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Effect of an Obstructed Ceiling on the Activation Time of a Residential Sprinkler

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Table of Contents

List of Tables

List of Figures

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Robert L. Vettori

Abstract

A series of 45 experiments were conducted to compare the effects of two different ceiling configurations on the activation times of a quick response residential pendent sprinkler. The two ceiling configurations consisted of a smooth horizontal unobstructed ceiling and a horizontal ceiling obstructed by parallel beams measuring 0.038 m (1.5 in) wide by 0.24 m (9.5 in) deep and spaced 0.41 m (16 in) on center. For each of the two ceiling configurations, the fire source, a computer controlled methane gas burner, was placed in three different locations within the fire compartment and 2.1 m (7 ft) below the ceiling. Additionally, for each burner location, the flow of methane gas to the burner was supplied in such a way as to give three different fire growth scenarios. For the smooth horizontal unobstructed ceiling three experiments were performed for every burner position and fire growth rate. For the horizontal obstructed/beamed ceiling there were two experiments for every burner position and fire growth rate. Measurements taken include the time to sprinkler activation, temperature and velocity of the ceiling jet at the sprinkler of activation, and temperatures and ceiling jet velocities at various other locations and elevations within the fire compartment. The horizontal obstructed/beamed ceiling increased sprinkler activation time by 57 % to 137 % depending on the experimental setup.

Key Words: beams; ceiling jets; corners; fire growth; residential sprinklers; sprinkler response; sprinkler systems; tenability limits; wall fires

1 Introduction

There is little quantitative information on the effect beams or other ceiling obstructions have on the activation time of quick response residential sprinklers [1]. Residential sprinklers are only listed for use under smooth horizontal unobstructed ceilings [2,3]. The objective of this study was to determine the effect that a horizontal obstructed/beamed ceiling configuration had on the activation times of a residential sprinkler.

The ceiling jet is usually defined as the gas flow beneath the ceiling surface directed radially away from the fire plume, which is driven by the buoyancy of the hot combustion products. For smooth horizontal unobstructed ceilings, temperature and velocity distributions vary both radially away from the fire center and vertically below the ceiling. Sprinkler response is primarily a function of the physical properties of the sprinkler thermal element, its mounting, and the temperature and velocity of the ceiling jet that flows around it. One of the effects that ceiling obstructions such as beams and joists have is to significantly alter the flow of the ceiling jet.

2 Experimental Configuration

These experiments were conducted at the Building and Fire Research Laboratory Annex Building 534. The fire compartment consisted of a room 9.2 m x 5.6 m (30 ft x 18 ft) with a ceiling height of 2.4 m (8 ft), figure 1. The walls were constructed of a wood frame covered with 12.7 mm (0.5 in) gypsum board and the floor was concrete. A hollow steel door measuring 0.91 m x 2.1 m (3.0 ft x 6.8 ft) opened to the outside. The air gap under the door measured 25 mm (1 in). This door was closed for all experiments. A stairway of wood construction led to an upper floor that had the same dimensions as the fire compartment. There was no vent from this upper floor. For the smooth horizontal unobstructed ceiling experiments, the ceiling was also covered with 12.7 mm (0.5 in) gypsum board. For the horizontal obstructed/beamed ceiling, the gypsum board on the ceiling was removed exposing the 0.038 m x 0.24 m (1.5 in x 9.5 in) wood joists that were spaced 0.41 m (16 in) on center. These ceiling joists spanned the width of the room; supported in the center by a 0.10 m x 0.18 m (4 in x 7 in) steel I beam that spanned the length of the room. The steel I beam was supported at either end by the wood frame wall and along its length by two steel 0.064 m (2.5 in) lolly columns. The flooring material for the upper floor consisted of 1.22 m x 2.44 m (4 ft x 8 ft) sheets of 12.7 mm (0.5 in) thick plywood nailed directly to the top of the ceiling joists. Four quick response residential pendent sprinklers were installed on the ceiling in accordance with NFPA 13D, Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes [3]. The location of the four sprinklers, numbered 1 through 4, is also shown in figure 1.

2.1 Instrumentation

Temperature measurements were made with 0.51 mm (0.02 in) nominal diameter type K thermocouples. Standard thermocouple instrumentation for all 45 experiments consisted of four vertical arrays of thermocouples, one array located next to each sprinkler, figure 1. Each array was comprised of 12 thermocouples located 0, 25, 50, 75, 100, 125, 150, 250, 350, 450, 550, and 900 mm (0, 1.0, 2.0, 3.0, 3.9, 4.9, 5.9, 9.8, 13.8, 17.7, 21.7, and 35.4 in) below the ceiling, figure

2. The standard uncertainty for these temperature measurements is ± 2.2°C (± 4.0°F) based on manufacturer's data.

Gas velocity measurements were recorded at sprinklers one and two using vertical arrays of bi-directional probes. Each array consisted of four bi-directional probes. The bi-directional probes were located 25, 75, 125, and 250 mm (1, 3, 4.9, and 9.8 in) below the ceiling, figure 2. There were no gas velocity measurements taken at sprinklers three and four. For experiments with the horizontal obstructed/beamed ceiling, additional bi-directional probes were placed within the ceiling joist channels above the corner burner location, figure 6. The standard uncertainty for the velocity measurements is ± 0.1 m/s (± 0.3 ft/s) based on manufacturer's data for the differential pressure transducers.

2.2 Sprinklers

The sprinklers used throughout these experiments were commercially available quick response residential pendent sprinklers. They were all from the same manufacturer and were all the same model. The sprinklers had glass bulb elements with an activation temperature of 68 ± 2.4 °C (154 ± 5.4 °F). The response time index (RTI) for the sprinklers was 55 $(m\text{-}s)^{1/2}$ (100 $(ft\text{-}s)^{1/2}$), as determined by an independent testing laboratory [4][1]. When mounted under the smooth horizontal unobstructed ceiling, the sprinklers were fully exposed and the center of the glass bulb element was 25 mm (1 in) below the gypsum ceiling. For the experiments in which the gypsum board was removed from the ceiling, the center of the glass bulb element was 37 mm (1½ in) below the bottom of the ceiling joists. For each experiment, 25 ml of water was placed in the pipe to which the sprinkler was mounted in order to simulate the water that would normally be present in the sprinkler piping system. The sprinkler system was then pressurized with air to approximately 100 kPa (15 psi). Each sprinkler was connected to a pressure switch that was electronically connected to a timer. The pressure switches were set at 5 kPa (1 psi) so that upon sprinkler activation the drop in pressure would automatically stop the corresponding timer. This provided an activation time to within ± 0.1 seconds.

2.3 Gas Burner

The fire source in this experimental series consisted of a rectangular methane gas burner with a piloted ignition. The burner had dimensions of 0.7 m x 1.0 m (28 in x 40 in) and was 0.31 m (1 ft) high. A technical grade of methane was used, which was certified by the supplier to contain at least 98 % methane. The flow of methane gas to the burner was controlled by a computer. The computer was programmed to monitor the flow of methane gas through four mass flow controllers arranged in parallel. With this configuration the heat release rate curve produced by the burner is one that follows the fire growth rates used in the 1993 edition of National Fire Protection Association (NFPA) 72 National Fire Alarm Code Appendix B [5]. The fast, medium and slow fires described by this NFPA standard are based on a wide variety of fires that grow with the square of time and are sometimes referred to as t-squared (t^2) fires. A fast developing fire is one that would take less than 150 seconds from the time of open burning until the fire reaches a heat release rate of 1055 kW. A medium developing fire is one that would take more

[1] Reference 4 is attached as an appendix at the end of this report.

than 150 s, but less then 600 s from the time of open burning until the fire reaches a heat release rate of 1055 kW. A slow developing fire is one that would take 600 or more seconds from the time of open burning until the fire reaches a heat release rate of 1055 kW. A mathematical representation for these curves is as follows:

$$\dot{Q} = \alpha t^2 \tag{1}$$

Where: $\dot{Q}$ = heat release rate (kW)
α = coefficient (kW/s^2)
t = time (s)

Figure 3 shows the area bounded by the theoretical fast, medium and slow fire growth curves. For the purpose of this experimental series, a fast fire reached 1055 kW in 150 seconds which corresponds to an α equal to 0.0468 kW/s^2. A medium fire reached 1055 kW in 300 seconds, which corresponds to an α equal to 0.0117 kW/s^2. A slow fire reached 1055 kW in 600 seconds, which corresponds to an α equal to 0.00293 kW/s^2. Before the experiments were conducted, the rectangular gas burner was calibrated using the principals of oxygen consumption calorimetry. Figure 4 demonstrates the repeatability obtained with the gas burner during these calibration tests. The three theoretical fire growth curves used in this experimental series are overlaid with data obtained from the respective burner calibration tests. For each fire growth rate, two calibration tests were performed.

3 Location of Fire

In addition to varying the heat release rate of the fire, the rectangular burner was placed in three different locations within the room. These locations are as follows; in the open or away from any wall (detached experiment), against a wall (wall experiment), and in a corner (corner experiment). Figure 5 shows the distance from the burner to the sprinklers of interest for each burner location. The effect of placing the burner against a wall or in a corner of the room is to restrict the entrainment of air into the plume [6,7]. When the burner is placed away from a wall or what would be considered in the open, cool room air is entrained into the plume from all directions. By placing the burner adjacent to one or more walls, the area over which this cool room air can be entrained into the plume is reduced. One result of this reduction in entrainment is higher flame heights. Since the fuel requires the same amount of air to complete the oxidation process a greater distance is now needed for the fuel vapors to mix with the smaller quantity of air that is entering the plume. With these higher flame heights there is now less distance from the tip of the flame to the bottom of the hot upper layer for the plume to entrain cool air. The higher plume temperatures that result from the reduced cool air entrainment cause similar increases in the upper layer temperatures.

4 Results

4.1 Effect of Obstructed/Beamed Ceiling on Activation Times

Table 1 is a comparison of the sprinkler activation times between the smooth horizontal unobstructed ceiling and the horizontal obstructed/beamed ceiling. The burner position and fire growth rate for the 45 experiments are listed. For each burner position and fire growth rate, the location of the first sprinkler to activate and its activation time is also listed. By taking the simple average of the three activation times for the smooth horizontal unobstructed ceiling scenario and the two activation times for the horizontal obstructed/beamed ceiling scenario, table 2 was constructed. Table 2 presents the percent increase in activation time caused by the obstructed/beamed ceiling. As can be seen from table 2, the effect of the obstructed/beamed ceiling was to increase the sprinkler activation time for all scenarios. It is interesting to note from table 1 that when the burner was placed in the corner position, under the horizontal obstructed/beamed ceiling configuration, sprinkler number 4 activated first in five out of the six experiments. Figure 5 shows the distance from the burner to both sprinklers 1 and 4. The radial distance to sprinkler number 4 is twice as far as to sprinkler number 1. When exposed, the ceiling joists form channels beneath the ceiling. Due to the nature of the construction, the ceiling joists overlap each other on top of the I beam, figure 6. Although sprinklers 1 and 4 are in the same plane, they are in different channels. Sprinkler number 4 is in the seventh channel away from the burner. Sprinkler number 1 is in the sixth channel. A two zone fire model would not be able to predict this type of phenomenon. In order to predict this type of event one would have to utilize a computer field model such as one being developed at the National Institute of Standards and Technology that uses Large Eddy Simulation techniques for fire [8].

4.2 Effect of Obstructed/Beamed Ceiling on Ceiling Jet Velocities

With the removal of the gypsum board from the ceiling, exposing the ceiling joists, the effective height from floor to ceiling now becomes 2.7 m (8 ft 10 in). With the gypsum board removed, the sprinklers are now located 0.27 m (10.5 in) below this new ceiling height. This alone removes the sprinkler from the hottest part of the ceiling jet as described by Alpert [9] as being in the top 1 % of the floor to ceiling height. Another effect that the ceiling joists had was to slow the ceiling jet velocity dramatically at the sprinkler. Figures 7 through 9 show the effects the obstructed/beamed ceiling had on the ceiling jet velocity for the experiments in which the burner was in the detached position. Figures 10 through 12 show the effects the obstructed/beamed ceiling had on the ceiling jet velocity for the experiments in which the burner was in the wall position. For these figures, 7 through 12, the ceiling jet velocities for the smooth horizontal unobstructed ceiling are the average obtained from the top velocity probe at sprinkler number 1 from the three experiments. The velocities for the horizontal obstructed/beamed ceiling are the average obtained from the top velocity probe at sprinkler number 1 from the two experiments. For the experiments in which the burner was placed in the corner only one figure is shown, figure 13. This is a comparison of the ceiling jet velocity for a fast growing fire. There are no comparisons for the medium and slow growing fires since at sprinkler number 4 there were no velocity probes. The horizontal obstructed/beamed ceiling velocity in figure 13 is based on the one experiment in which sprinkler number 1 activated.

When comparing figures 7 through 13, it may be best to describe the "ceiling jet" in the horizontal obstructed/beamed ceiling scenario as having a flow under a beam rather than a traditional ceiling jet as described by Alpert. Because the convective heat transfer is proportional to the square root of the velocity, sprinkler activation is delayed by the reduced ceiling jet velocity.

As stated in the section under instrumentation, the basic measurements for all 45 experiments were the same. In the corner experiments for the obstructed/beamed ceiling scenario, two additional velocity probes were installed in the first two channels formed by the ceiling joists above the burner, figure 6. These two probes were located in the same plane as sprinkler number 1. They were centered between the joists approximately 10 cm (4 in) below the top of the ceiling joists. Figures 14 through 16 present data on these additional velocity probes along with data from the velocity probes located at sprinkler number 1. Comparable to figures 7 through 13, the effect of the obstructed/beamed ceiling was to reduce the velocity significantly when compared to those found with the smooth horizontal unobstructed ceiling. The effect of the very high velocities produced in the channels as compared with those at sprinkler number 1 may help in explaining why sprinkler number 4 activated first in 5 out of 6 experiments.

4.3 Effect of Fire Growth on Activation Times

The rate of fire growth also had an effect on the time to sprinkler activation. By looking at Table 2, it can be seen that for all three burner locations and both ceiling configurations that the average time to sprinkler activation increased as the fire growth slowed.

4.4 Effect of Burner Position on Activation Times.

For the smooth horizontal unobstructed ceiling, the placement of the burner did not have a pronounced effect on the time to sprinkler activation. Moving the burner from the detached position to the wall position, the effect was hardly noticeable for the fast and medium fires. For the slow growing fire, the average activation time was actually longer. A factor that must be taken into account is that the distance from the center of the burner to the sprinkler is not the same for the different burner positions, figure 5. In the detached position the sprinkler is 2.2 m (7 ft 3 in) away from the fire, for the wall position the sprinkler is 2.4 m (8 ft) away. This represents a 10 % increase in distance. The fast and medium fires had slightly faster activation times on average but by looking at the individual experiment results, table 1, it can be seen the results are virtually indistinguishable. For the corner experiments, the activation times are noticeably faster but, in turn, the sprinkler is now closer than in either the detached position or wall position. Another factor that may be taken into account is how the burner was placed against the wall. In describing the effect of a wall on the plume, Zukoski [6] placed a wall across the diameter of a circular burner, which effectively reduced it to a semi circular geometry. By doing this the perimeter over which the plume can entrain air is reduced to 50 % of the original. As can be seen in figure 5, when the burner was placed against the wall, a short side of the rectangular burner was placed up against the wall. The original perimeter of the burner was 3.4 m (11 ft). By placing a short side of the burner against the wall the perimeter is only reduced by 0.7 m (28 in), a reduction of only 21 %. In this configuration, air was being entrained over 79 %

of the perimeter of the burner. When the burner was placed in the corner position, 50 % of the burner perimeter is still exposed for the entrainment of air into the plume.

When considering the effect of the burner position in the horizontal obstructed/beamed ceiling configuration, it appears more variables need to be taken into account since it is not always the physically closest sprinkler that activates first.

4.5 Effect of Obstructed/Beamed Ceiling on Temperatures

Table 3 gives the ceiling jet temperature at the first sprinkler to activate at the time of activation. All the temperatures measured for the obstructed/beamed ceiling experiments are higher than the smooth horizontal unobstructed ceiling. For the obstructed beamed ceiling configuration, it must be noted that the temperature is that measured 0.27 m (10.5 in) below the top of the ceiling joists. The temperatures within the channels formed by the ceiling joists would be higher. Figures 17 through 19 compare ceiling jet temperatures at sprinklers 1 and 4 along with the temperatures in the channels above the burner in which the burner was placed in the corner position. The location of the thermocouples within the channels are the same as the location of the additional velocity probes that were added for the obstructed/beamed ceiling, corner burner position, figure 6.

Tables 4 and 5 list temperature readings at the time of sprinkler activation at the 1.54 m (5 ft) and 1.89 m (6 ft) elevations respectively. These heights were chosen since they represent possible elevations that the mouth and eyes of people egressing the room might be located. In each table, the average temperature represents the average of the four thermocouples, one at each sprinkler location, at the specified elevation. The low–high temperature is simply the value of the lowest temperature recorded of the four thermocouples and the highest temperature recorded of the four thermocouples at the time of sprinkler activation. In all cases, for both the 1.54 m (5 ft) and 1.89 m (6ft) elevation, the average temperature at sprinkler activation for the horizontal obstructed/beamed ceiling was higher than the smooth horizontal unobstructed ceiling. Additionally, in a large majority of cases, the low temperature measured for the horizontal obstructed/beamed ceiling was higher than the high temperature measures in the smooth horizontal unobstructed ceiling.

As a point of reference, The National Fire Protection Handbook [10] summary of the UL 1626 test criteria [2] states:

> The maximum gas or air temperature adjacent to the sprinkler 76.2 mm (3 in) below the ceiling and 203 mm (8 in) horizontally away from the sprinkler must not exceed 316 °C (600 °F).
>
> The maximum temperature 1.6 m (5 ft 3 in) above the floor and half the room length away from each wall must be less than 93 °C (200 °F) during the entire test. This temperature must not exceed 54 °C (130 °F) for more than a two minute period.

5 Conclusions

The effect of this obstructed/beamed ceiling configuration was to increase the activation time for the first sprinkler. This was true for all burner locations and fire growth rates. No effort was made in this experimental series to determine what effect this obstructed/beamed ceiling would have on the activation times of additional sprinklers. Additionally, for the obstructed/beamed ceiling configuration there was an increase in temperature at the 1.54 m (5 ft) and 1.89 m (6 ft) elevations creating a potentially greater hazard within the room.

This experimental series was limited to only one depth and spacing of ceiling joists. There are many different sizes and methods for the construction of ceiling joists. Future research needs to be conducted to understand the effects different obstructed/beamed ceilings have on fire growth, suppression, and gas generation.

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Table 1 – Comparison of sprinkler activation times

		Smooth Horizontal Unobstructed Ceiling		Obstructed/Beamed Ceiling	
Burner position	Fire growth	Experiment number	Location of sprinkler and time to activation	Experiment Number	Location of sprinkler and time to activation
Detached	Fast	1	Number 1 – 46 s	4	Number 2 – 68 s
		2	Number 1 – 43 s	5	Number 2 – 67 s
		3	Number 1 – 41 s		
	Medium	6	Number 1 – 88 s	9	Number 2 - 118 s
		7	Number 1 – 67 s	10	Number 2 – 128 s
		8	Number 1 – 78 s		
	Slow	11	Number 2 – 100 s	14	Number 2 – 191 s
		12	Number 1 – 117 s	15	Number 2 - 195 s
		13	Number 1 – 116 s		
Wall	Fast	16	Number 2 – 42 s	19	Number 2 - 82 s
		17	Number 1 – 40 s	20	Number 2 - 76 s
		18	Number 2 – 39 s		
	Medium	21	Number 2 – 70 s	24	Number 2 – 144 s
		22	Number 1 – 71 s	25	Number 2 – 123 s
		23	Number 1 – 68 s		
	Slow	26	Number 1 – 129 s	29	Number 2 – 233 s
		27	Number 1 – 116 s	30	Number 2 – 232 s
		28	Number 1 – 124 s		
Corner	Fast	31	Number 1 – 35 s	34	Number 1 – 72 s
		32	Number 1 – 29 s	35	Number 4 – 67 s
		33	Number 1 – 29 s		
	Medium	36	Number 1 – 54 s	39	Number 4 – 133 s
		37	Number 1 – 47 s	40	Number 4 – 112 s
		38	Number 1 – 54 s		
	Slow	41	Number 1 – 99 s	44	Number 4 – 190 s
		42	Number 1 – 84 s	45	Number 4 – 196 s
		43	Number 1 – 84 s		

Table 2 – Average activation times and percent increase in activation times caused by obstructed/beamed ceiling

Burner position	Fire growth	Average time to activation smooth unobstructed ceiling (s)	Average time to activation obstructed/beamed ceiling (s)	Percent increase in activation time caused by obstructed/beamed ceiling
Detached	Fast	43	68	56
	Medium	78	123	58
	Slow	111	193	74
Wall	Fast	40	79	96
	Medium	70	134	92
	Slow	123	233	89
Corner	Fast	31	70	124
	Medium	52	123	137
	Slow	89	193	117

Table 3 – Temperature of the ceiling jet at the activated sprinkler at time of activation

Burner position	Fire growth	Smooth Horizontal Unobstructed Ceiling			Obstructed/Beamed Ceiling		
		Experiment number	Location of sprinkler and ceiling jet temperature	(°C)	Experiment number	Location of sprinkler and ceiling jet temperature	(°C)
Detached	Fast	1	Number 1	116	4	Number 2	165
		2	Number 1	118	5	Number 2	153
		3	Number 1	108			
	Medium	6	Number 1	102	9	Number 2	130
		7	Number 1	108	10	Number 2	139
		8	Number 1	111			
	Slow	11	Number 2	118	14	Number 2	136
		12	Number 1	100	15	Number 2	133
		13	Number 1	93			
Wall	Fast	16	Number 2	138	19	Number 2	162
		17	Number 1	114	20	Number 2	165
		18	Number 2	118			
	Medium	21	Number 2	114	24	Number 2	155
		22	Number 1	106	25	Number 2	138
		23	Number 1	106			
	Slow	26	Number 1	102	29	Number 2	129
		27	Number 1	99	30	Number 2	126
		28	Number 1	100			
Corner	Fast	31	Number 1	121	34	Number 1	154
		32	Number 1	131	35	Number 4	148
		33	Number 1	143			
	Medium	36	Number 1	124	39	Number 4	144
		37	Number 1	116	40	Number 4	131
		38	Number 1	137			
	Slow	41	Number 1	118	44	Number 4	129*
		42	Number 1	112	45	Number 4	125
		43	Number 1	109			

*Thermocouple at sprinkler malfunctioned. This value obtained from the thermocouple located 25 mm (1 in) below the sprinkler.

Table 4 – Temperature comparisons at the 1.54 m (5ft) elevation at the time of sprinkler activation

		Smooth Horizontal Unobstructed Ceiling			Obstructed/Beamed Ceiling		
Burner position	Fire growth	Experiment number	Average temp (°C)	Low – High temp (°C)	Experiment number	Average temp (°C)	Low – High temp (°C)
Detached	Fast	1	41	36 – 48	4	61	51 – 76
		2	38	31 – 44	5	57	52 – 63
		3	40	31 – 46			
	Medium	6	52	47 – 59	9	64	63 – 65
		7	50	46 – 54	10	69	67 – 69
		8	53	48 – 57			
	Slow	11	55	47 – 62	14	72	68 – 74
		12	52	45 – 60	15	70	69 – 71
		13	53	48 – 58			
Wall	Fast	16	27	24 – 32	19	63	57 – 70
		17	27	22 – 34	20	63	61 – 67
		18	25	21 – 31			
	Medium	21	39	36 – 46	24	71	66 – 73
		22	39	37 – 44	25	67	66 – 68
		23	39	36 – 46			
	Slow	26	49	45 – 54	29	68	66 – 71
		27	44	40 – 49	30	80	77 – 82
		28	47	43 – 53			
Corner	Fast	31	24	22 – 25	34	38	28 – 46
		32	21	20 – 22	35	37	32 – 42
		33	22	21 – 24			
	Medium	36	24	22 – 25	39	53	46 – 62
		37	23	21 – 24	40	45	43 – 49
		38	25	22 – 28			
	Slow	41	34	29 – 39	44	50	47 – 52
		42	28	24 – 30	45	49	47 – 52
		43	26	24 – 29			

Table 5 – Temperatures comparison at the 1.89 m (6ft) elevation at the time of sprinkler activation

		Smooth Horizontal Unobstructed Ceiling			Obstructed/Beamed Ceiling		
Burner position	Fire growth	Experiment number	Average temp (°C)	Low – High Temp (°C)	Experiment number	Average temp (°C)	Low – High temp (°C)
Detached	Fast	1	69	59 – 77	4	89	82 – 111
		2	68	58 – 80	5	89	82 – 106
		3	72	59 – 83			
	Medium	6	77	67 – 85	9	87	78 – 100
		7	73	61 – 80	10	90	85 – 97
		8	74	65 – 80			
	Slow	11	75	68 – 82	14	93	84 – 106
		12	73	65 – 80	15	91	84 – 100
		13	71	66 – 76			
Wall	Fast	16	52	52 – 53	19	103	85 – 129
		17	59	55 – 64	20	100	88 – 119
		18	54	46 – 62			
	Medium	21	64	63 – 67	24	97	90 – 103
		22	65	62 – 67	25	93	91 – 96
		23	67	61 – 76			
	Slow	26	74	69 – 77	29	89	84 – 96
		27	67	64 – 71	30	101	96 – 112
		28	69	67 – 72			
Corner	Fast	31	30	23 – 40	34	60	55 – 69
		32	31	21 – 42	35	66	60 – 72
		33	32	22 – 44			
	Medium	36	42	35 – 48	39	72	69 – 76
		37	38	26 – 45	40	63	62 – 65
		38	43	36 – 49			
	Slow	41	56	46 – 65	44	63	61 – 68
		42	46	40 – 51	45	61	57 – 64
		43	45	41 – 47			

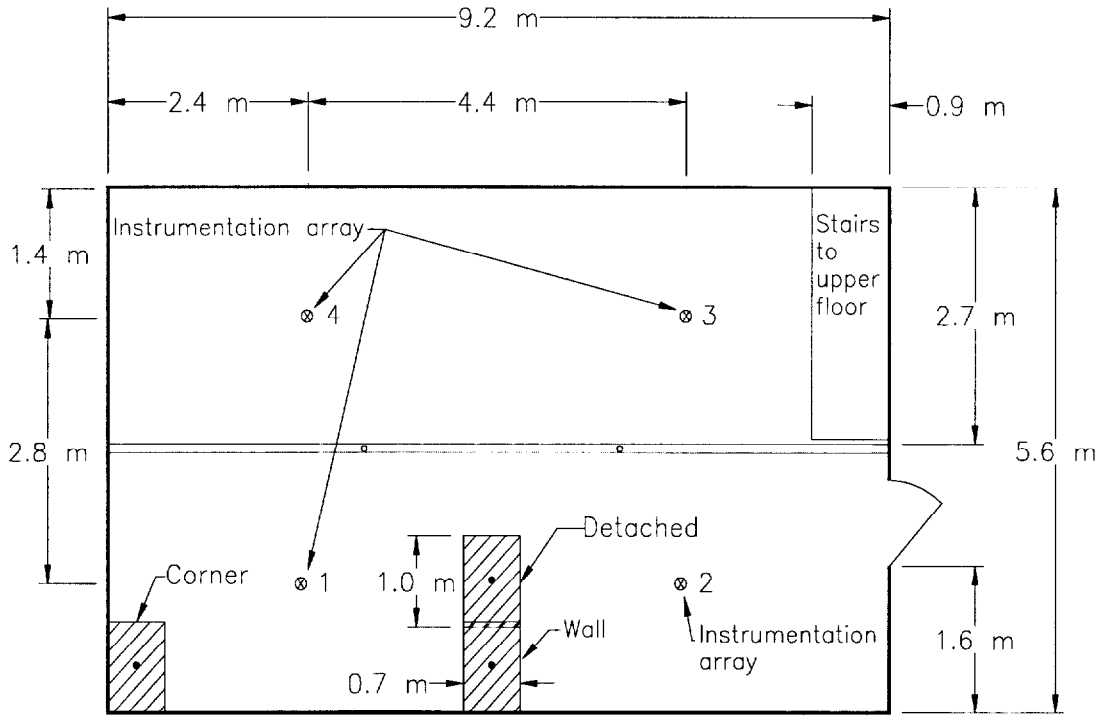

Figure 1 - Plan view of experimental set up.

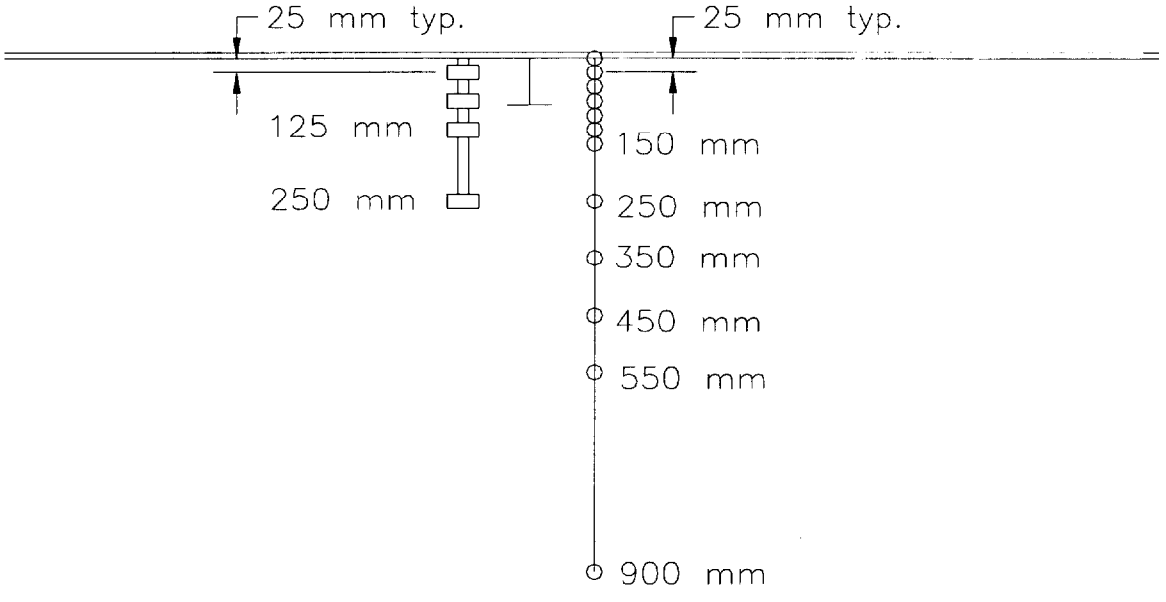

Figure 2 - Instrumentation set up for arrays 1 and 2.

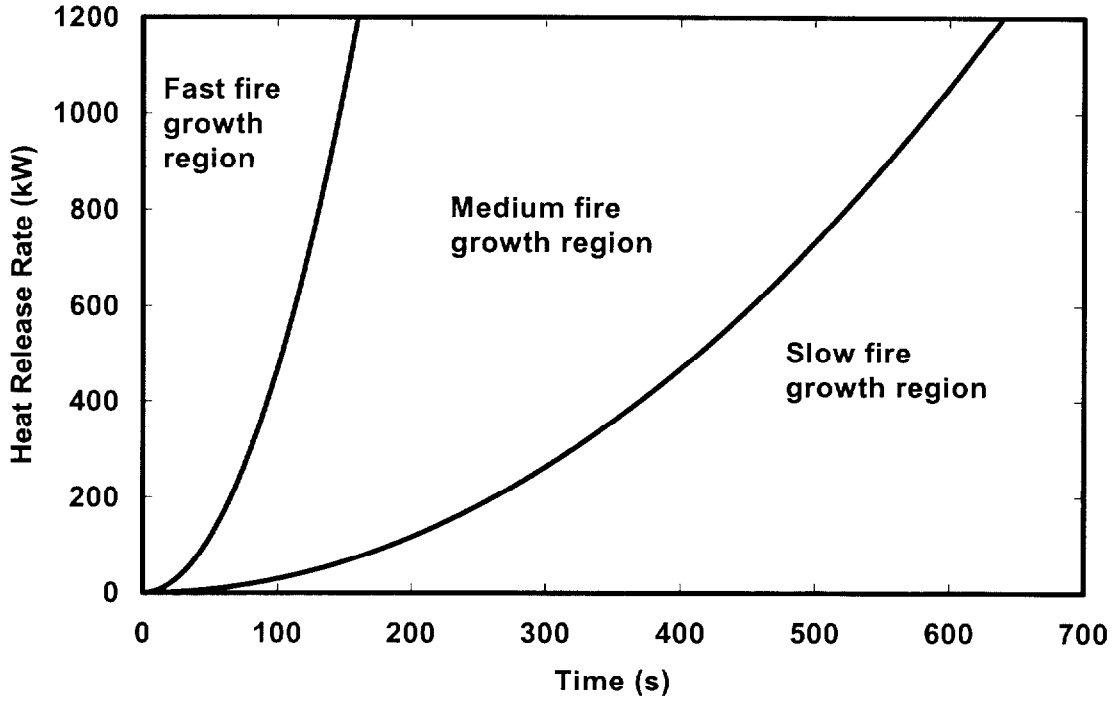

Figure 3 - Fast, medium, and slow fire growth regions.

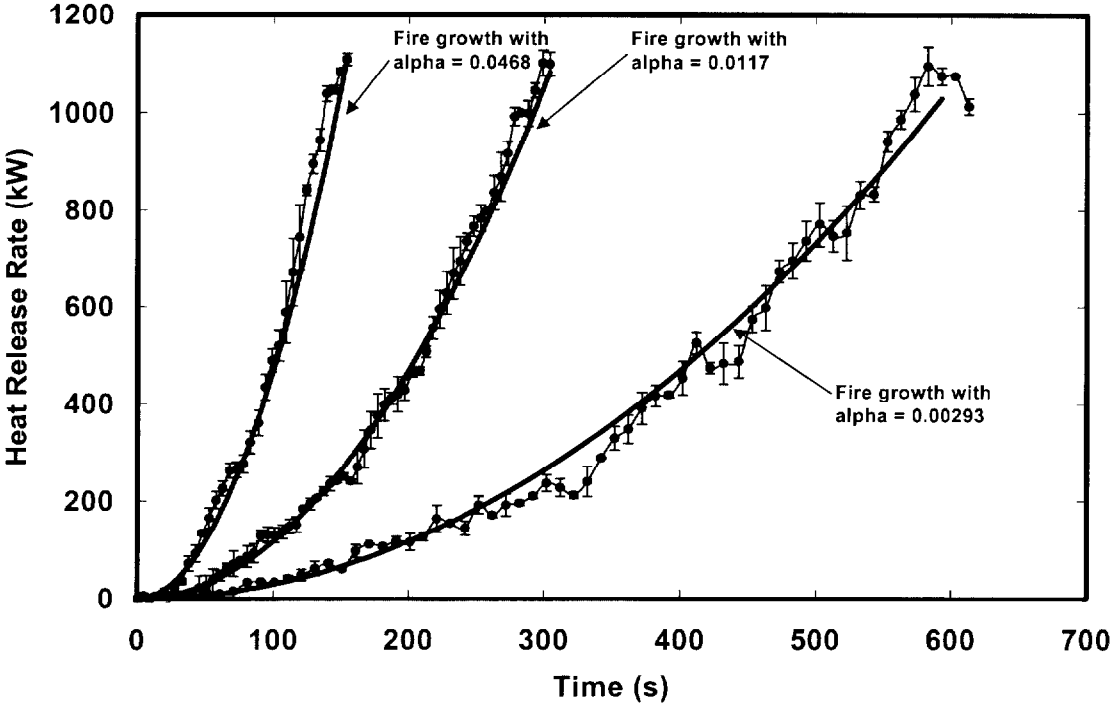

Figure 4 - Calibration data for the rectangular gas burner.

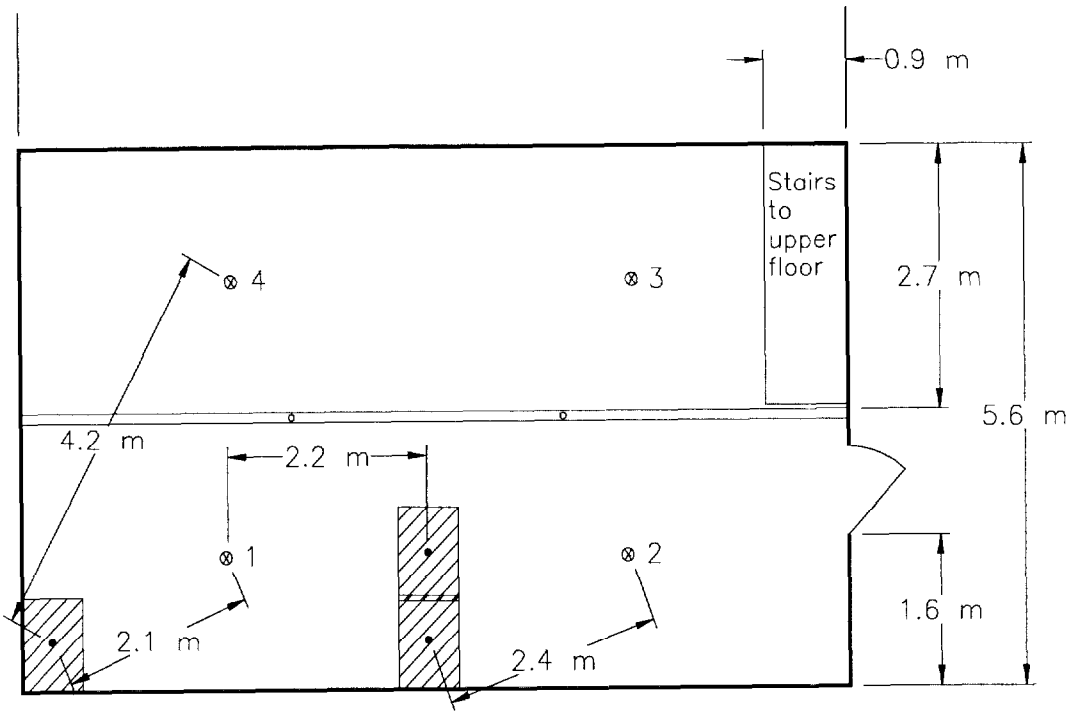

Figure 5 - Distances from different burner positions to sprinklers of interest.

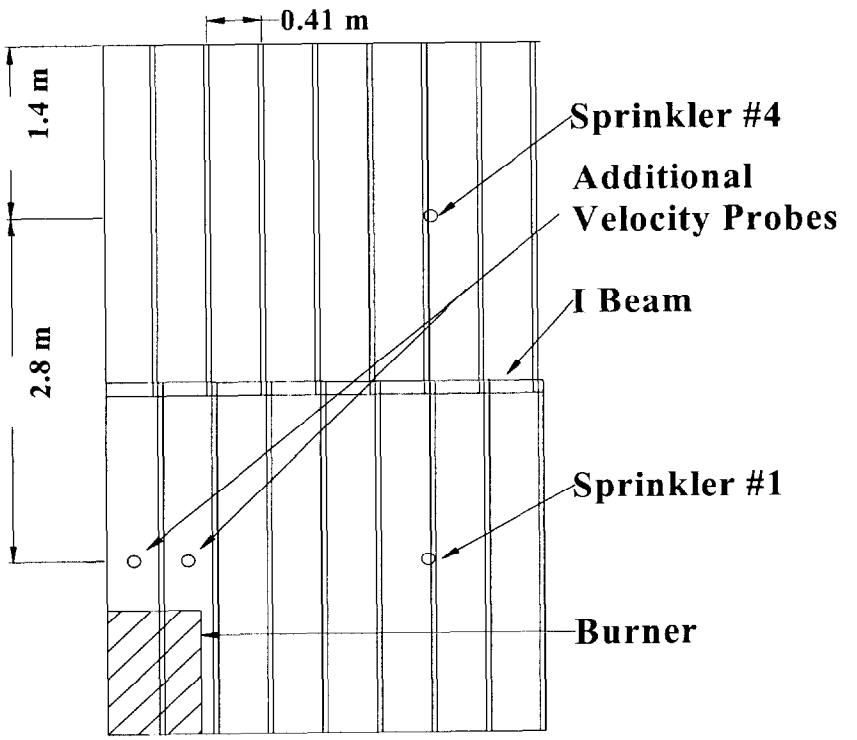

Figure 6 - Position of sprinklers 1 and 4 relative to channels formed by ceiling joists. Location of additional velocity probes, corner burner position, obstructed/beamed ceiling.

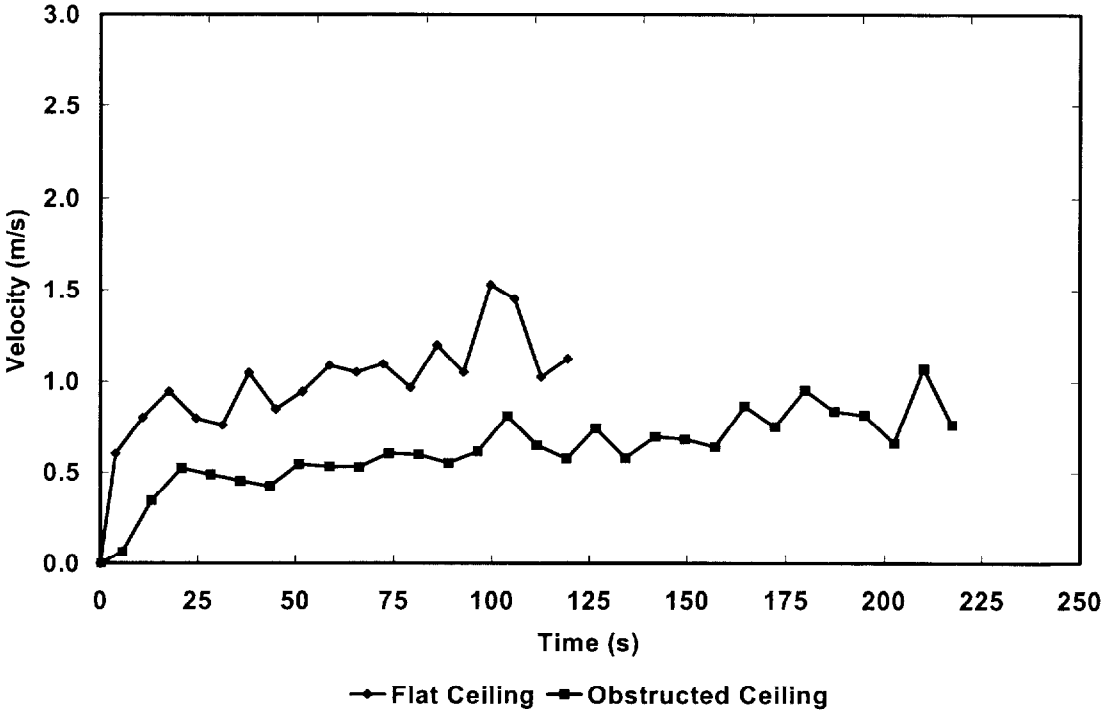

Figure 7 - Ceiling jet velocity comparisons at sprinkler number 1, detached burner position, slow fire growth.

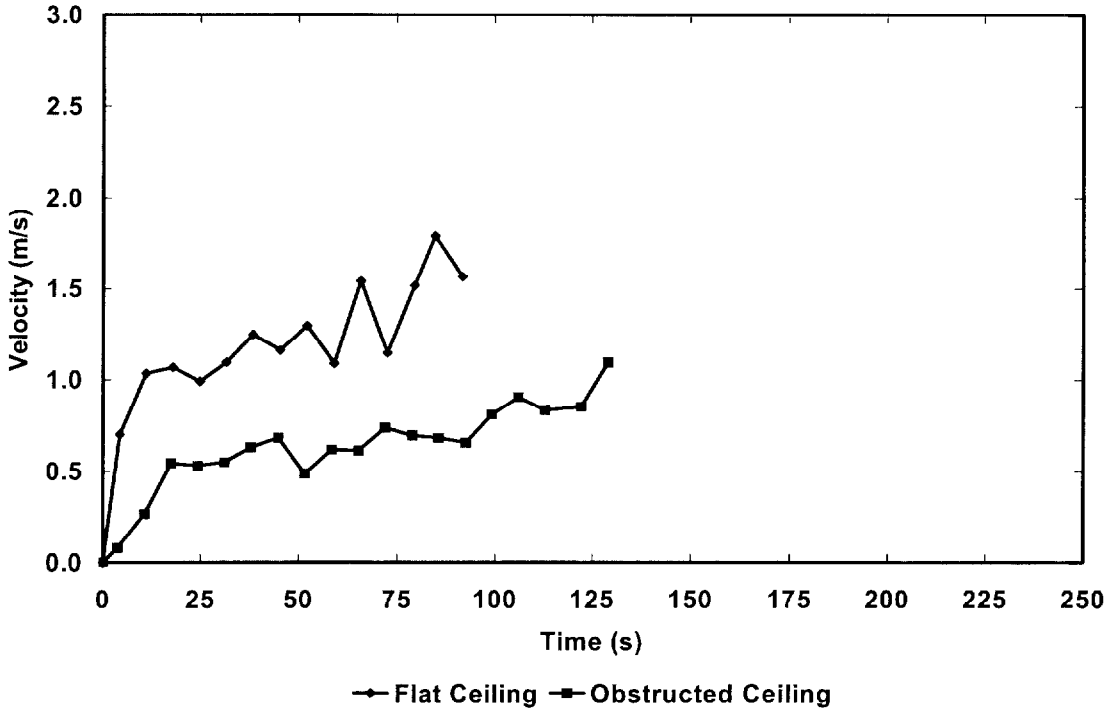

Figure 8 - Ceiling jet velocity comparisons at sprinkler number 1, detached burner position, medium fire growth.

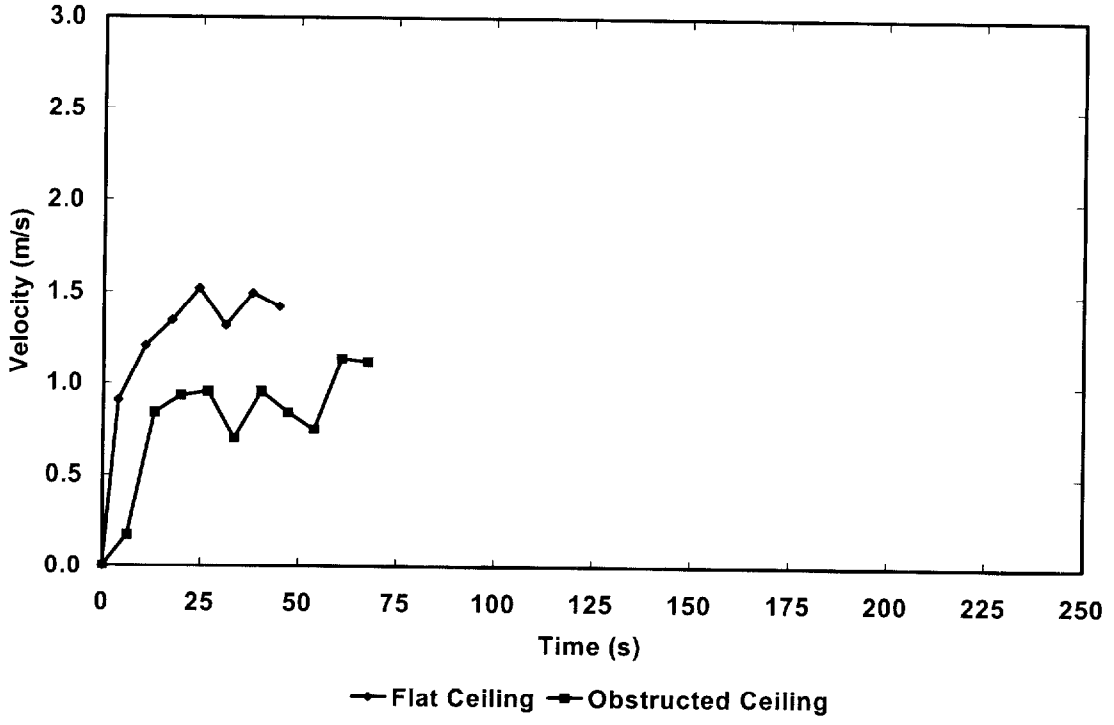

Figure 9 - Ceiling jet velocity comparisons at sprinkler number 1, detached burner position, fast fire growth.

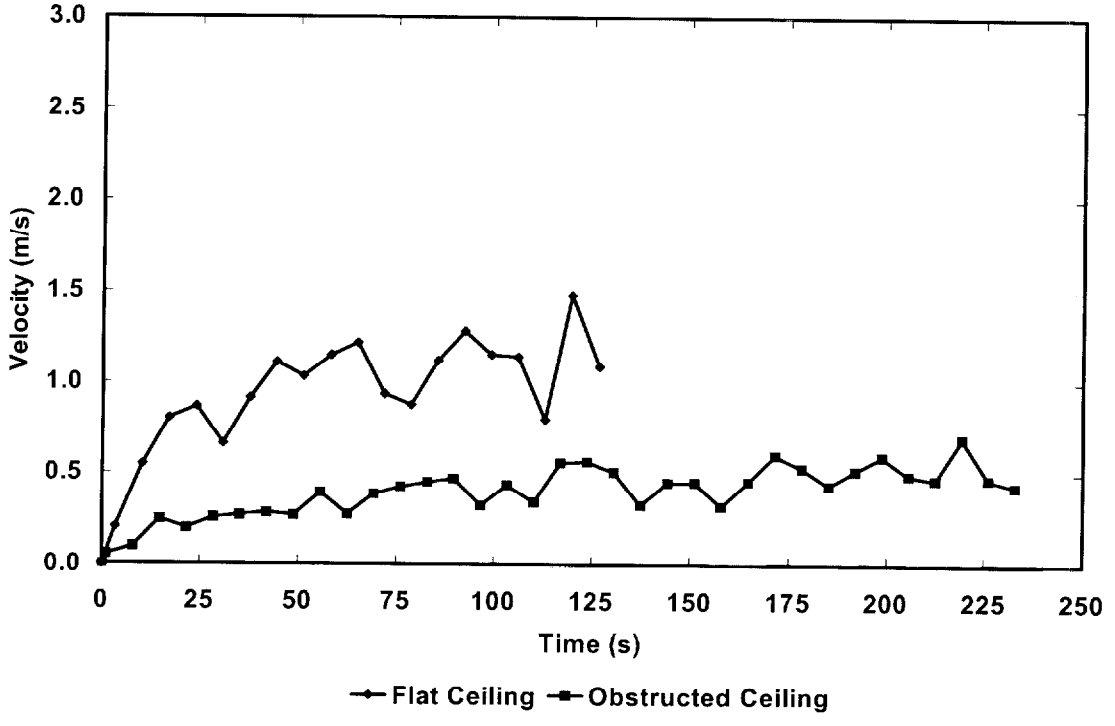

Figure 10 - Ceiling jet velocity comparisons at sprinkler number 1, wall burner position, slow fire growth.

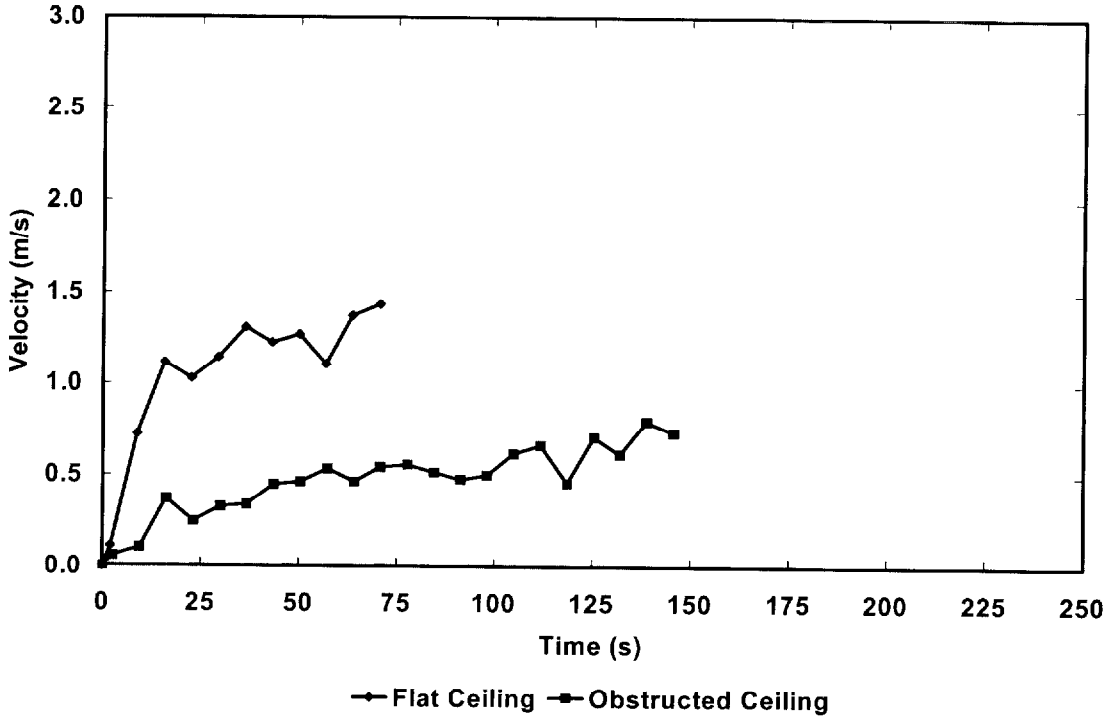

Figure 11 - Ceiling jet velocity comparisons at sprinkler number 1, wall burner position, medium fire growth.

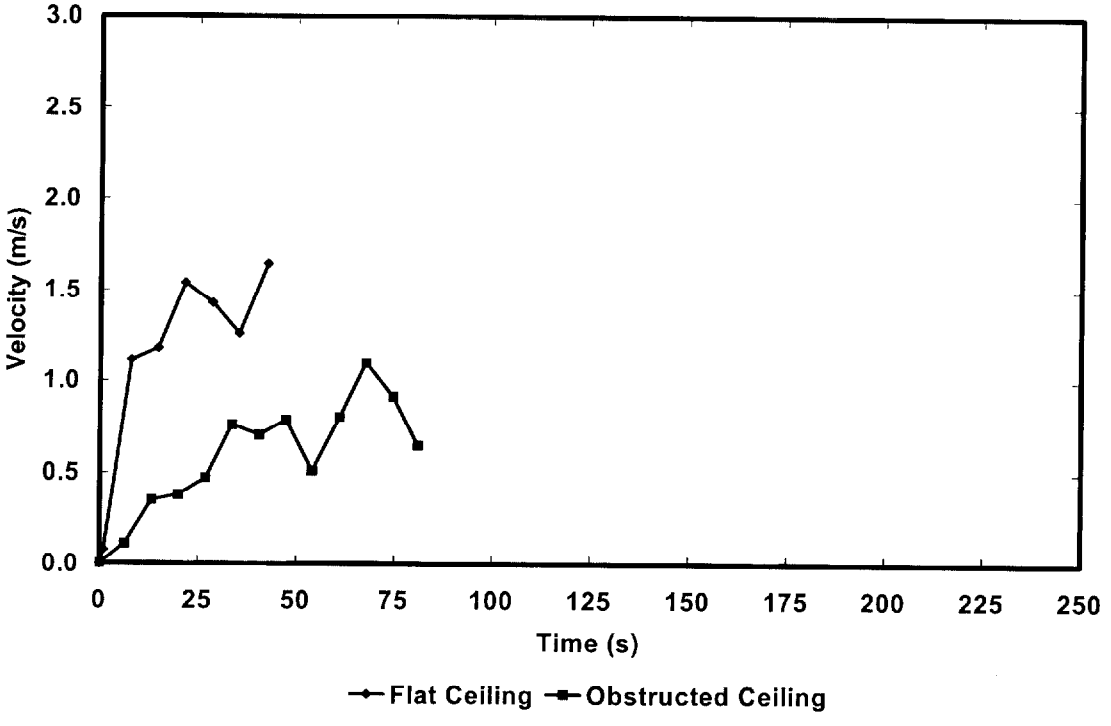

Figure 12 - Ceiling jet velocity comparisons at sprinkler number 1, wall burner position, fast fire growth.

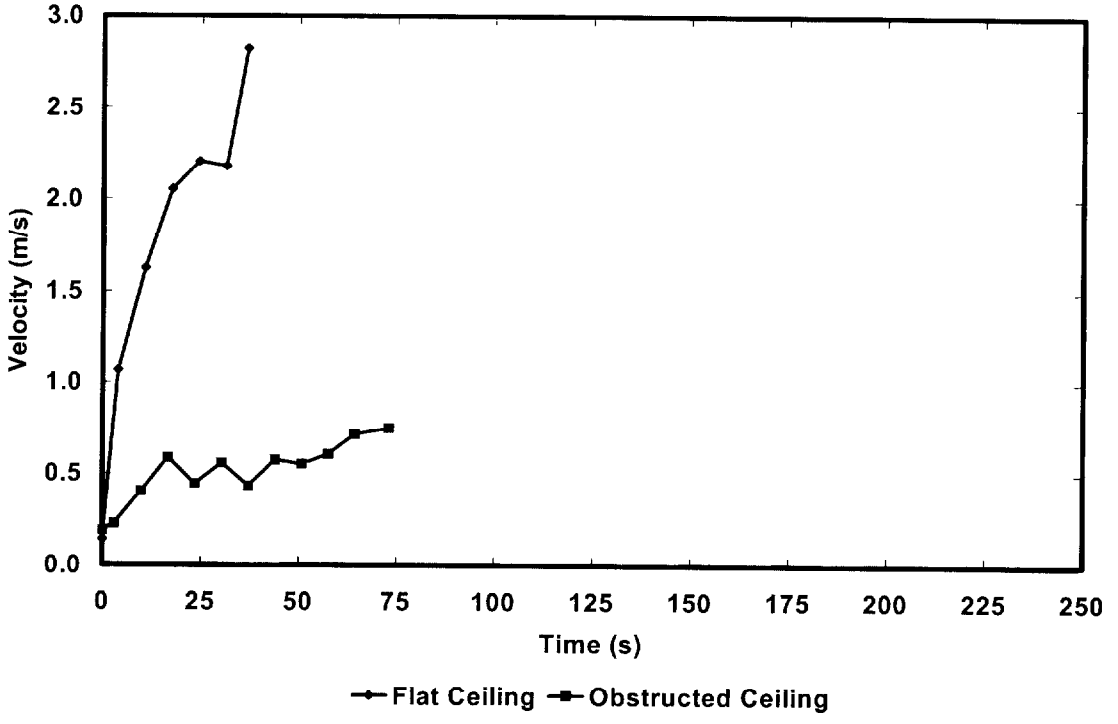

Figure 13 - Ceiling jet velocity comparisons at sprinkler number 1, corner burner position, fast fire growth.

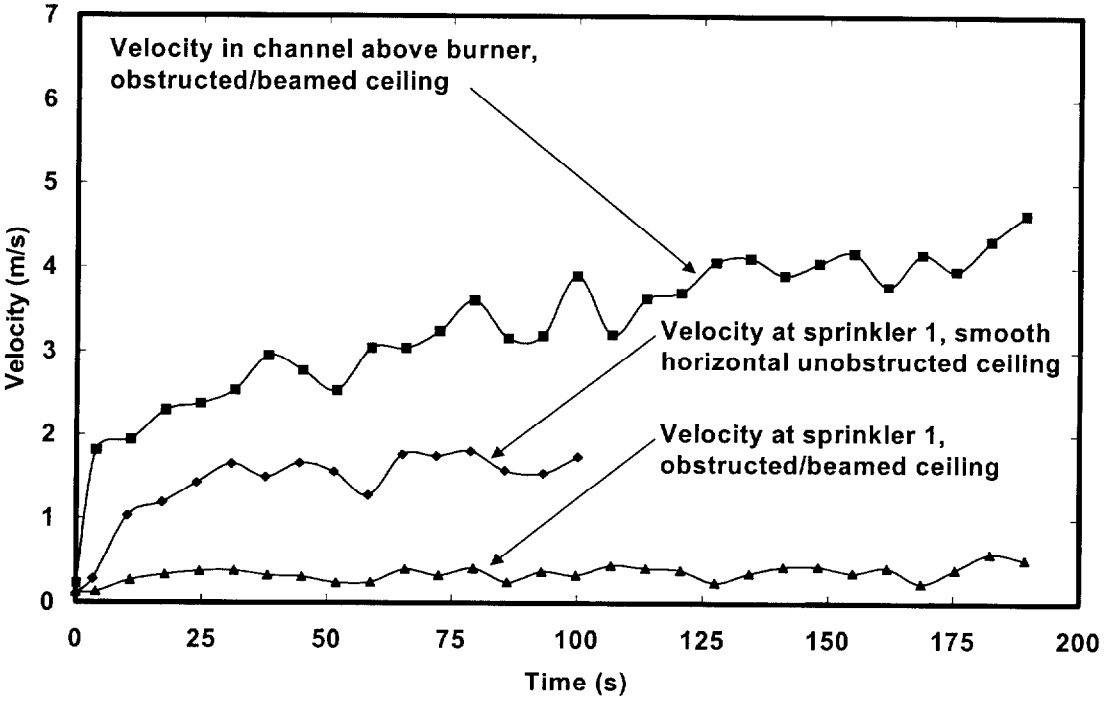

Figure 14 - Ceiling jet velocity comparisons for corner burner position, slow fire growth.

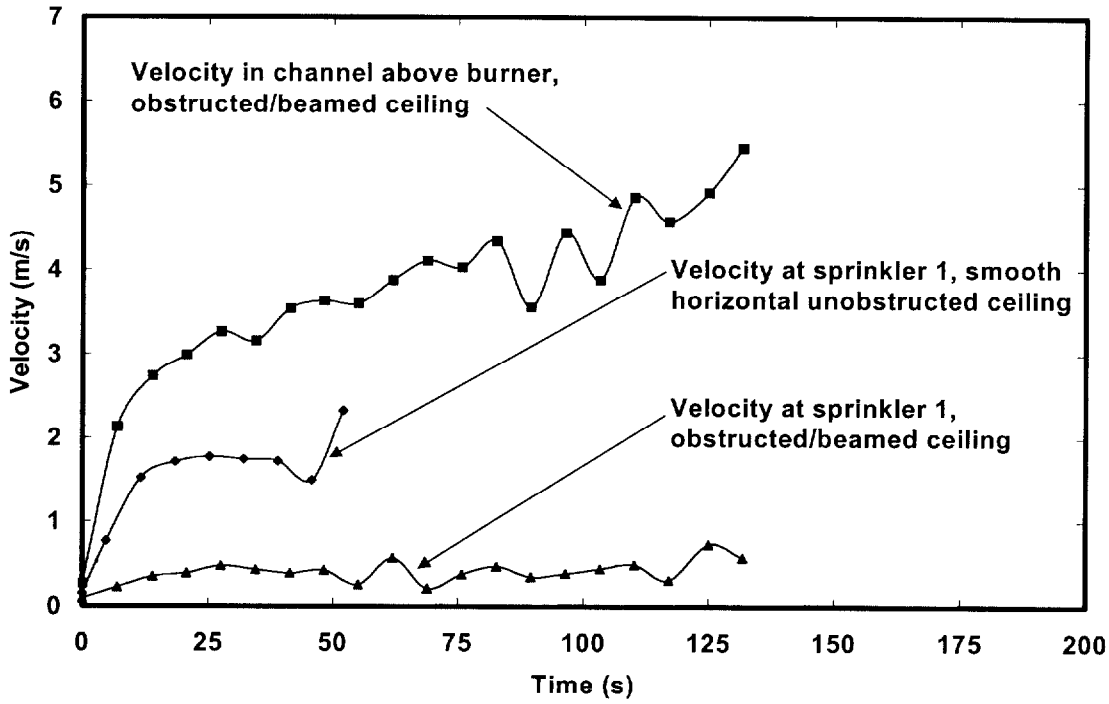

Figure 15 - Ceiling jet velocity comparisons for corner burner position, medium fire growth.

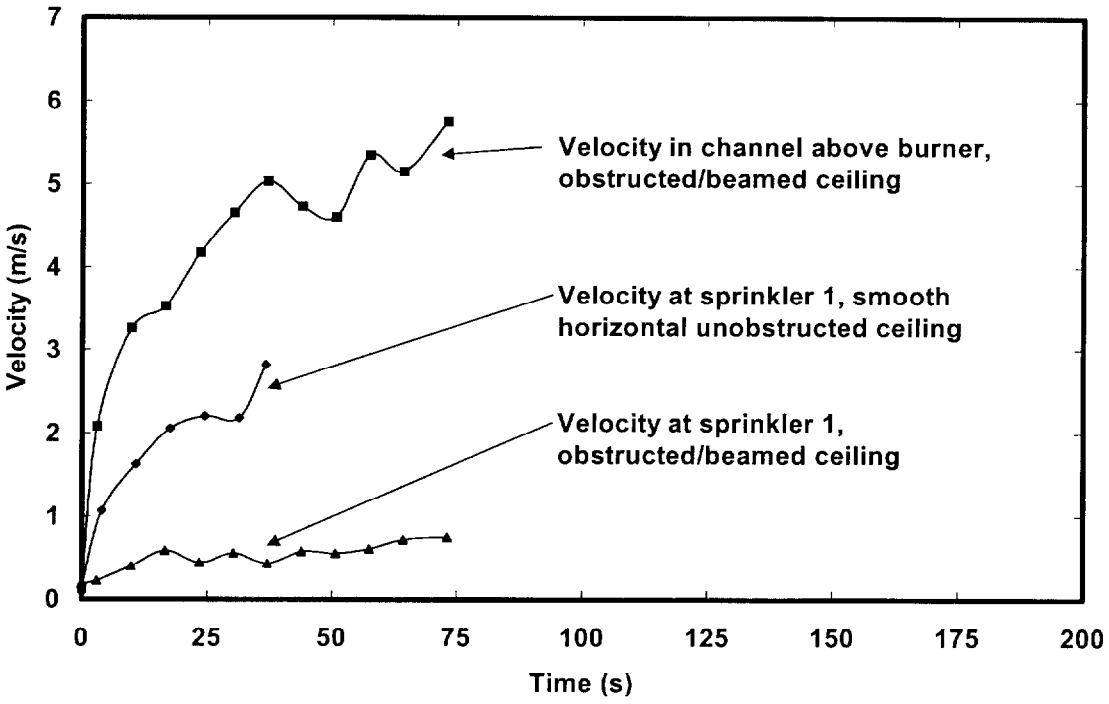

Figure 16 - Ceiling jet velocity comparisons for corner burner position, fast fire growth.

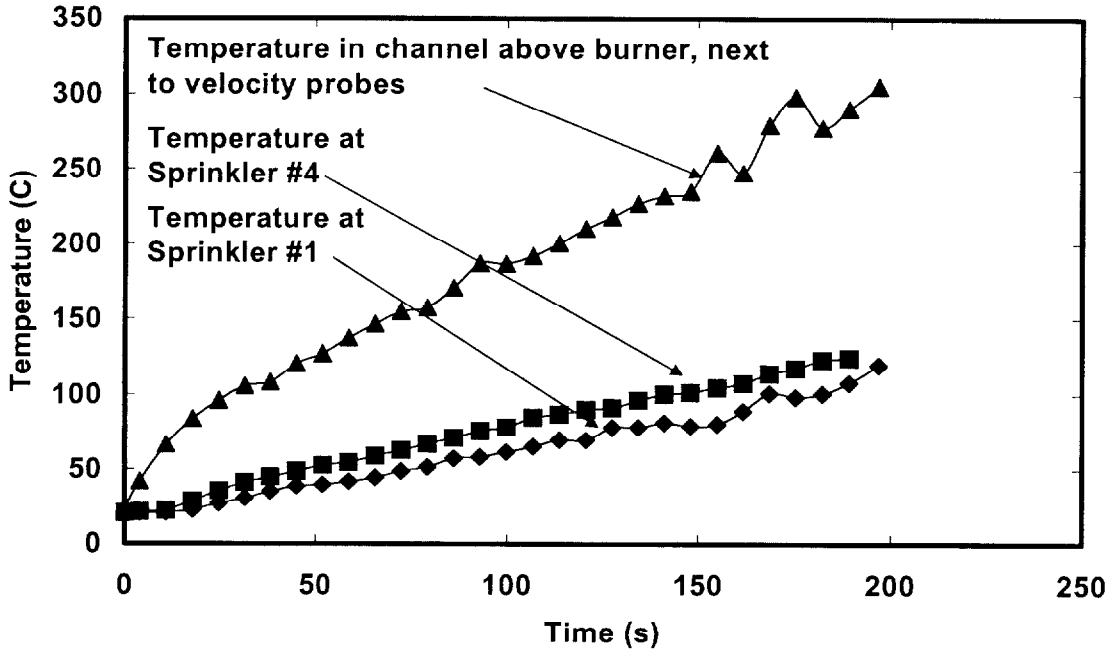

Figure 17 - Ceiling jet temperature comparisons at sprinklers 1 and 4 and in the channel above the burner, obstructed/beamed ceiling, burner in corner, slow fire growth.

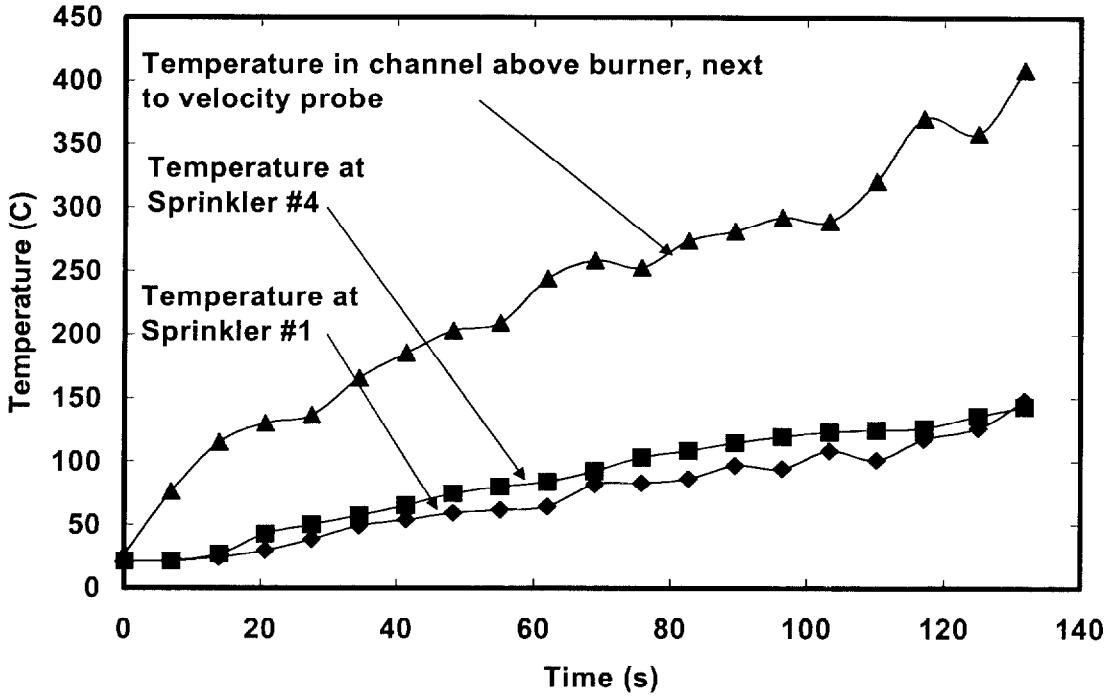

Figure 18 – Ceiling jet temperature comparisons at sprinklers 1 and 4 and in the channel above the burner, obstructed/beamed ceiling, burner in corner, medium fire growth.

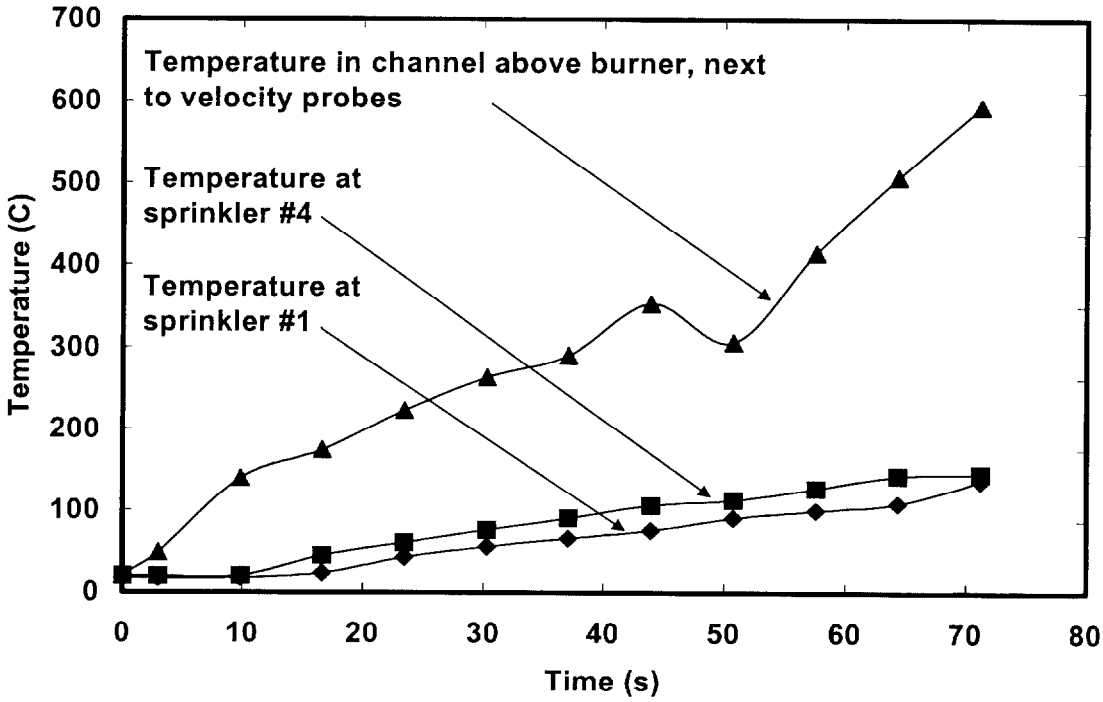

Figure 19 – Ceiling jet temperatures comparisons at sprinklers 1 and 4 and in the channel above the burner, obstructed/beamed ceiling, burner in corner, fast fire growth.

8 Appendix A: Determination of the Response Time Index (RTI) and Conductivity (C) Factor

The attached is Underwriters Laboratory's report and test data obtained during their investigation of the Response Time Index and Conductivity Factor for the quick response residential sprinkler used in these experiments.

As requested, we have prepared a summary of the Response Time Index, (RTI) and Conductivity Factor, (C) generated on the sample automatic sprinklers submitted. The tests were conducted in accordance with the Standard for the Requirements and Methods of Test for Sprinklers, ISO 6128-1.

TEST RECORD

SAMPLES:

Representative standard orifice automatic sprinklers utilizing a 3.0 mm glass bulb in the 68°C (155 °F) temperature rating were provided by the National Institute of Standards and Technology.

DETERMINATION OF CONDUCTIVITY FACTOR (C):

METHOD

Sample sprinklers were fitted with 1 to 1.5 wraps of PTFE sealant tape and screwed into a test fixture mount. The test fixture mount and sprinkler were then conditioned for at least 30 minutes at 20 ± 0.5°C.

Following the conditioning, the inlet of each sprinkler was filled with water and connected to a source of air pressure at 4 ± 1 psi. The sample was then plunged into the oven test section which was preheated to a temperature of 128 °C.

The temperature of the sprinkler mount was monitored during each test and maintained at a temperature of 20 ± 0.5 °C by flowing cooling water through tubing around the mount.

It was planned to repeat the plunge test at various air velocities in the test section such that the sprinkler would not operate at one velocity and operate within 15 minutes at a higher velocity where the square root of the ratio of the high velocity to the low velocity did not exceed 1.1.

RESULTS

The results of the prolonged plunge test are shown in Table 1 below. Since the sprinklers operated at zero velocity, a conductivity factor of 0.25 was established for the sprinklers in accordance with Note 3 to Paragraph 7.6.2.2.1 of ISO 6182-1.

TABLE 1 - PROLONGED PLUNGE TEST RESULTS

Sample No.	Plunge Temperature, °C	Operating Time, sec
1	128	804
2	128	252
3	128	724

DYNAMIC HEATING - DETERMINATION OF RESPONSE TIME INDEX (RTI):

METHOD

The Response Time Index, (RTI) of the representative sprinklers was determined using the Sensitivity Oven Heat Test method. Twenty samples rated 155°F were subjected to this test.

Each sample was fitted with 1 to 1.5 wraps of PTFE sealant tape and screwed into a test a test fixture mount. The test fixture mount and sprinkler were then conditioned for at least 30 minutes at 20 ± 0.5 °C.

Following the conditioning, the inlet of each sprinkler was filled with water and connected to a source of air pressure at 4 ± 1 psi. The sprinkler was quickly plunged into the oven and its operating time was automatically recorded.

The test was repeated so that 10 samples were tested with the frame arms (1) perpendicular to the air flow, and (2) offset 25 degrees from the parallel position to the air flow.

The RTI of each sample was calculated using the following parameters:

Oven Velocity, m/s:	1.765
Operation Bath Temperature, °C:	67.53
Room Ambient Temperature, °C:	23.89
Oven Air Temperature, °C:	135
Mount Temperature, °C:	20
Conductivity Factor, (C):	0.25

RESULTS

The results of the Dynamic Heating Test are contained in Tables 2 and 3.

TABLE 2 - PLUNGE OVEN RESULTS
Frame Arms Perpendicular to Air Flow

Sample No.	Response Time, sec	RTI, $(m*s)^{1/2}$
1	24.46	61.42
2	21.43	53.82
3	19.91	49.99
4	25.66	64.44
5	19.15	48.08
6	22.03	55.31
7	19.97	50.14
8	25.42	63.83
9	23.71	59.54
10	20.39	51.20

Average RTI = $55.78(m*s)^{1/2}$

TABLE 3 - PLUNGE OVEN RESULTS
Frame Arms Offset 25 Degrees From the Parallel Position to the Air Flow

Sample No.	Response Time, sec	RTI, $(m*s)^{1/2}$
1	27.93	70.88
2	23.68	60.10
3	22.68	57.58
4	17.39	44.13
5	30.74	78.03
6	21.11	53.57
7	31.14	79.04
8	17.97	45.61
9	23.65	60.03

10	36.99	93.88

Average RTI = 64.29$(m*s)^{1/2}$

SUMMARY

This report provides test data which was obtained under an investigation concerning the Response Time Index and the Conductivity Factor of automatic sprinklers.

In no event shall UL be responsible to anyone for whatever use or nonuse is made of the information contained in this Report, and in no event shall UL, its employees, or its agent incur any obligation or liability for damages, including, but not limited to, consequential damage arising out of or in connection with the use, or inability to use, the information contained in this Report.

This serves to terminate our work under Assignment 96NK9527.

Report by:

Jennifer Owers
Engineer

Reviewed by:

William M. Carey
Senior Staff Engineer

9 Appendix B – Data Set

Data from all 45 experiments is given in this appendix. For all 45 experiments, the following data are listed. All thermocouple data at sprinklers 1, 2, 3, and 4. All ceiling jet velocity data at sprinklers 1 and 2. For the obstructed/beamed ceiling in which the burner was placed in the corner, data from the two velocity probes located within the ceiling joists above the burner is also given. For the smooth horizontal unobstructed ceiling experiments the distance labels at the top of each column represents the distance below the ceiling the instrument was located. For the horizontal obstructed/beamed ceiling experiments the gypsum board on the ceiling was removed exposing the ceiling joists. Since none of the original instrumentation was moved, the distance labels at the top of each column represent the distance below the ceiling as if the gypsum board ceiling was still in place.

Experiment Number 1

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	16.6	16.8	16.8	16.8	16.8	16.8	16.8	16.7	16.6	16.5	16.4	16.1
6.1	16.7	17.0	18.6	19.1	19.8	19.8	18.6	20.9	18.7	17.4	16.6	16.3
13.0	22.3	39.7	46.8	46.7	44.6	45.2	42.4	37.8	27.5	18.2	17.0	16.7
19.7	28.7	58.6	67.4	66.3	64.5	66.1	61.4	55.6	38.8	32.4	30.4	18.4
26.6	35.0	70.2	78.6	78.6	76.9	77.7	74.4	68.5	60.5	55.7	31.0	17.8
33.4	40.8	82.5	93.1	88.8	89.0	87.4	87.1	80.1	74.6	67.8	46.9	19.7
40.3	49.2	107.3	127.5	126.7	126.9	123.6	118.6	107.6	96.3	89.6	69.7	24.0
47.2	56.8	117.6	131.9	130.0	135.0	133.7	135.1	122.8	114.5	105.0	78.3	37.2
53.9	62.1	129.8	147.7	135.1	127.2	132.0	101.4	135.7	122.5	116.0	93.5	47.2
60.9	61.6	113.5	125.0	111.7	112.3	119.2	108.2	124.5	117.8	107.5	95.2	51.3

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	16.7	16.8	16.8	16.9	16.9	16.9	16.8	16.8	16.8	16.7	16.6	16.1
6.1	17.7	23.7	24.1	24.1	24.9	25.0	24.7	22.2	19.6	18.0	16.8	16.3
13.0	24.0	49.0	50.7	50.9	50.1	49.0	45.7	35.9	27.5	20.2	17.3	16.8
19.7	33.0	72.8	74.7	74.5	73.7	73.4	69.9	59.5	46.6	36.4	31.6	21.1
26.6	38.8	85.5	89.8	89.4	90.5	90.9	91.3	81.5	66.3	49.5	32.2	18.4
33.4	41.6	94.4	100.5	100.0	103.1	100.3	102.9	92.9	86.4	71.7	58.9	24.7
40.3	48.2	116.7	121.3	123.8	127.5	125.8	125.9	113.9	97.7	89.1	75.8	29.3
47.2	54.6	125.4	133.0	131.8	135.1	130.5	132.3	121.9	111.0	95.1	68.9	45.2
53.9	57.8	105.9	105.1	71.7	116.0	63.4	109.4	125.9	126.4	114.0	98.1	54.6
60.9	50.3	100.0	96.3	98.0	102.2	104.7	101.6	109.7	115.8	104.7	97.5	51.8

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	16.6	16.7	16.9	16.9	16.9	16.9	16.9	16.8	16.6	16.3	16.2	16.1
6.1	16.6	16.8	17.0	17.0	16.9	16.9	16.8	16.8	16.6	16.4	16.3	16.4
13.0	16.9	22.3	24.9	24.1	21.8	21.6	21.2	19.9	18.2	16.9	16.7	16.5
19.7	18.3	30.9	38.6	39.0	36.1	36.4	34.3	28.8	24.9	20.7	17.4	16.8
26.6	20.1	46.2	58.1	59.4	55.7	57.4	54.0	49.2	44.2	35.5	29.1	21.9
33.4	22.2	51.3	63.3	62.9	61.4	63.2	60.3	54.5	49.1	42.4	38.8	27.7
40.3	25.6	68.8	79.3	79.0	76.0	76.7	73.0	67.6	59.6	50.2	48.3	38.7
47.2	27.6	75.7	95.4	95.2	91.5	92.1	87.7	76.5	66.2	61.0	60.4	49.0
53.9	29.8	82.3	103.5	103.5	101.2	99.8	96.3	84.2	77.5	72.4	72.2	58.7
60.9	29.6	79.2	105.5	105.3	101.9	102.4	100.2	89.0	83.5	82.9	82.3	59.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	16.6	16.7	16.8	16.8	16.7	16.7	16.6	16.5	16.4	16.3	16.3	16.1
6.1	16.8	16.7	16.9	16.9	16.8	16.8	16.7	16.6	16.5	16.5	16.4	16.5
13.0	20.2	27.7	30.5	29.1	24.0	22.7	21.7	20.6	18.6	16.7	16.7	17.0
19.7	21.6	40.3	40.6	39.9	38.4	39.5	38.9	30.6	25.8	22.2	22.1	19.2
26.6	26.2	52.6	55.3	55.4	53.9	55.9	56.2	49.5	48.0	38.8	35.8	20.2
33.4	28.9	61.4	68.0	67.6	66.3	68.2	69.5	63.1	57.4	49.7	46.3	21.3
40.3	36.0	81.3	84.9	84.2	81.7	83.5	83.1	76.1	69.3	60.3	60.2	27.8
47.2	44.9	93.7	95.7	94.7	90.8	92.3	92.5	84.0	79.7	76.2	72.8	38.6
53.9	44.5	101.1	108.5	107.9	104.2	105.1	105.5	97.1	94.9	90.3	86.0	47.5
60.9	44.7	108.5	109.5	110.1	108.8	111.5	111.8	104.7	102.4	98.7	90.1	49.3

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.1	-1.5	-1.4	-1.4	-0.5
13.0	-1.3	-1.2	-1.0	-0.2
19.7	-1.5	-1.8	-1.7	-0.9
26.6	-1.8	-1.7	-1.4	-0.5
33.4	-1.6	-1.4	-1.4	-0.7
40.3	-1.2	-1.6	-1.6	-0.8
47.2	-1.2	-1.5	-1.7	-0.8
53.9	-0.8	-0.6	-0.4	-0.5
60.9	0.2	0.2	0.1	-0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.1	1.2	1.1	0.9	0.4
13.0	1.1	1.2	1.2	0.4
19.7	1.6	1.6	1.3	0.4
26.6	1.3	1.6	1.4	0.9
33.4	1.1	1.2	1.1	0.3
40.3	1.5	1.5	1.7	0.7
47.2	1.3	1.4	1.4	0.8
53.9	0.5	0.6	0.5	0.6
60.9	0.4	0.4	0.5	0.5

Experiment Number 2

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.0	19.0	19.1	19.0	19.0	19.0	18.9	18.9	18.8	18.7	18.7	18.6
0.3	19.1	19.0	19.0	19.0	18.9	18.9	18.9	18.9	18.9	18.8	18.8	18.6
7.2	19.5	23.4	28.7	29.2	29.1	29.7	27.2	24.4	21.1	19.5	19.0	18.7
14.0	24.4	42.3	52.0	52.4	51.4	52.9	48.8	46.5	29.2	21.0	19.3	18.9
20.8	31.5	59.0	67.6	66.8	64.6	67.2	64.1	55.2	41.6	37.7	33.2	23.0
27.7	38.2	75.2	86.5	85.6	81.2	82.2	78.7	69.1	60.0	54.4	31.4	20.9
34.5	44.8	90.8	108.9	108.9	103.8	99.8	97.2	82.9	73.5	66.5	46.8	23.3
41.4	53.0	115.5	138.6	134.7	125.9	125.2	119.6	120.0	107.5	92.9	76.6	26.2
48.2	59.4	122.9	108.5	53.3	100.4	115.2	94.7	117.3	118.5	112.5	87.4	42.0
55.0	62.5	124.8	135.1	107.1	135.2	137.0	106.2	140.3	131.5	119.8	106.0	53.8

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.0	19.3	19.2	19.1	19.1	19.1	19.1	18.9	18.8	18.7	18.7	18.5
0.3	19.2	19.5	19.3	19.3	19.1	19.2	19.2	19.1	18.9	18.7	18.6	18.5
7.2	21.3	31.7	33.8	34.3	34.2	31.7	31.8	28.6	22.8	19.1	19.0	18.7
14.0	26.4	49.0	51.6	52.7	52.5	51.4	51.3	42.9	36.1	21.0	19.4	19.0
20.8	33.3	73.2	75.4	75.7	76.2	74.5	74.8	65.4	45.6	39.6	31.7	20.3
27.7	40.1	86.8	89.0	88.5	90.4	88.7	88.7	77.7	64.9	57.2	37.0	20.3
34.5	44.8	107.8	115.9	113.6	115.2	107.4	109.6	98.0	80.9	71.0	58.6	30.0
41.4	54.1	120.8	127.7	126.3	129.5	123.7	126.1	115.3	104.4	88.1	70.6	36.8
48.2	57.9	131.6	136.8	83.3	119.0	85.7	103.3	124.2	92.6	107.8	52.8	45.6
55.0	60.8	134.6	140.8	146.5	151.5	149.4	147.0	132.3	126.6	112.0	98.0	54.9

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	18.3	18.4	18.6	18.7	18.7	18.7	18.7	18.6	18.6	18.5	18.5	18.5
0.3	18.4	18.6	18.8	18.9	18.9	18.9	18.8	18.7	18.7	18.7	18.8	18.7
7.2	18.4	18.6	18.8	18.9	18.9	18.9	18.9	18.9	18.9	19.0	18.9	18.9
14.0	18.8	26.6	30.2	28.9	25.9	25.7	23.7	21.4	21.0	19.2	19.1	19.1
20.8	20.3	35.0	44.7	42.8	39.6	40.7	37.7	31.0	26.0	22.1	20.1	19.4
27.7	22.3	50.8	60.1	61.5	57.9	59.8	56.5	48.2	43.7	36.5	32.7	27.9
34.5	25.0	54.1	68.1	67.6	64.8	64.1	61.8	55.3	50.1	44.0	42.8	31.7
41.4	27.5	67.1	89.0	89.9	86.1	88.2	82.7	74.6	61.1	55.6	54.8	40.8
48.2	30.4	76.6	100.3	102.5	99.2	101.1	96.5	86.9	77.4	66.6	66.5	52.4
55.0	32.0	80.8	105.4	106.1	101.9	100.7	96.8	85.8	80.5	76.1	76.6	64.6

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	18.4	18.9	18.9	18.9	18.8	18.8	18.8	18.7	18.7	18.6	18.5	18.4
0.3	18.4	18.7	18.8	18.8	18.7	18.8	18.8	18.7	18.8	18.7	18.6	18.5
7.2	18.6	18.9	19.1	19.0	18.9	18.8	18.8	18.9	18.8	18.8	18.8	18.9
14.0	21.9	28.9	29.0	28.1	24.9	24.1	23.8	21.8	20.6	19.0	19.0	19.2
20.8	25.0	44.3	49.0	47.8	45.1	46.0	46.1	39.1	28.5	26.7	26.2	22.0
27.7	28.4	57.8	61.2	60.3	58.2	59.5	57.4	48.4	44.0	40.1	39.2	22.4
34.5	31.7	65.5	69.3	68.7	66.3	67.9	68.3	63.2	61.6	52.7	50.3	24.4
41.4	41.5	82.5	93.8	93.7	91.0	90.5	87.9	71.8	65.7	61.6	63.1	32.9
48.2	47.6	104.9	107.0	104.9	101.9	104.5	105.1	95.0	84.4	82.9	79.0	44.9
55.0	52.0	112.4	114.9	115.1	112.3	113.5	112.7	100.0	96.9	93.9	90.3	56.2

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.3	-0.2	-0.2	-0.3	-0.2
7.2	-1.1	-1.2	-1.1	-0.8
14.0	-1.2	-1.3	-1.2	-0.3
20.8	-1.3	-1.3	-0.7	-0.4
27.7	-1.1	-1.4	-1.3	0.4
34.5	-1.7	-1.6	-1.2	-0.6
41.4	-1.8	-1.8	-1.3	-0.7
48.2	-1.2	-1.0	-0.9	-0.3
55.0	-1.0	-0.8	-0.8	-0.4

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.3	0.2	0.2	0.2	0.2
7.2	1.0	0.9	0.7	0.6
14.0	1.3	1.4	1.0	0.4
20.8	0.7	1.0	1.0	0.6
27.7	1.4	1.4	1.2	0.7
34.5	1.2	1.2	1.2	0.8
41.4	1.5	1.5	1.4	1.0
48.2	0.9	0.8	1.1	0.8
55.0	0.8	0.7	0.8	0.5

Experiment Number 3

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.8	20.9	20.9	20.9	20.9	20.8	20.8	20.8	20.6	20.4	20.1	19.3
5.2	21.7	26.2	30.6	30.9	30.6	31.1	27.9	26.5	23.7	21.6	20.7	19.3
12.1	27.6	43.3	50.0	48.7	49.9	49.2	49.2	41.4	33.6	22.5	21.1	19.5
18.8	33.2	64.2	79.2	74.3	75.1	74.0	69.4	61.8	48.0	41.8	30.2	20.6
25.7	39.2	74.9	90.7	85.0	88.5	84.3	86.1	74.7	61.4	51.2	36.2	21.0
32.5	46.0	92.8	116.6	106.8	112.3	106.7	110.2	89.5	85.6	74.6	60.3	25.2
39.4	53.2	108.2	131.8	119.8	123.8	117.8	120.0	97.6	107.8	98.1	81.8	28.0
46.2	58.4	107.8	109.4	95.1	85.7	86.5	98.3	71.4	117.2	106.6	87.3	43.5
53.0	66.2	146.8	181.0	155.7	117.9	120.6	134.2	99.3	133.3	129.7	103.6	59.6

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.8	20.9	20.8	20.9	20.8	20.8	20.7	20.6	20.5	20.4	20.1	19.4
5.2	23.7	38.0	39.5	40.4	42.5	43.2	42.7	39.9	27.9	24.4	22.1	20.1
12.1	31.0	58.1	61.0	60.9	60.4	58.7	57.5	47.0	33.7	23.2	20.9	20.2
18.8	34.9	68.2	71.3	72.2	72.9	71.1	71.0	60.7	50.6	37.7	29.0	21.6
25.7	42.7	91.7	96.7	97.5	97.6	94.1	94.3	76.8	65.0	58.5	43.0	21.6
32.5	49.0	106.5	109.6	107.7	111.7	109.7	113.8	110.8	88.6	74.4	65.7	30.6
39.4	54.0	121.4	127.8	126.4	129.9	127.3	132.7	120.4	108.6	95.3	78.2	39.6
46.2	61.0	135.9	143.3	139.3	143.7	140.2	144.4	93.4	115.2	98.2	67.4	47.4
53.0	72.6	156.7	170.9	156.1	164.6	159.6	164.5	146.4	146.9	132.9	118.2	59.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.0	21.1	20.9	20.8	20.8	20.8	20.8	20.7	20.6	20.5	20.3	19.3
5.2	21.1	21.2	21.0	20.9	20.9	20.9	21.0	20.9	20.9	20.4	20.3	19.8
12.1	21.6	28.4	31.6	30.3	27.5	28.2	25.5	22.6	22.4	21.4	20.5	20.1
18.8	23.1	39.8	46.1	44.5	41.3	40.7	39.1	32.6	28.4	26.0	24.1	21.4
25.7	24.7	49.9	59.9	60.9	58.5	59.7	56.7	51.5	45.5	39.9	37.3	26.4
32.5	28.2	57.5	74.3	71.9	69.2	66.3	62.4	53.4	48.2	45.8	42.5	32.8
39.4	29.6	72.6	88.7	89.1	86.8	88.6	86.3	80.3	72.0	58.6	56.6	44.7
46.2	31.2	73.0	95.7	96.8	94.0	94.7	92.3	84.9	77.6	66.4	65.2	52.1
53.0	35.0	91.5	116.5	115.5	109.9	107.4	101.5	91.4	85.3	79.2	75.7	62.6

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.0	21.1	21.0	21.0	20.9	20.9	20.9	20.7	20.6	20.4	20.1	19.4
5.2	21.3	21.2	21.2	21.2	21.0	20.9	20.9	20.9	20.8	20.7	20.6	19.8
12.1	23.8	29.0	31.8	31.0	29.6	29.2	28.8	24.7	23.0	21.3	20.9	20.4
18.8	26.7	49.7	52.3	52.4	49.8	51.1	50.8	43.4	36.2	31.0	30.1	24.3
25.7	30.7	57.8	64.6	64.1	61.4	63.6	62.6	53.9	52.3	46.2	45.1	23.9
32.5	34.2	72.0	75.8	75.5	73.6	75.6	75.5	68.1	65.7	58.1	57.6	25.4
39.4	40.1	81.3	87.6	87.0	84.7	87.7	86.9	80.4	75.9	69.6	68.2	35.9
46.2	45.1	103.7	107.2	106.9	103.6	104.7	103.4	87.0	83.0	79.9	77.8	46.0
53.0	52.3	108.2	115.8	117.5	115.0	120.6	119.6	109.0	109.2	97.0	93.0	54.2

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.2	-1.0	-1.1	-1.1	-0.4
12.1	-1.2	-1.0	-0.5	-0.2
18.8	-1.4	-1.1	-0.6	-0.4
25.7	-1.5	-1.7	-1.6	-0.6
32.5	-1.3	-1.3	-0.8	-0.7
39.4	-1.6	-1.6	-1.6	-0.6
46.2	-1.2	-1.2	-0.8	-0.7
53.0	-1.7	-1.9	-1.4	-0.4

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.2	1.1	1.3	1.3	0.5
12.1	1.3	1.1	0.9	0.4
18.8	1.2	1.2	1.4	0.4
25.7	1.3	1.1	1.0	0.7
32.5	1.1	0.9	0.7	0.4
39.4	1.3	1.2	1.0	0.4
46.2	2.3	1.7	1.4	0.9
53.0	1.7	1.6	1.2	0.7

Experiment Number 4

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.0	21.1	21.3	21.5	21.3	21.2	21.2	21.3	21.0	21.0	20.9	20.2
6.8	21.1	21.0	21.3	21.5	21.2	21.1	21.2	21.4	21.2	21.1	21.1	20.3
13.5	22.5	23.1	24.2	25.3	26.2	25.3	24.9	28.0	27.3	25.2	23.3	20.8
20.3	44.4	43.2	46.9	46.6	43.9	43.5	37.3	29.1	24.1	23.0	22.3	21.0
27.2	55.3	56.2	60.1	61.3	61.3	60.9	52.8	47.9	29.3	23.8	22.5	21.5
33.9	69.6	70.8	75.9	75.2	72.7	73.0	64.2	56.1	40.2	33.9	32.0	24.6
40.8	76.7	76.5	79.1	78.7	77.3	77.2	73.2	71.7	63.6	50.4	41.8	29.6
47.6	94.3	95.1	102.5	104.3	102.5	106.2	95.2	80.7	65.9	62.5	53.4	34.5
54.3	102.9	103.4	108.4	108.9	107.5	108.7	102.0	93.3	76.2	68.7	64.1	41.4
61.3	111.3	112.1	118.8	121.5	118.1	121.8	116.1	112.3	91.9	80.5	75.1	55.6
68.0	149.5	152.3	164.5	167.1	160.4	160.6	143.8	126.4	101.9	87.6	81.4	62.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.1	21.3	21.3	21.3	21.2	21.3	21.2	21.0	21.0	21.0	20.9	20.1
6.8	21.1	21.3	21.3	21.3	21.3	21.3	21.2	21.2	21.0	21.0	21.1	20.4
13.5	30.0	34.1	34.3	38.1	37.9	37.0	35.0	29.1	26.0	26.4	22.6	21.1
20.3	44.9	50.6	50.9	51.8	50.7	48.7	45.9	30.1	23.4	22.7	22.0	21.2
27.2	57.4	62.6	62.9	64.6	64.2	63.9	62.2	52.9	38.4	24.1	22.8	21.8
33.9	70.4	76.2	76.6	78.6	77.7	77.0	75.3	63.9	48.5	36.3	33.2	24.5
40.8	82.3	89.7	91.7	95.8	97.6	96.7	95.3	75.9	62.1	50.5	44.3	24.7
47.6	95.8	103.6	105.3	108.9	107.7	104.6	101.9	83.6	69.2	62.1	57.0	30.7
54.3	98.0	103.2	104.4	107.4	107.3	109.2	108.9	102.5	86.6	77.2	67.3	37.8
61.3	106.6	116.1	117.6	121.2	122.7	124.8	123.2	106.2	95.1	82.7	69.0	44.6
68.0	150.0	164.8	162.5	162.0	160.4	157.6	153.6	133.3	102.5	90.3	81.0	50.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.1	21.1	21.0	21.0	21.2	21.2	21.2	21.0	20.9	20.9	20.7	20.2
6.8	21.2	21.5	21.6	21.8	21.4	21.3	20.8	21.0	20.6	20.8	21.4	21.1
13.5	21.6	21.8	21.3	21.0	21.1	21.2	21.7	21.4	21.9	21.3	20.9	20.0
20.3	25.5	23.5	27.2	26.0	25.1	26.1	26.9	27.5	28.4	28.3	27.6	22.9
27.2	33.5	34.7	38.5	38.1	38.5	39.9	40.5	40.5	38.5	31.3	28.3	22.1
33.9	36.6	39.6	39.3	43.4	42.4	45.0	44.8	44.7	46.8	43.0	42.7	23.9
40.8	45.1	48.7	49.0	50.2	51.5	56.0	55.6	55.4	58.3	53.4	52.9	24.4
47.6	42.5	46.3	49.2	54.6	57.1	61.6	64.1	67.9	72.7	66.8	59.4	33.6
54.3	64.0	75.0	74.2	76.6	75.6	79.2	81.1	80.7	82.7	73.7	60.3	42.9
61.3	55.4	53.9	64.2	65.5	70.1	72.0	74.0	77.7	83.1	79.6	74.9	48.4
68.0	62.9	76.3	84.3	87.8	88.5	95.7	100.3	98.8	105.6	95.3	81.6	55.4

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.2	21.3	21.3	21.3	21.1	21.2	21.2	21.1	21.1	20.9	20.7	20.2
6.8	21.2	21.3	21.3	21.3	21.1	21.2	21.2	21.2	21.2	20.9	20.7	20.2
13.5	21.7	21.7	21.7	21.6	21.9	22.3	22.4	22.0	21.4	21.3	21.3	20.9
20.3	26.0	30.0	30.1	31.6	31.7	32.4	32.9	32.9	32.2	28.8	26.6	22.0
27.2	33.1	34.9	35.7	37.1	37.8	38.9	39.6	40.7	42.5	39.9	34.6	22.2
33.9	41.7	45.1	44.5	45.8	46.5	47.4	48.1	49.6	51.9	50.9	50.1	25.5
40.8	47.7	55.4	54.8	58.6	58.1	58.5	63.3	67.3	68.0	64.1	59.1	26.4
47.6	66.3	66.2	66.7	69.5	70.3	73.0	74.7	73.9	75.7	72.9	70.7	36.0
54.3	77.9	78.6	78.0	81.6	78.7	79.8	79.5	80.3	83.6	81.2	78.4	43.2
61.3	67.7	72.1	72.2	76.4	79.8	81.8	82.4	82.9	89.5	89.9	91.9	64.0
68.0	79.6	89.4	85.8	96.4	105.0	106.3	108.4	111.4	113.0	106.9	109.7	75.3

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.8	-0.1	-0.1	0.0	-0.1
13.5	-0.8	-0.8	-0.8	-0.5
20.3	-1.0	-1.0	-0.9	-0.3
27.2	-0.9	-0.8	-0.6	-0.3
33.9	-0.8	-0.9	-0.7	-0.4
40.8	-0.9	-0.9	-0.8	-0.5
47.6	-0.7	-0.8	-0.9	-0.6
54.3	-0.8	-1.0	-0.9	-0.7

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.8	0.2	0.2	0.3	0.2
13.5	0.8	0.8	0.6	0.1
20.3	0.9	1.0	1.0	0.7
27.2	1.0	1.0	1.0	0.3
33.9	0.8	0.9	0.9	0.5
40.8	0.9	0.9	0.9	0.6
47.6	0.7	0.8	0.9	0.4
54.3	0.7	0.7	0.8	0.5

61.3	-1.1	-1.3	-1.1	-0.9	61.3	1.2	1.1	1.3	0.6
68.0	-1.1	-1.1	-1.0	-0.6	68.0	1.2	1.3	1.3	0.2

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
6.8	2.0	1.0
13.5	2.1	0.8
20.3	2.4	1.3
27.2	2.6	1.4
33.9	3.1	1.3
40.8	3.2	1.3
47.6	3.1	1.5
54.3	3.0	1.8
61.3	3.0	2.2
68.0	3.9	2.0

Experiment Number 5

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.0	20.1	20.2	20.2	20.2	20.0	20.2	20.0	20.3	20.2	20.0	19.9
5.9	20.1	20.2	20.3	20.3	20.3	20.1	20.2	20.1	20.2	20.2	20.2	20.0
12.7	25.4	26.3	28.8	29.2	29.3	30.1	25.7	25.3	22.7	21.4	20.8	20.5
19.5	48.6	47.7	51.2	50.2	46.4	46.7	39.6	26.5	22.9	21.3	21.2	20.9
26.4	61.3	62.2	66.8	66.7	64.3	64.8	55.3	46.2	27.5	22.3	22.8	21.2
33.2	72.7	74.2	78.6	77.5	73.7	71.7	63.7	52.6	39.6	34.6	33.2	24.2
40.1	87.1	86.4	88.9	87.4	84.6	85.9	79.5	71.2	56.1	44.7	38.7	27.6
46.9	93.8	94.6	98.2	100.4	99.6	104.1	96.4	92.2	71.0	59.4	50.8	28.2
53.6	110.3	109.5	114.9	114.7	110.9	111.8	104.3	94.4	84.1	69.3	59.1	35.1
60.6	108.2	113.7	119.1	123.0	121.7	123.9	115.1	103.8	90.2	80.2	73.8	42.3
67.3	146.3	150.0	161.0	161.9	156.9	157.4	141.3	129.8	106.2	89.7	83.4	62.2

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.3	20.4	20.3	20.4	20.4	20.3	20.2	20.4	20.3	20.3	19.9
5.9	20.2	20.4	20.5	20.4	20.4	20.4	20.3	20.2	20.4	20.3	20.3	20.1
12.7	29.6	35.9	37.0	39.5	39.7	39.7	37.4	31.4	24.4	23.0	21.8	20.5
19.5	42.2	47.0	46.2	44.0	43.0	41.4	39.1	32.3	22.8	21.9	21.4	20.8
26.4	52.8	56.6	57.7	59.6	60.2	59.6	58.9	55.0	35.6	22.4	21.9	21.4
33.2	70.4	77.3	79.5	79.5	81.0	79.7	78.7	67.6	51.6	41.9	33.9	24.3
40.1	75.8	84.4	86.6	89.5	90.5	90.4	89.1	76.6	57.4	50.7	39.8	25.9
46.9	97.5	106.4	105.7	108.0	107.6	107.2	105.2	89.5	68.2	59.9	56.5	34.3
53.6	103.8	111.2	112.4	113.3	115.2	114.5	114.1	105.1	85.2	70.5	64.4	38.4
60.6	116.9	127.4	130.4	131.9	133.2	134.0	131.9	120.9	100.3	83.0	72.0	45.5
67.3	143.2	154.7	158.7	162.2	168.5	170.0	168.4	149.3	111.7	94.2	82.8	52.0

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.4	20.5	20.6	20.7	20.7	20.8	20.7	20.7	20.6	20.4	20.3	19.9
5.9	20.6	20.6	20.7	20.8	20.8	20.8	20.7	20.6	20.5	20.4	20.4	20.0
12.7	20.7	20.8	20.8	20.8	20.8	20.9	20.9	20.9	20.7	20.6	20.5	20.2
19.5	25.1	23.5	26.3	27.0	26.9	27.5	28.2	27.9	29.6	27.4	26.4	23.8
26.4	27.1	28.5	31.8	32.3	32.6	33.4	34.0	36.3	37.0	34.4	30.1	21.6
33.2	34.8	33.6	38.8	40.3	40.5	42.2	43.0	44.7	49.4	46.1	38.7	22.6
40.1	41.2	47.0	48.6	50.9	51.8	55.6	58.6	58.9	64.1	56.6	54.3	25.3
46.9	47.7	56.9	58.3	58.9	61.5	65.1	66.2	67.1	70.6	62.5	55.0	35.5
53.6	63.8	78.1	71.9	78.4	75.5	79.4	80.7	80.8	84.2	76.0	63.2	36.9
60.6	63.8	71.6	75.1	80.0	80.3	82.3	83.7	85.8	89.3	84.5	71.9	46.9
67.3	82.5	97.8	94.0	99.0	98.4	103.1	107.4	104.5	111.0	99.2	87.3	55.2

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.4	20.4	20.3	20.6	20.5	20.5	20.5	20.3	20.2	20.0	19.9	19.8
5.9	20.5	20.4	20.3	20.6	20.4	20.5	20.5	20.4	20.3	20.2	20.0	19.9
12.7	20.7	20.7	20.5	20.7	20.5	20.5	20.6	21.2	21.0	20.6	20.4	20.3
19.5	23.7	25.7	26.3	28.8	29.0	29.5	30.4	31.1	34.4	31.6	26.3	23.4
26.4	31.3	36.5	37.3	37.7	37.8	38.5	39.5	38.7	42.7	40.3	37.9	22.2
33.2	39.4	43.4	43.0	45.7	45.3	48.0	48.4	48.1	51.2	50.7	51.6	26.2
40.1	40.2	46.8	46.1	51.1	57.9	59.8	63.5	65.4	67.8	62.0	59.5	28.7
46.9	50.2	60.5	64.1	66.7	70.9	72.8	73.9	78.4	81.4	77.9	73.7	36.6
53.6	60.2	66.5	68.2	71.2	72.8	74.4	76.9	80.9	85.9	82.9	82.4	39.1
60.6	74.7	82.6	80.4	87.8	88.1	89.0	91.4	92.5	96.0	94.6	96.2	58.1
67.3	74.2	96.8	94.3	103.1	105.3	107.7	110.4	110.8	114.8	110.1	107.3	62.9

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.9	-0.2	-0.1	-0.1	-0.1
12.7	-0.9	-0.9	-0.7	-0.2
19.5	-0.9	-0.9	-0.8	-0.5
26.4	-1.0	-1.0	-0.8	-0.4
33.2	-0.7	-0.8	-0.9	-0.6
40.1	-0.7	-0.9	-0.9	-0.7
46.9	-1.2	-1.2	-1.0	-0.4
53.6	-0.7	-0.9	-1.0	-0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.9	0.1	0.2	0.2	0.2
12.7	0.9	0.9	0.9	0.5
19.5	0.9	0.9	0.7	0.4
26.4	0.9	1.1	1.1	0.6
33.2	0.6	0.7	0.7	0.8
40.1	1.0	1.0	1.0	0.7
46.9	0.9	1.0	1.1	0.6
53.6	0.8	0.8	0.9	0.7

60.6	-1.2	-1.1	-0.8	-0.5	60.6	1.0	0.8	0.9	0.6
67.3	-1.3	-1.3	-0.8	-0.6	67.3	1.0	1.2	1.4	0.8

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
5.9	1.7	0.7
12.7	2.3	1.3
19.5	2.4	1.3
26.4	2.6	1.4
33.2	2.7	1.5
40.1	2.8	1.6
46.9	1.7	1.5
53.6	3.2	1.7
60.6	4.1	2.1
67.3	4.2	1.4

Experiment Number 6

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	17.1	17.6	17.7	17.7	17.7	17.7	17.7	17.7	17.6	17.6	17.5	17.4
2.7	17.2	17.6	17.8	17.9	17.9	17.9	17.8	17.8	17.6	17.5	17.5	17.3
9.6	17.1	18.5	20.7	21.1	21.5	22.0	21.0	21.4	19.3	17.7	17.6	17.4
16.4	20.3	30.0	34.0	34.4	32.3	33.9	31.7	29.1	21.1	18.6	17.8	17.5
23.3	23.2	38.3	42.0	41.8	40.7	41.4	40.6	38.8	31.2	25.2	20.9	18.9
30.2	26.4	49.6	56.6	56.6	53.4	54.9	51.6	46.5	38.1	34.8	28.1	18.7
36.9	29.3	55.3	64.9	64.4	61.8	59.8	57.2	53.6	49.2	45.3	31.9	18.3
43.9	31.6	62.1	74.3	71.7	69.9	67.8	66.2	59.7	55.6	50.1	35.9	22.3
50.6	34.1	65.1	73.8	74.4	73.2	73.1	72.0	67.0	62.5	59.2	47.1	22.4
57.5	37.3	71.6	80.8	80.1	78.7	79.0	78.0	73.8	68.1	65.3	54.5	25.3
64.3	39.6	77.1	86.8	86.3	83.1	84.5	82.8	81.0	78.0	73.0	62.4	35.4
71.1	44.1	82.9	93.7	93.4	93.7	93.3	92.1	87.5	82.0	75.3	64.4	38.7
78.1	44.0	89.2	101.4	101.4	100.6	102.5	101.4	97.2	91.3	83.4	73.3	43.3
84.8	47.7	99.7	113.6	113.6	110.2	113.2	109.8	103.1	99.3	93.9	86.2	47.0
91.8	54.3	105.1	57.7	70.7	74.0	89.8	87.2	106.3	104.5	102.3	83.0	50.3
98.5	58.6	123.5	61.0	117.5	116.0	126.6	106.1	120.1	121.7	116.2	95.3	47.1

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	17.1	17.7	17.8	17.8	17.8	17.8	17.8	17.8	17.7	17.7	17.7	17.5
2.7	17.1	17.8	17.9	17.9	17.9	17.9	17.9	17.9	17.8	17.7	17.5	17.4
9.6	18.1	25.6	25.5	24.9	23.9	24.0	23.9	23.3	20.2	17.7	17.7	17.5
16.4	22.7	44.2	44.3	44.8	43.7	42.8	40.7	32.9	24.6	19.0	17.9	17.7
23.3	25.7	47.6	48.7	48.5	48.2	46.9	44.3	38.5	31.0	24.5	22.3	17.9
30.2	26.8	49.7	51.7	52.1	53.7	53.7	53.6	52.8	45.8	39.7	28.0	18.7
36.9	29.7	62.1	63.2	63.0	64.2	62.0	61.8	57.3	48.0	43.2	37.2	18.5
43.9	30.0	57.5	62.1	60.2	63.1	61.3	63.4	57.6	52.1	46.8	41.8	26.1
50.6	33.5	74.6	78.2	78.2	80.7	79.4	79.3	74.2	61.8	54.7	45.4	25.6
57.5	35.9	76.0	80.7	80.8	83.9	82.5	83.3	78.7	75.3	64.5	45.2	32.8
64.3	40.4	92.4	95.3	96.7	97.6	95.3	94.5	86.0	81.8	75.2	64.3	36.2
71.1	43.3	97.4	105.0	103.3	106.2	103.0	104.8	97.5	87.5	70.3	55.6	40.4
78.1	48.7	117.0	119.2	117.4	118.5	115.0	113.1	106.5	98.5	86.0	75.8	48.6
84.8	51.6	117.3	124.4	121.1	123.3	116.5	119.2	109.3	103.5	92.9	73.9	54.7
91.8	54.3	125.5	129.5	130.2	130.9	128.7	127.6	124.2	118.8	112.7	89.6	62.1
98.5	56.1	124.0	68.6	117.9	131.6	130.4	131.5	129.7	126.1	102.9	88.4	66.9

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	16.7	17.3	17.7	17.7	17.7	17.7	17.7	17.6	17.6	17.5	17.4	17.4
2.7	16.9	17.2	17.5	17.7	17.6	17.6	17.5	17.5	17.6	17.6	17.6	17.5
9.6	16.7	17.1	17.4	17.5	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.5
16.4	16.9	19.3	21.7	21.6	20.4	20.6	19.9	19.1	18.3	17.7	17.7	17.7
23.3	17.5	25.9	28.7	27.4	26.0	26.1	24.5	19.8	17.9	17.8	17.8	17.8
30.2	18.5	32.0	37.4	37.6	36.8	37.9	36.2	31.8	23.9	21.5	21.8	20.6
36.9	19.7	40.7	46.8	47.3	45.1	45.9	44.0	39.9	34.6	30.6	30.2	22.6
43.9	20.2	38.1	46.6	46.2	45.0	44.9	43.7	39.8	35.7	33.7	32.8	25.3
50.6	21.2	45.9	54.7	54.6	53.1	52.9	51.1	47.4	43.5	37.8	36.4	29.9
57.5	21.8	49.0	59.2	59.5	57.9	58.3	56.8	51.7	46.8	42.3	42.5	34.1
64.3	22.7	52.6	64.9	65.3	63.8	64.2	62.5	56.2	51.3	47.9	46.9	39.0
71.1	23.5	54.9	68.8	69.5	67.9	68.7	67.0	62.5	56.6	51.7	50.4	41.6
78.1	25.6	63.1	77.6	77.3	75.2	75.5	73.5	67.8	58.8	55.9	56.4	46.5
84.8	26.8	65.3	81.2	80.0	77.8	77.8	75.2	68.6	66.0	65.1	64.8	53.6
91.8	27.3	71.9	87.7	87.7	86.1	86.2	84.0	76.3	73.3	70.6	69.9	58.5
98.5	30.2	79.2	96.2	97.3	94.5	95.4	92.3	83.7	78.2	74.9	75.7	66.0

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	16.7	17.3	17.6	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.3
2.7	17.0	17.1	17.5	17.6	17.5	17.5	17.6	17.5	17.4	17.4	17.4	17.4
9.6	16.8	17.0	17.6	17.5	17.5	17.5	17.5	17.5	17.6	17.5	17.4	17.4
16.4	17.8	21.8	24.2	23.6	22.7	22.6	22.4	20.8	19.5	17.5	17.5	17.7
23.3	19.9	27.3	28.7	28.0	26.6	26.1	25.3	22.1	22.1	19.5	18.9	17.7
30.2	21.0	38.2	39.3	38.6	36.6	38.2	38.1	33.6	30.3	27.4	25.3	20.8
36.9	22.0	39.4	41.9	42.4	42.1	43.9	44.7	41.9	40.5	34.5	32.7	20.1

Experiment Number 6

43.9	23.9	45.0	46.9	47.6	46.6	47.9	48.3	45.5	44.0	39.2	37.4	20.4
50.6	25.1	52.3	53.6	53.0	51.8	52.7	52.4	48.2	44.8	42.6	41.1	24.4
57.5	28.9	59.4	60.4	60.0	58.6	59.8	60.4	57.2	52.4	47.2	46.0	30.5
64.3	30.1	66.1	67.3	67.3	65.3	67.4	67.9	63.0	58.8	53.4	52.3	33.2
71.1	36.0	72.6	74.5	74.9	73.3	74.9	74.8	68.4	64.6	59.6	58.3	36.6
78.1	38.0	79.5	81.3	81.3	79.5	81.2	81.5	77.3	76.1	68.3	64.8	39.9
84.8	41.0	85.8	86.6	86.9	85.4	87.6	87.3	83.1	81.2	72.7	70.8	44.3
91.8	45.5	92.3	93.2	93.0	90.5	92.5	92.2	86.6	86.2	79.5	76.8	49.6
98.5	48.7	99.9	102.7	102.5	99.7	102.8	103.9	98.1	93.6	85.4	83.6	53.7

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.7	-0.2	-0.2	-0.2	0.0
9.6	-1.0	-0.7	-0.4	-0.3
16.4	-0.9	-0.6	-0.7	-0.6
23.3	-1.2	-1.1	-1.2	-0.3
30.2	-1.2	-1.1	-1.3	-0.5
36.9	-1.4	-1.3	-1.1	-0.7
43.9	-0.8	-1.0	-1.0	-0.1
50.6	-1.5	-1.5	-1.0	-0.5
57.5	-0.9	-1.0	-0.6	-0.3
64.3	-1.1	-1.2	-0.9	-0.3
71.1	-1.0	-1.1	-1.0	-0.5
78.1	-1.4	-1.6	-1.5	-0.9
84.8	-1.8	-1.6	-1.3	-0.1
91.8	-1.6	-1.4	-1.2	-0.9
98.5	-1.2	-1.2	-1.4	-0.7

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.7	0.2	0.1	0.1	0.1
9.6	0.9	0.9	0.8	0.3
16.4	1.0	0.8	0.7	-0.1
23.3	1.1	1.0	1.0	0.5
30.2	0.8	0.8	0.7	0.4
36.9	1.4	1.4	1.2	0.5
43.9	0.7	0.7	0.6	0.3
50.6	1.2	1.1	1.1	0.4
57.5	0.9	0.9	0.9	0.6
64.3	1.1	1.2	1.0	0.5
71.1	1.4	1.4	1.4	0.8
78.1	1.2	1.5	1.4	0.7
84.8	1.1	1.2	1.3	0.4
91.8	1.4	1.6	1.4	0.9
98.5	1.3	1.3	1.1	0.6

Experiment Number 7

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.6	21.5	21.5	21.3	21.3	21.1	21.1	20.8	20.5	20.4	20.2	19.4
4.5	21.7	21.6	21.6	21.4	21.4	21.2	21.3	20.9	20.8	20.6	20.5	19.7
11.3	23.0	29.5	36.4	36.3	36.0	36.6	35.4	34.6	30.1	26.3	22.3	20.0
18.0	27.6	45.0	51.7	50.5	48.7	49.5	47.7	41.5	28.7	22.6	21.3	20.1
25.0	31.1	54.4	62.2	60.6	59.0	58.3	56.5	48.9	40.2	34.2	26.1	21.7
31.8	33.8	62.3	71.9	70.4	69.2	69.2	67.6	60.2	49.0	41.9	29.9	20.6
38.7	37.5	69.1	79.0	75.7	75.6	73.2	72.8	60.9	56.1	52.4	44.8	23.2
45.5	42.3	82.0	95.1	92.4	91.4	90.0	89.9	78.7	69.5	62.2	51.4	24.3
52.3	46.5	90.9	102.8	98.2	98.9	94.6	95.5	83.6	83.4	79.9	60.0	33.0
59.3	50.6	98.7	112.6	108.9	109.6	107.6	107.9	98.8	93.3	82.1	66.6	38.9
66.0	55.1	108.4	126.3	120.5	125.3	119.7	121.6	110.3	105.3	97.5	77.1	44.6
73.0	58.5	108.0	92.8	95.5	87.3	96.5	115.7	112.3	114.3	107.6	87.8	53.2
79.8	64.3	119.3	149.5	141.7	96.9	108.3	131.3	128.8	121.0	100.3	85.5	57.6

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.2	21.7	21.6	21.5	21.4	21.3	21.2	20.9	20.8	20.6	20.4	19.6
4.5	22.5	21.8	21.8	21.6	21.5	21.1	21.4	21.0	20.8	20.7	20.5	19.6
11.3	25.7	41.9	43.1	43.9	44.2	43.5	42.8	36.0	28.3	22.8	22.0	20.0
18.0	29.4	47.3	49.1	49.4	50.2	49.1	48.9	45.5	33.8	25.9	21.3	20.1
25.0	32.7	58.5	60.4	61.0	60.6	60.7	59.5	52.1	43.5	35.1	24.4	21.0
31.8	35.4	66.7	71.1	69.7	71.3	69.9	70.8	65.4	52.3	44.9	30.7	20.7
38.7	39.0	75.1	81.9	79.1	82.2	81.5	83.1	74.2	62.8	53.4	44.9	26.9
45.5	47.8	95.6	98.3	97.7	98.2	93.6	95.9	88.2	73.7	64.3	48.5	30.3
52.3	46.2	92.9	99.3	95.9	99.3	95.3	98.4	91.2	89.9	78.1	52.3	39.2
59.3	52.3	110.9	116.7	112.4	116.5	109.3	116.3	109.4	106.7	93.7	69.0	41.4
66.0	56.5	127.4	135.3	132.9	135.9	131.3	133.8	117.0	105.3	93.8	78.7	51.0
73.0	62.6	129.9	133.4	129.2	128.0	131.5	132.9	120.5	110.0	106.4	86.8	60.4
79.8	62.4	128.3	141.7	134.5	138.9	134.6	139.8	131.2	122.3	109.4	82.3	68.0

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.5	21.5	21.3	21.2	21.2	21.1	21.1	21.0	20.9	20.6	20.3	19.5
4.5	21.6	21.6	21.3	21.2	21.1	21.1	21.1	20.9	20.6	20.4	20.2	19.8
11.3	21.7	22.1	22.6	23.3	22.4	23.1	22.4	22.3	21.3	20.8	20.6	20.0
18.0	22.1	28.9	32.4	32.2	30.0	29.6	27.0	22.8	21.5	21.0	20.9	20.3
25.0	22.9	34.8	42.0	42.1	40.3	40.7	38.6	35.2	26.3	24.9	23.8	22.7
31.8	23.7	43.4	51.2	50.6	48.1	48.2	46.3	43.3	40.9	35.3	31.2	23.3
38.7	24.8	46.2	50.5	50.8	49.8	50.5	49.5	48.1	43.3	38.5	37.3	28.1
45.5	26.6	53.2	59.3	60.4	59.6	60.4	59.5	56.8	49.8	42.8	42.9	33.6
52.3	27.1	54.9	70.2	69.4	66.8	66.3	64.5	60.4	54.6	50.1	48.1	38.7
59.3	28.4	60.4	75.8	76.0	74.6	75.2	72.7	66.6	60.2	55.7	55.5	44.2
66.0	29.1	65.7	80.5	79.6	77.0	77.7	76.3	69.0	65.0	61.6	60.0	53.1
73.0	31.7	74.9	94.6	92.4	87.6	86.7	83.1	75.6	70.1	67.5	68.4	59.0
79.8	32.3	75.1	98.2	98.7	96.4	97.4	94.2	82.2	77.7	75.6	78.1	67.7

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.3	21.3	21.3	21.2	21.0	21.0	21.0	20.7	20.5	20.3	20.0	19.4
4.5	21.3	21.3	21.2	21.2	21.0	21.0	21.0	20.9	20.8	20.6	20.3	19.9
11.3	21.4	21.4	21.3	21.5	22.0	22.1	22.1	21.3	20.9	20.7	20.6	20.2
18.0	23.6	31.0	33.5	32.6	30.8	29.9	27.0	22.8	22.2	22.0	21.2	20.4
25.0	25.2	41.0	44.1	43.7	42.3	42.9	42.4	33.4	30.4	30.3	28.2	22.7
31.8	26.3	44.9	50.2	49.9	48.4	49.6	49.2	44.1	43.4	38.7	35.6	22.3
38.7	28.4	50.9	55.5	54.5	52.8	53.3	53.4	46.2	44.9	44.0	41.7	23.3
45.5	31.8	65.6	65.7	64.9	63.2	64.1	63.4	55.4	54.4	48.2	47.3	29.7
52.3	35.4	72.4	74.5	73.7	71.6	73.0	71.9	62.0	58.5	56.5	54.3	36.3
59.3	39.6	82.2	84.1	84.1	82.0	84.2	84.2	75.6	70.2	64.8	63.0	42.2
66.0	46.6	91.6	93.4	92.9	89.5	91.8	90.6	79.5	75.8	72.5	69.4	46.3
73.0	51.9	101.4	101.9	101.4	99.1	101.8	102.9	94.4	93.4	83.4	81.9	50.8
79.8	54.2	111.0	114.7	113.5	111.4	113.4	111.9	100.3	95.8	89.7	89.0	54.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Experiment Number 7

4.5	-0.9	-1.0	-0.6	-0.5	4.5	0.8	0.7	0.7	0.4
11.3	-1.0	-0.9	-0.7	-0.3	11.3	1.1	1.0	0.8	0.1
18.0	-1.1	-0.9	-0.6	-0.1	18.0	0.9	0.8	0.9	0.5
25.0	-1.0	-1.0	-1.0	-0.6	25.0	1.1	1.0	0.9	0.1
31.8	-1.1	-1.0	-1.0	-0.1	31.8	1.1	1.0	0.9	0.0
38.7	-1.2	-1.2	-1.0	-0.5	38.7	1.5	1.4	1.3	0.5
45.5	-1.3	-1.2	-0.6	-0.3	45.5	1.1	1.0	1.0	0.5
52.3	-1.0	-1.1	-0.6	-0.2	52.3	1.4	1.4	1.4	0.6
59.3	-1.4	-1.5	-1.3	-0.9	59.3	1.5	1.6	1.2	0.5
66.0	-1.7	-1.8	-1.4	-1.0	66.0	1.5	1.5	1.5	0.9
73.0	-1.3	-1.1	-0.7	-0.4	73.0	1.8	1.8	1.7	0.8
79.8	-1.2	-1.3	-1.0	-0.8	79.8	0.6	1.0	1.2	0.7

Experiment Number 8

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.8	21.6	21.6	21.6	21.6	21.5	21.6	21.4	21.4	21.3	21.2	20.7
5.7	22.1	21.7	21.8	21.8	21.5	21.5	21.5	21.4	21.3	21.2	21.0	20.5
12.5	23.4	27.8	33.2	31.5	31.7	31.6	30.3	27.8	26.6	24.1	21.5	20.9
19.4	27.8	42.3	48.0	45.6	45.1	44.1	42.0	35.8	30.7	24.3	21.8	21.1
26.2	30.6	49.0	54.1	51.9	52.9	51.3	51.9	50.0	43.1	36.5	29.6	22.6
33.0	33.4	55.8	64.8	60.9	64.1	60.1	62.3	57.8	52.3	47.3	32.5	21.7
39.9	36.2	65.4	78.7	72.2	76.5	71.1	73.1	61.7	56.9	52.5	44.4	23.5
46.7	39.2	70.2	82.4	79.7	81.6	76.3	82.1	67.3	66.6	61.0	45.9	26.1
53.6	42.2	75.2	88.1	83.7	87.6	84.0	89.2	79.3	82.1	73.1	54.0	26.4
60.4	45.6	86.0	100.3	94.5	99.3	94.2	96.7	85.2	85.0	79.8	67.3	36.7
67.1	50.2	96.1	111.5	105.9	109.0	103.4	106.0	91.3	93.7	82.4	71.4	43.3
74.1	55.2	105.1	119.7	114.9	117.3	112.0	115.0	101.0	99.5	89.5	74.6	48.9
80.9	60.0	116.5	74.5	62.5	78.6	57.0	59.0	76.7	109.5	101.3	84.1	51.8
87.8	61.4	119.5	52.0	119.5	126.6	56.8	115.9	110.4	109.3	108.7	84.1	54.7

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.0	21.8	21.7	21.7	21.7	21.6	21.6	21.5	21.4	21.3	21.2	20.5
5.7	22.1	21.8	21.8	21.7	21.9	21.8	21.7	21.6	21.5	21.5	21.4	21.1
12.5	25.4	39.2	39.3	40.0	39.6	39.4	38.6	32.1	25.1	22.6	21.6	21.2
19.4	30.0	47.1	47.7	48.2	48.2	47.6	47.1	42.9	29.7	22.5	21.7	21.2
26.2	33.2	55.4	59.3	57.9	59.3	58.7	59.5	57.1	44.9	35.8	28.3	21.8
33.0	39.2	71.8	73.9	73.3	74.4	71.9	70.4	58.8	49.5	44.6	31.1	21.8
39.9	39.4	73.0	76.9	75.3	77.1	75.9	77.0	70.4	62.2	54.5	41.7	22.6
46.7	43.8	78.4	83.0	81.6	83.4	83.4	85.9	80.5	67.6	62.2	50.9	28.2
53.6	47.3	85.9	90.7	88.9	90.9	89.7	90.0	84.9	76.7	66.3	52.3	36.2
60.4	51.3	99.2	106.5	105.3	108.0	105.3	105.0	98.3	88.5	80.8	58.7	39.6
67.1	56.7	107.0	113.1	108.9	115.0	109.7	113.5	101.5	95.0	83.6	65.3	46.2
74.1	62.4	115.8	122.3	118.9	121.7	118.6	120.3	109.3	102.0	92.4	79.0	49.6
80.9	63.0	129.9	136.6	133.9	136.3	133.7	131.8	120.8	110.9	95.9	80.1	60.5
87.8	63.5	121.1	132.4	130.0	131.5	133.4	138.2	130.2	123.1	108.3	93.0	69.9

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.5	21.6	21.4	21.4	21.3	21.4	21.3	21.3	21.2	21.1	20.9	20.5
5.7	21.4	21.5	21.4	21.4	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.0
12.5	21.6	21.6	21.5	21.4	21.4	21.5	21.4	21.4	21.3	21.3	21.3	21.0
19.4	21.9	27.5	30.9	30.4	28.8	28.7	27.2	22.8	22.0	21.5	21.4	21.0
26.2	22.5	32.5	37.3	37.7	36.4	37.2	35.5	29.6	27.1	26.1	25.2	21.4
33.0	23.4	38.7	46.3	45.9	44.5	45.0	43.7	39.9	35.1	30.5	29.1	24.7
39.9	24.1	41.6	49.9	49.4	48.3	48.2	46.9	43.7	40.4	36.1	35.1	28.6
46.7	25.0	45.7	59.0	58.7	56.8	58.2	56.3	50.4	46.4	40.1	39.2	31.5
53.6	26.2	51.8	63.7	63.8	62.8	63.1	62.0	55.1	49.0	45.2	43.2	35.5
60.4	27.2	60.5	70.2	70.2	68.5	69.2	68.2	61.0	54.1	51.1	49.2	41.6
67.1	27.8	57.0	77.2	77.0	72.7	73.4	71.4	66.0	60.3	58.1	57.1	47.6
74.1	28.7	65.5	80.5	80.0	77.5	78.0	76.2	74.8	64.8	61.5	61.0	51.4
80.9	30.6	74.3	93.3	92.4	89.6	88.4	84.9	76.2	70.4	67.4	68.4	61.8
87.8	32.7	77.1	101.4	101.0	97.8	97.6	94.6	79.6	74.3	73.4	73.3	68.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.3	21.4	21.4	21.4	21.3	21.3	21.3	21.2	21.1	21.0	21.0	20.6
5.7	21.5	21.4	21.5	21.4	21.2	21.2	21.2	21.1	21.0	21.0	20.9	20.5
12.5	21.4	22.7	23.6	23.3	23.1	23.5	23.7	22.6	21.4	21.1	20.9	20.5
19.4	23.9	29.8	31.8	31.4	30.5	30.6	30.5	24.5	21.7	21.2	21.2	20.8
26.2	24.2	38.5	40.3	39.9	38.7	39.5	38.5	30.5	28.2	25.5	24.2	22.9
33.0	25.7	42.1	46.5	46.5	45.7	47.0	47.1	42.4	41.0	34.7	31.5	23.6
39.9	27.1	49.0	51.3	51.0	49.7	50.8	50.6	47.0	45.4	39.7	39.0	23.3
46.7	28.9	54.5	55.9	56.0	54.5	56.1	56.7	53.2	51.6	45.8	43.7	26.3
53.6	32.9	64.6	64.6	63.7	61.3	62.3	61.7	56.1	54.5	53.1	50.1	32.3
60.4	39.7	72.7	73.3	72.2	69.5	71.3	71.3	66.8	66.9	60.2	58.3	36.7
67.1	38.1	82.4	83.7	83.3	81.7	83.5	83.2	74.3	69.8	64.9	63.7	41.0
74.1	45.5	85.2	86.0	85.6	83.8	84.9	83.7	77.9	76.8	74.0	72.5	45.6
80.9	50.5	98.2	98.6	98.4	96.9	99.0	99.0	91.2	85.8	78.5	76.3	49.6

Experiment Number 8

87.8	54.6	107.3	109.8	109.3	106.3	107.8	106.8	97.1	93.4	89.7	85.9	53.9

Velocity probes at sprinkler number 1				
Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.7	-1.0	-1.0	-0.9	-0.6
12.5	-1.1	-1.0	-0.6	-0.3
19.4	-1.2	-1.1	-0.8	-0.7
26.2	-0.8	-1.0	-1.1	-0.4
33.0	-1.0	-0.9	-0.6	-0.4
39.9	-1.1	-1.0	-0.6	-0.5
46.7	-1.4	-1.4	-1.1	-0.9
53.6	-1.3	-1.2	-0.7	-0.3
60.4	-0.9	-1.2	-1.4	-0.9
67.1	-1.8	-1.6	-1.3	-1.1
74.1	-1.3	-1.2	-0.8	-0.8
80.9	-1.7	-1.6	-1.3	-0.5
87.8	-1.1	-1.0	-0.4	-0.5

Velocity probes at sprinkler number 2				
Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.7	0.8	0.7	0.5	0.1
12.5	1.0	1.1	0.8	0.2
19.4	1.3	1.4	1.2	0.6
26.2	1.4	1.4	1.0	0.4
33.0	0.9	1.0	1.0	0.4
39.9	1.1	1.1	1.1	0.7
46.7	0.8	0.7	0.6	-0.1
53.6	1.0	1.1	0.9	-0.1
60.4	1.0	1.1	0.9	0.4
67.1	1.3	1.2	1.1	0.5
74.1	1.2	1.1	1.0	0.4
80.9	1.3	1.3	1.2	0.4
87.8	1.1	1.2	0.9	0.5

Experiment Number 9

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.3	21.1	21.2	20.8	20.7	20.0	20.3	19.6	19.6	19.4	19.1	18.2
1.3	21.4	21.2	21.2	20.8	20.7	20.0	20.3	19.7	19.7	19.3	19.2	18.5
8.2	21.5	21.3	21.2	20.9	20.8	20.1	20.5	19.9	19.8	19.4	19.3	18.5
15.0	21.9	22.0	22.1	22.1	22.0	22.1	21.9	21.8	21.0	20.6	20.0	18.8
21.9	30.0	30.1	32.0	31.9	30.5	29.3	26.4	23.5	22.4	21.8	20.8	18.9
28.7	37.4	37.2	39.8	40.4	39.3	39.7	36.0	31.9	23.5	20.8	20.5	19.0
35.4	42.9	43.0	45.9	46.1	44.1	44.0	40.3	36.0	29.7	23.9	22.9	21.0
42.4	49.4	49.1	50.8	50.8	49.2	48.9	45.7	42.3	34.1	28.2	27.3	21.7
49.1	55.9	55.5	58.1	58.4	56.7	56.9	53.4	50.5	36.3	32.9	31.0	24.6
56.0	59.2	60.0	62.1	63.7	62.4	63.5	59.5	58.6	43.7	38.2	36.1	27.1
62.8	67.8	67.2	68.8	70.1	68.3	69.0	64.6	65.1	56.2	45.4	39.7	29.6
69.5	74.1	74.5	78.5	79.0	77.3	76.2	70.9	65.7	57.3	50.2	47.2	35.4
76.5	81.2	81.1	84.2	85.4	83.4	85.2	81.3	78.6	65.2	54.4	50.3	42.1
83.2	83.2	85.1	88.6	89.9	88.2	89.8	84.5	83.9	73.4	61.8	56.7	48.2
90.2	84.4	87.5	91.8	93.6	92.0	94.4	90.0	91.6	86.7	65.6	60.6	47.3
96.9	90.0	94.8	99.8	103.1	101.7	103.8	98.5	95.1	83.8	71.3	65.8	50.8
103.6	97.1	100.2	107.4	111.0	109.2	112.7	106.8	108.9	99.0	82.3	68.2	58.4
110.5	109.1	110.0	115.4	116.3	112.9	115.0	108.4	106.0	97.4	84.4	76.2	61.4
117.3	108.8	110.3	116.3	118.2	117.2	120.7	113.3	109.3	100.1	90.5	81.7	63.1

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	21.6	21.2	21.0	20.8	20.5	20.4	19.8	19.5	19.2	18.9	18.3
1.3	22.0	21.9	21.8	21.4	21.3	20.8	20.5	20.0	19.7	19.5	19.3	18.5
8.2	22.1	22.0	21.8	21.3	21.4	21.1	21.2	20.1	20.0	19.5	19.5	18.5
15.0	22.6	23.2	23.7	23.6	23.9	24.2	24.4	24.9	22.6	21.0	20.1	18.9
21.9	30.3	33.8	33.6	33.9	33.4	33.1	32.4	27.6	22.4	21.0	20.1	18.8
28.7	37.7	41.7	42.4	43.5	43.2	42.1	40.3	33.1	22.9	20.8	20.0	19.1
35.4	42.6	45.3	45.6	46.4	47.2	47.4	46.1	33.2	27.0	24.7	23.2	20.9
42.4	49.7	53.5	53.4	52.9	53.3	52.5	50.0	43.9	36.4	29.1	27.8	21.1
49.1	56.2	60.5	60.7	61.4	61.6	61.1	59.3	48.4	39.7	34.7	33.1	22.4
56.0	61.5	66.6	67.6	68.8	69.1	69.1	68.3	55.1	41.6	40.4	37.7	27.0
62.8	72.7	76.5	76.3	77.7	77.9	76.5	74.9	57.1	47.7	45.1	41.1	30.0
69.5	72.6	78.1	79.4	79.9	80.9	80.8	80.3	70.4	55.9	51.7	47.7	34.7
76.5	84.0	90.7	92.2	93.8	94.0	93.8	91.5	79.6	65.2	56.9	48.5	38.2
83.2	91.1	98.8	99.0	101.3	101.6	101.3	98.0	82.5	66.2	62.4	58.6	43.1
90.2	96.6	103.1	103.2	103.7	103.2	102.4	100.7	88.4	75.4	67.5	63.0	46.4
96.9	104.2	112.2	110.7	111.0	111.6	110.1	107.4	94.7	83.9	74.7	69.1	51.6
103.6	116.9	125.7	127.3	129.3	128.3	128.1	125.7	100.1	89.4	80.2	72.7	55.3
110.5	119.6	124.6	125.0	125.5	124.9	122.8	121.1	106.5	92.7	83.1	74.5	60.0
117.3	122.8	129.5	131.5	132.6	133.0	132.5	129.4	113.0	100.9	91.0	77.1	64.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.6	21.6	21.3	21.0	20.8	20.6	20.5	19.8	19.5	19.4	19.0	18.4
1.3	21.0	20.1	20.9	21.1	21.2	21.2	21.0	20.0	19.6	19.7	18.6	18.6
8.2	21.7	22.3	21.9	21.4	20.7	20.5	20.7	20.1	20.3	19.8	19.5	18.2
15.0	21.9	22.4	21.8	21.2	21.1	21.2	21.5	20.6	20.6	20.1	19.2	18.4
21.9	22.6	23.7	23.5	23.8	23.1	23.6	23.9	23.2	23.8	22.7	23.2	19.2
28.7	25.7	27.2	26.2	27.7	27.1	27.9	27.7	27.4	27.9	24.2	21.7	19.6
35.4	27.0	25.8	28.6	30.0	30.4	30.3	29.9	32.6	32.5	29.7	28.3	20.2
42.4	30.4	29.0	32.6	34.7	35.0	36.0	35.5	35.0	36.0	35.1	29.3	21.6
49.1	36.7	41.5	39.3	41.6	40.0	41.2	40.7	41.3	43.6	41.1	40.3	22.7
56.0	39.4	43.5	42.5	43.4	42.5	43.7	44.4	44.9	48.3	46.1	41.9	24.2
62.8	43.7	50.5	49.2	50.1	48.4	49.6	50.5	51.5	54.8	50.3	46.8	29.1
69.5	51.2	59.8	55.2	56.9	55.8	58.2	59.0	58.8	62.4	53.8	46.4	30.8
76.5	58.9	62.3	64.3	62.4	63.5	66.1	66.8	65.5	66.5	58.9	50.9	38.3
83.2	55.9	65.1	65.0	65.1	66.3	68.8	71.1	71.5	71.7	64.7	52.9	42.2
90.2	54.8	61.1	64.8	67.3	68.5	70.8	71.3	72.2	71.8	68.7	67.4	43.0
96.9	56.6	56.3	69.4	72.2	72.6	73.9	75.1	74.8	77.4	76.4	75.1	48.5
103.6	60.9	66.5	70.9	72.9	74.3	78.3	79.6	80.8	82.6	79.5	78.5	53.4
110.5	63.5	67.1	71.7	75.6	80.7	85.3	88.3	90.4	91.8	87.7	84.2	55.7
117.3	77.3	87.7	85.8	91.1	86.5	92.6	92.9	94.3	96.8	90.7	86.3	61.8

Experiment Number 9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.6	21.6	21.6	21.2	20.7	20.6	20.3	19.9	19.4	19.2	18.9	18.5
1.3	21.7	21.7	21.7	21.2	20.7	20.6	20.4	20.1	19.6	19.3	19.1	18.6
8.2	22.0	21.8	21.8	21.3	20.9	20.7	20.5	20.2	19.6	19.3	19.1	18.7
15.0	22.3	22.1	22.1	21.8	21.5	21.5	21.4	20.9	20.4	19.9	19.5	19.0
21.9	23.3	23.8	23.8	24.7	24.9	25.2	26.1	25.4	25.9	24.5	24.1	19.7
28.7	26.2	27.6	27.1	28.4	28.8	29.3	29.9	30.1	31.7	28.8	23.5	19.6
35.4	29.0	29.6	29.3	30.8	31.4	32.1	32.7	33.7	36.1	32.9	27.1	20.7
42.4	30.9	31.9	32.7	33.8	33.7	34.3	34.8	34.5	35.9	36.1	36.0	22.5
49.1	39.8	38.1	37.8	39.4	39.6	40.2	41.2	41.2	42.0	41.6	43.1	24.4
56.0	43.9	46.0	45.2	45.5	44.7	46.5	47.1	47.8	50.3	49.5	48.5	25.7
62.8	44.7	51.0	50.8	55.6	56.8	57.8	57.0	53.6	55.1	56.4	55.5	30.8
69.5	51.2	53.0	54.2	54.8	54.5	56.2	58.0	56.4	58.4	58.4	60.6	35.9
76.5	53.7	58.7	57.1	65.6	66.2	67.1	68.7	67.5	70.4	66.8	61.4	34.5
83.2	51.1	55.6	55.2	62.3	65.3	65.6	67.3	71.0	73.8	73.1	71.1	38.3
90.2	53.7	62.0	60.3	67.6	68.2	68.6	70.2	72.7	76.0	75.4	75.9	44.9
96.9	55.4	62.7	59.3	68.5	74.8	76.8	78.8	80.6	83.2	80.8	80.2	45.3
103.6	71.3	75.9	74.8	83.6	85.6	87.4	89.6	89.8	90.8	89.3	88.6	55.0
110.5	85.7	93.1	91.3	98.0	97.6	97.4	99.1	98.4	100.9	93.5	89.8	54.0
117.3	72.3	83.0	80.0	90.7	92.8	93.6	93.2	93.8	98.1	99.5	98.9	62.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.3	0.0	0.1	-0.1	0.1
8.2	-0.1	-0.1	-0.1	0.1
15.0	-0.6	-0.5	-0.4	-0.3
21.9	-0.4	-0.6	-0.6	-0.4
28.7	-0.7	-0.7	-0.5	-0.3
35.4	-0.8	-0.9	-0.8	-0.3
42.4	-0.7	-0.8	-0.8	-0.1
49.1	-0.7	-0.8	-0.6	-0.5
56.0	-0.7	-0.9	-0.8	-0.5
62.8	-0.7	-0.8	-0.9	-0.6
69.5	-0.9	-1.0	-0.8	-0.3
76.5	-0.8	-0.7	-0.6	-0.3
83.2	-0.7	-0.9	-0.7	-0.7
90.2	-0.7	-0.9	-0.8	-0.8
96.9	-0.7	-1.0	-1.1	-0.8
103.6	-0.8	-1.0	-0.9	-0.5
110.5	-0.9	-1.0	-0.8	-0.4
117.3	-0.8	-1.0	-0.7	-0.7

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.3	0.0	0.0	0.0	0.0
8.2	0.0	0.1	0.1	0.1
15.0	0.5	0.4	0.4	0.3
21.9	0.5	0.6	0.6	0.3
28.7	0.6	0.6	0.7	0.3
35.4	0.6	0.5	0.5	0.3
42.4	0.6	0.6	0.6	0.3
49.1	0.5	0.7	0.9	0.5
56.0	0.6	0.8	0.8	0.4
62.8	0.6	0.6	0.7	0.5
69.5	0.8	0.8	0.8	0.3
76.5	0.7	0.8	1.0	0.7
83.2	0.9	0.9	0.9	0.5
90.2	0.7	0.8	0.9	0.5
96.9	0.7	0.7	0.8	0.4
103.6	0.9	0.9	1.1	0.5
110.5	0.9	0.8	0.9	0.5
117.3	0.7	0.8	1.0	0.8

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
1.3	0.4	0.2
8.2	1.8	0.6
15.0	2.1	0.8
21.9	1.6	0.9
28.7	1.9	0.9
35.4	1.9	0.9
42.4	1.6	1.3
49.1	2.6	1.1
56.0	2.4	1.7
62.8	2.8	0.7
69.5	2.3	1.0
76.5	2.5	1.1
83.2	2.6	1.4
90.2	2.7	1.4
96.9	2.4	1.2
103.6	2.9	1.3
110.5	2.4	1.0
117.3	2.7	1.3

Experiment Number 10

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.8	22.6	22.4	22.2	22.0	21.6	21.5	20.7	20.3	20.0	19.8	18.9
6.3	22.9	22.6	22.4	22.2	22.0	21.8	21.7	20.9	20.8	20.4	20.2	19.5
13.2	23.3	23.1	22.9	22.6	22.4	21.9	21.9	21.2	21.0	20.7	20.4	19.6
19.9	26.5	26.8	27.8	27.7	26.5	26.0	24.8	25.7	24.9	22.5	21.5	19.9
26.8	35.4	35.4	37.6	37.5	35.9	35.9	31.6	24.8	22.7	21.7	21.1	19.7
33.6	40.2	40.8	43.0	44.5	43.2	43.5	40.1	36.0	22.7	21.8	21.5	20.1
40.3	47.9	47.7	50.1	50.1	48.5	48.1	44.9	38.8	30.9	26.3	25.9	22.8
47.3	52.3	53.2	55.8	56.1	54.5	55.0	51.0	42.3	35.5	32.0	30.7	23.6
54.0	57.9	58.3	60.7	60.9	59.0	58.5	55.0	48.9	39.5	36.6	35.2	24.4
60.9	59.6	61.2	64.5	66.1	65.4	65.8	62.6	53.9	45.0	40.3	37.3	27.6
67.6	66.6	69.2	74.3	75.5	74.5	74.3	69.1	64.6	53.2	47.8	44.6	28.1
74.4	76.1	77.7	82.0	82.9	80.2	79.1	73.0	63.4	58.2	53.2	49.5	38.4
81.3	82.3	84.1	89.1	89.3	87.8	88.4	81.2	78.3	67.2	60.1	55.5	39.1
88.0	89.9	91.4	96.4	97.1	95.1	96.4	90.3	82.1	71.6	65.0	56.6	42.0
95.0	95.1	97.4	101.7	103.0	101.2	101.6	95.4	90.5	76.1	69.1	61.7	49.6
101.7	107.0	110.2	115.5	116.6	112.1	112.9	104.4	94.9	78.8	73.6	68.0	54.8
108.5	108.8	111.0	116.2	117.7	114.5	115.0	109.3	101.6	92.5	81.8	74.6	54.6
115.4	111.3	115.9	120.9	122.2	119.1	120.1	113.3	114.0	103.7	90.8	80.9	62.7
122.2	114.9	118.5	124.5	126.5	126.2	129.8	121.3	116.3	97.9	90.4	83.2	65.0
129.1	115.7	119.3	123.5	126.1	122.7	124.8	120.4	117.4	105.8	94.6	85.4	70.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.9	23.2	22.1	22.9	21.7	21.9	21.3	20.8	20.3	20.0	19.8	19.2
6.3	23.2	23.3	22.5	22.9	22.1	22.0	21.7	21.2	20.7	20.5	20.3	19.5
13.2	23.6	23.9	23.5	23.8	23.6	23.5	23.3	21.8	21.1	20.8	20.6	19.6
19.9	27.9	29.9	29.8	29.7	29.6	28.7	28.1	25.7	23.6	22.1	21.0	19.6
26.8	35.1	37.8	38.0	37.6	37.2	36.0	34.5	26.2	22.6	21.4	20.9	19.8
33.6	39.8	42.3	43.3	43.0	43.5	43.1	42.1	33.8	27.4	21.8	21.6	20.5
40.3	43.4	46.2	46.5	45.4	46.3	44.9	43.8	38.5	29.3	26.7	26.2	22.7
47.3	50.0	53.9	54.2	53.2	52.9	52.0	50.7	42.2	34.4	30.7	29.2	21.7
54.0	56.7	62.1	62.5	62.8	64.1	63.6	62.6	57.5	45.1	36.9	34.0	24.0
60.9	58.3	61.0	63.5	62.6	64.3	65.5	65.9	63.2	49.7	43.4	39.5	29.2
67.6	67.6	72.1	73.7	73.4	75.8	76.0	75.1	72.0	55.6	48.7	45.0	32.5
74.4	75.0	81.2	83.0	82.6	85.0	84.9	83.2	75.0	63.3	54.3	49.1	35.5
81.3	85.3	90.7	93.0	93.2	94.5	94.2	93.3	76.9	64.8	55.8	52.4	39.8
88.0	87.8	90.9	91.5	91.3	93.4	94.8	94.7	86.6	79.6	68.4	59.9	44.8
95.0	94.6	102.2	103.3	104.7	107.4	107.0	106.3	98.3	79.7	71.3	59.3	47.7
101.7	103.6	113.9	117.7	115.9	118.0	115.8	114.3	101.2	89.8	82.2	70.8	52.3
108.5	117.5	127.2	128.3	127.2	128.6	128.0	124.5	106.4	90.8	82.8	77.7	57.9
115.4	122.0	129.8	131.0	130.0	130.7	128.3	126.1	109.2	96.9	89.6	82.0	62.4
122.2	120.2	125.8	125.4	125.6	126.6	127.0	126.3	117.9	111.2	101.2	88.0	67.2
129.1	132.9	141.7	142.2	139.9	142.1	139.2	137.5	124.6	105.2	96.8	84.7	69.5

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.9	22.8	22.4	22.1	21.8	21.5	21.3	20.8	20.4	20.2	20.0	19.4
6.3	22.8	22.9	22.9	22.7	22.5	22.0	21.5	21.0	20.8	20.5	20.1	19.5
13.2	23.0	22.9	22.9	22.6	22.4	22.0	21.7	21.1	21.0	20.7	20.3	19.7
19.9	23.1	23.1	23.1	23.0	22.9	22.8	22.7	22.6	22.5	21.9	22.1	20.1
26.8	24.7	26.1	25.1	26.4	26.0	26.9	26.5	26.2	26.4	25.6	25.6	20.1
33.6	26.9	28.9	28.9	29.8	29.7	29.6	29.5	30.4	30.9	29.2	26.6	20.1
40.3	31.5	34.0	33.9	34.1	34.5	34.2	34.8	33.6	33.9	33.5	32.5	21.8
47.3	30.0	31.3	33.2	34.2	34.6	36.1	36.9	38.6	40.8	34.6	34.1	23.1
54.0	42.7	46.6	45.6	46.3	44.8	45.5	47.0	44.9	44.9	39.0	33.6	23.0
60.9	41.2	47.6	46.3	47.5	47.1	50.4	51.2	51.5	51.7	39.9	35.4	29.7
67.6	46.6	52.6	51.5	55.9	55.1	57.5	56.9	56.6	59.0	52.6	51.4	33.2
74.4	48.5	57.2	55.7	56.6	58.1	60.6	61.1	61.2	62.6	58.8	48.0	34.7
81.3	53.3	60.2	63.5	64.5	64.1	65.9	68.0	67.3	69.0	63.2	54.2	39.5
88.0	50.5	54.4	59.3	60.5	61.8	65.3	66.1	68.4	73.1	68.8	65.5	42.8
95.0	61.6	72.2	70.4	75.1	72.7	76.1	77.9	77.8	79.7	71.8	65.4	48.4
101.7	64.9	75.7	76.5	79.8	78.3	80.2	81.2	84.5	89.2	80.1	65.2	50.4
108.5	75.7	91.1	85.1	88.2	86.7	88.4	88.9	91.0	90.0	77.4	70.4	56.8

Experiment Number 10

115.4	70.6	85.1	85.6	88.8	87.3	91.1	92.1	89.5	91.3	86.5	85.2	61.2
122.2	83.1	89.8	94.3	95.7	95.8	97.7	97.0	95.0	94.4	89.9	89.1	66.6
129.1	72.1	81.7	87.5	93.6	93.8	96.5	95.2	93.4	97.6	95.0	95.6	67.1

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.7	22.7	22.7	22.4	22.1	21.9	21.6	20.9	20.1	19.7	19.5	19.3
6.3	22.7	22.7	22.8	22.5	22.3	22.2	21.9	21.2	20.4	19.9	19.8	19.6
13.2	23.0	22.8	22.8	22.5	22.2	22.1	21.9	21.3	20.7	20.1	20.0	19.7
19.9	22.9	23.3	23.3	23.8	24.0	24.0	24.0	23.7	23.4	23.0	23.3	20.6
26.8	24.2	26.1	26.3	27.2	28.0	28.4	28.9	27.8	27.7	26.1	24.2	21.1
33.6	31.6	31.2	30.1	33.9	33.4	33.7	33.8	32.5	33.3	31.9	30.5	20.8
40.3	36.0	35.5	33.3	40.8	39.8	40.0	39.7	36.8	37.0	32.6	27.8	22.3
47.3	31.8	34.6	36.2	37.3	38.7	38.9	39.5	40.4	41.2	41.3	40.7	23.9
54.0	38.7	38.2	38.7	39.7	41.0	42.4	42.9	43.1	44.7	43.6	44.4	26.7
60.9	39.7	40.8	41.3	42.6	43.4	45.3	46.6	45.9	48.7	50.1	51.6	29.9
67.6	46.4	46.4	46.7	48.3	48.8	50.0	51.7	52.9	55.1	54.5	56.0	32.6
74.4	51.1	55.3	57.3	57.7	57.2	58.5	58.1	58.9	61.5	60.0	61.2	39.7
81.3	50.5	59.5	58.1	60.9	63.9	64.6	64.7	62.4	65.2	66.4	67.8	39.2
88.0	58.8	68.6	66.3	74.8	75.7	77.3	78.1	75.9	77.6	74.0	75.2	39.4
95.0	60.6	69.7	64.4	73.4	77.5	79.1	81.0	81.1	85.6	79.9	78.4	48.5
101.7	65.2	75.7	76.0	81.9	83.3	84.9	86.0	85.6	88.8	86.9	86.1	54.9
108.5	60.2	69.4	67.7	73.4	82.4	82.2	83.0	86.8	88.9	89.3	92.3	55.7
115.4	67.1	74.2	75.5	80.8	85.5	86.4	88.6	91.5	94.5	94.1	96.9	68.8
122.2	70.3	83.0	84.2	89.5	92.9	93.2	94.5	95.4	97.4	95.0	97.2	72.7
129.1	68.3	78.7	80.7	87.0	90.9	92.2	96.3	95.2	98.1	97.9	96.4	68.6

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.3	-0.1	-0.1	0.1	0.0
13.2	-0.4	-0.4	-0.4	-0.3
19.9	-0.6	-0.5	-0.4	-0.1
26.8	-0.6	-0.6	-0.4	-0.3
33.6	-0.6	-0.6	-0.5	-0.3
40.3	-0.6	-0.6	-0.4	-0.3
47.3	-0.7	-0.6	-0.4	-0.3
54.0	-0.7	-0.9	-0.9	-0.3
60.9	-0.6	-0.7	-0.6	-0.4
67.6	-0.8	-1.0	-0.7	-0.4
74.4	-0.8	-0.9	-0.8	-0.6
81.3	-1.0	-1.1	-0.8	-0.5
88.0	-1.0	-1.1	-0.9	-0.5
95.0	-0.9	-1.0	-0.7	-0.4
101.7	-0.9	-0.9	-1.0	-0.6
108.5	-0.6	-0.8	-0.8	-0.8
115.4	-0.8	-0.9	-0.7	-0.6
122.2	-0.9	-1.0	-0.8	-0.6
129.1	-0.9	-1.0	-0.8	-0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.3	0.1	0.1	0.0	0.0
13.2	0.5	0.6	0.6	0.4
19.9	0.6	0.6	0.5	0.1
26.8	0.6	0.7	0.6	0.3
33.6	0.5	0.5	0.5	0.3
40.3	0.7	0.7	0.8	0.5
47.3	0.8	0.7	0.7	0.5
54.0	0.4	0.4	0.6	0.6
60.9	0.6	0.6	0.7	0.4
67.6	0.6	0.7	0.8	0.5
74.4	0.7	0.8	0.8	0.5
81.3	0.7	0.8	1.0	0.3
88.0	0.4	0.5	0.7	0.7
95.0	0.6	0.5	0.7	0.6
101.7	0.9	0.9	1.0	0.6
108.5	0.9	0.8	0.9	0.5
115.4	0.8	0.9	1.1	0.8
122.2	0.9	0.8	0.8	0.3
129.1	1.1	1.1	1.2	0.7

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
6.3	1.3	0.6
13.2	1.6	0.7
19.9	1.5	0.7
26.8	1.5	0.9
33.6	1.7	0.8
40.3	2.0	0.9
47.3	1.8	1.4
54.0	2.2	1.2
60.9	1.7	1.1
67.6	2.6	1.5
74.4	3.0	1.1
81.3	2.9	1.2
88.0	1.9	1.4

95.0	2.9	1.7
101.7	3.3	1.7
108.5	3.2	1.4
115.4	3.0	1.7
122.2	2.8	1.4
129.1	3.0	1.5

Experiment Number 11

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	18.2	17.8	17.6	17.6	17.5	17.4	17.4	17.2	17.0	16.8	16.7	16.3
5.3	18.3	17.8	17.7	17.7	17.7	17.6	17.6	17.5	17.4	17.3	17.0	16.7
12.2	20.5	31.1	38.6	37.3	35.3	35.7	31.5	27.9	23.0	19.2	17.5	16.8
19.0	24.8	40.8	46.0	46.3	43.2	43.7	40.5	35.3	25.2	19.2	17.6	16.9
25.9	27.4	48.6	55.6	56.1	53.4	53.4	48.4	41.7	36.9	30.5	24.1	19.3
32.7	28.8	51.4	55.9	56.2	54.3	54.9	53.1	49.4	43.5	39.6	28.5	18.0
39.5	31.3	57.0	65.5	65.2	63.2	62.0	61.5	52.5	49.4	48.1	38.8	18.8
46.4	34.0	62.6	69.8	70.8	70.8	71.4	69.4	66.3	59.1	53.5	41.6	21.9
53.2	36.2	68.3	75.6	74.9	72.9	73.2	73.2	71.2	68.3	60.5	50.1	24.6
59.9	37.9	70.4	77.4	77.4	76.1	77.1	76.1	75.0	73.0	68.5	59.4	31.4
66.9	41.2	79.4	88.3	87.0	85.2	85.2	84.7	81.3	78.5	71.5	56.9	33.7
73.7	42.9	84.2	95.7	94.9	91.0	91.2	88.8	83.5	82.1	77.4	64.8	36.8
80.6	45.9	90.8	102.3	101.8	98.1	99.4	96.5	91.3	90.2	81.0	68.3	36.9
87.4	50.7	98.3	110.5	108.5	105.7	105.3	104.5	94.5	89.0	83.9	73.9	41.6
94.2	51.8	101.4	116.1	119.2	119.4	118.0	112.8	109.9	100.7	92.2	78.0	43.0
101.1	55.0	109.7	120.9	120.8	117.3	118.5	115.5	108.8	101.7	91.4	82.5	47.7
107.8	53.0	62.5	114.1	102.6	86.2	103.0	90.4	102.4	100.3	99.0	84.5	51.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	18.1	17.6	17.3	17.2	17.2	17.2	17.1	17.0	16.9	16.8	16.7	16.4
5.3	18.2	17.7	17.5	17.6	18.4	18.4	18.9	20.8	19.1	18.0	17.1	16.9
12.2	22.3	37.1	38.2	38.2	38.5	38.1	36.7	30.9	25.7	18.5	17.2	17.0
19.0	25.1	45.2	45.5	44.9	44.9	43.3	42.1	34.2	24.6	20.5	18.3	17.1
25.9	26.9	47.5	48.9	49.0	49.3	48.5	47.4	41.6	35.2	28.6	22.7	18.0
32.7	27.5	51.2	53.9	53.5	55.5	54.5	55.6	52.3	45.1	40.7	28.7	17.7
39.5	31.1	59.1	62.1	60.7	62.6	59.8	61.0	55.0	53.4	48.5	40.8	21.3
46.4	32.4	66.7	70.8	69.8	72.1	71.4	71.4	66.2	58.8	55.9	47.5	25.3
53.2	36.1	76.1	80.3	80.8	82.7	80.3	80.9	77.5	69.2	61.3	42.1	31.2
59.9	38.3	78.1	85.6	82.1	86.6	82.0	85.3	80.6	77.1	69.2	48.2	32.6
66.9	41.4	89.9	92.7	93.1	94.7	93.9	94.3	90.0	82.8	74.7	53.8	36.0
73.7	42.4	94.1	99.2	98.9	102.4	97.3	101.1	99.0	91.8	84.5	69.0	44.8
80.6	45.7	95.5	102.5	102.3	104.9	103.0	103.9	98.1	94.8	84.5	67.8	49.5
87.4	46.7	101.3	107.7	107.1	111.6	110.3	110.6	104.9	96.5	90.3	76.1	51.6
94.2	49.6	107.4	111.9	112.7	115.0	113.2	112.8	108.6	102.1	92.3	78.6	59.1
101.1	53.9	119.2	123.6	121.5	123.9	123.1	121.3	113.6	108.4	92.2	75.7	62.4
107.8	54.5	112.1	119.3	115.0	127.0	123.7	123.6	115.4	105.5	96.2	82.2	63.8

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	17.4	17.3	17.2	17.2	17.1	17.0	17.0	16.9	16.7	16.6	16.6	16.5
5.3	17.4	17.4	17.5	17.5	17.5	17.4	17.4	17.2	17.1	17.0	16.9	16.7
12.2	17.5	18.6	20.0	20.5	19.5	20.1	19.3	19.1	18.2	17.2	17.0	16.7
19.0	17.9	24.1	27.3	26.8	25.3	24.4	23.1	19.6	18.3	17.5	17.3	16.9
25.9	18.5	28.6	32.2	31.9	31.1	31.3	30.3	28.1	23.6	21.6	20.9	19.2
32.7	19.3	37.0	44.4	45.3	43.4	44.1	41.8	38.0	33.1	28.0	28.2	19.9
39.5	19.9	40.0	43.8	42.1	40.2	39.1	37.4	34.4	32.8	31.2	29.9	23.4
46.4	20.3	40.2	49.2	49.6	48.2	48.3	46.5	39.8	36.6	35.8	34.3	27.3
53.2	21.4	44.4	56.1	55.9	53.3	53.3	52.0	46.5	40.5	39.4	39.4	28.9
59.9	22.3	48.7	60.3	58.9	56.8	56.9	54.5	49.2	47.1	43.9	42.9	36.2
66.9	23.1	49.3	60.4	61.2	60.0	60.7	59.2	51.7	50.2	47.0	46.2	37.7
73.7	24.4	52.2	66.6	66.4	64.7	64.1	61.7	55.6	53.9	50.7	49.7	42.0
80.6	25.5	55.6	72.4	72.4	70.2	70.6	68.6	62.4	61.6	58.1	55.7	45.9
87.4	26.4	65.9	79.2	79.1	77.3	77.5	74.6	65.2	60.7	60.0	59.0	49.4
94.2	26.5	64.1	80.2	81.0	79.5	79.7	76.3	68.0	63.7	64.1	64.5	55.3
101.1	29.0	68.7	80.7	79.7	78.8	79.3	76.5	69.4	68.7	67.9	68.1	61.2
107.8	28.5	71.2	90.0	89.2	87.5	87.6	85.8	80.2	77.8	73.1	73.0	62.1

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	17.4	17.3	17.3	17.3	17.2	17.1	17.1	16.9	16.8	16.7	16.6	16.4
5.3	17.5	17.5	17.6	17.6	17.4	17.4	17.3	17.2	17.0	16.9	16.7	16.6
12.2	18.3	21.6	24.1	23.9	22.8	23.1	22.9	21.4	19.0	17.2	17.0	16.9
19.0	18.8	26.4	27.1	26.9	25.7	26.1	25.1	19.0	17.6	17.1	17.1	17.1

Experiment Number 11

25.9	20.2	33.5	35.6	35.6	34.8	36.4	36.8	32.6	29.1	25.3	24.8	20.3
32.7	21.9	40.0	42.8	42.7	42.1	43.8	43.9	39.7	38.8	32.1	30.7	19.7
39.5	24.9	44.0	47.7	47.2	46.1	46.7	46.5	42.7	40.8	36.1	34.6	19.6
46.4	25.9	50.6	52.3	51.4	49.8	50.7	49.9	44.9	42.2	39.9	38.6	21.4
53.2	29.7	54.6	56.5	56.5	55.9	56.7	56.7	51.6	48.5	43.2	45.0	27.4
59.9	29.3	57.7	61.4	62.2	61.6	63.0	63.1	55.5	54.3	52.1	51.0	30.8
66.9	33.2	63.4	65.5	65.6	64.2	64.5	63.7	58.5	56.7	53.9	52.6	34.0
73.7	37.1	68.0	68.0	68.6	67.7	68.1	67.7	61.9	59.9	59.0	56.7	36.6
80.6	38.2	75.6	77.3	77.8	76.2	77.8	78.6	74.6	72.2	64.1	63.0	39.6
87.4	44.3	84.8	84.1	82.7	78.1	79.0	78.7	72.5	70.4	66.8	64.9	41.8
94.2	38.8	79.9	84.2	84.9	84.1	86.0	86.2	78.9	76.6	72.6	70.8	45.0
101.1	43.8	93.7	95.4	95.0	92.2	92.2	90.6	80.5	80.0	76.4	74.7	48.9
107.8	47.4	97.0	98.6	98.6	96.7	98.2	97.5	86.3	83.6	80.0	80.1	52.4

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.3	-0.9	0.9	-0.9	-0.3
12.2	-0.9	-0.9	-0.6	-0.2
19.0	-1.1	-1.0	-0.4	-0.2
25.9	-0.7	-0.6	-0.5	-0.3
32.7	-1.0	-1.0	-0.9	-0.3
39.5	-1.4	-1.3	-0.7	-0.6
46.4	-0.8	-0.9	-1.1	-0.4
53.2	-0.9	-0.9	-0.6	-0.2
59.9	-1.5	-1.2	-0.8	-0.5
66.9	-1.2	-1.2	-1.3	-0.4
73.7	-1.0	-1.1	-0.8	-0.6
80.6	-1.4	-1.5	-1.5	-0.8
87.4	-1.1	-1.1	-0.9	-0.9
94.2	-1.0	-1.0	-0.8	-0.5
101.1	-1.6	-1.6	-1.1	-0.5
107.8	-1.4	-1.4	-1.2	-0.8

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.3	1.0	0.8	0.7	0.2
12.2	0.8	0.9	0.9	0.3
19.0	1.2	0.9	0.6	0.1
25.9	0.9	0.9	0.9	0.7
32.7	1.1	1.0	0.9	0.7
39.5	0.9	0.9	0.9	0.4
46.4	1.1	1.1	0.8	-0.2
53.2	1.2	1.2	0.8	0.4
59.9	0.9	0.8	0.9	0.3
66.9	1.2	1.1	0.8	0.4
73.7	1.2	1.1	0.9	0.3
80.6	1.1	1.4	1.4	0.5
87.4	1.5	1.3	1.2	0.7
94.2	1.3	1.5	1.5	0.8
101.1	1.9	2.0	1.6	0.6
107.8	1.2	1.2	1.0	0.6

Experiment Number 12

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.0	20.6	20.7	20.6	20.4	20.4	20.5	20.3	20.2	20.3	20.1	19.8
1.2	21.7	20.9	21.6	20.9	20.7	20.7	20.9	20.5	20.3	20.7	20.1	20.0
8.1	21.8	22.2	25.2	25.2	24.6	25.0	23.9	23.8	22.3	22.0	20.3	20.0
14.9	23.3	30.0	35.1	35.0	32.1	33.4	30.8	28.6	24.0	21.4	20.4	20.0
21.9	25.4	37.1	43.1	42.5	40.6	40.4	37.5	34.4	28.2	21.3	20.6	20.1
28.6	28.0	44.2	48.9	47.8	45.9	45.8	44.1	40.2	33.8	27.8	25.3	21.8
35.4	29.0	47.5	54.0	53.0	50.4	50.1	48.1	42.8	38.2	33.4	26.4	20.7
42.3	30.6	48.7	55.6	53.7	54.1	53.7	53.2	51.6	47.8	44.5	38.4	22.8
49.1	31.2	51.5	58.9	57.1	56.7	55.9	55.3	53.4	51.5	48.0	41.2	23.0
56.1	33.9	59.1	66.7	67.1	65.2	66.7	64.7	64.3	60.3	52.7	38.4	23.9
62.9	35.3	62.2	69.6	67.9	67.3	66.8	66.1	63.5	59.4	54.8	42.4	28.4
69.7	37.3	68.0	76.6	76.0	73.2	73.7	72.2	69.7	66.4	63.6	49.5	32.3
76.6	39.0	69.3	79.5	78.5	77.7	77.8	76.4	74.2	70.5	64.1	49.8	34.2
83.4	40.7	74.4	86.1	85.0	83.0	81.7	78.9	76.8	73.2	71.6	63.0	38.5
90.1	42.8	78.7	87.9	86.8	87.6	87.2	84.5	79.0	77.5	69.9	57.4	39.9
97.0	45.6	87.8	101.3	100.0	97.2	97.1	94.9	88.4	80.0	75.2	58.4	40.0
103.9	48.7	94.1	104.2	101.9	100.4	100.1	97.9	91.9	85.6	77.7	64.3	41.7
110.7	51.5	99.7	113.1	109.3	108.0	106.8	103.3	96.4	85.9	80.6	68.7	43.9
117.5	53.5	100.0	110.7	108.1	109.8	109.1	108.4	104.7	96.0	92.4	78.5	44.6
124.3	56.7	94.1	105.4	106.0	75.0	106.4	92.4	93.8	96.2	89.6	69.8	47.6
131.2	57.2	100.1	119.0	120.5	111.5	123.4	109.0	114.9	105.7	99.7	80.1	53.3
138.1	62.1	107.6	124.5	126.9	117.9	124.7	115.7	120.6	110.9	99.6	82.3	57.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.6	20.6	20.5	20.5	20.4	20.4	20.3	20.3	20.2	20.1	19.9
1.2	20.8	20.5	20.6	20.6	20.6	20.5	20.5	20.4	20.4	20.3	20.2	19.9
8.1	21.2	25.7	26.4	26.2	26.4	25.0	23.6	24.0	23.0	20.8	20.4	20.0
14.9	23.8	39.1	39.5	39.4	39.9	39.8	38.3	32.9	28.5	23.4	20.7	20.2
21.9	25.6	41.4	42.7	42.2	42.8	41.7	40.9	38.5	33.1	23.6	20.7	20.2
28.6	26.7	45.0	45.8	45.1	45.9	44.9	45.3	42.7	37.5	31.3	27.0	20.6
35.4	29.4	54.7	56.9	55.8	57.2	57.4	56.5	49.5	41.0	34.7	26.7	20.6
42.3	30.5	53.9	57.0	54.8	58.4	57.2	58.5	56.2	49.0	44.0	39.0	20.8
49.1	31.8	58.6	61.6	59.3	61.2	59.6	61.2	56.5	50.2	45.2	41.3	26.0
56.1	34.3	65.7	67.9	66.1	67.6	65.8	67.7	64.2	57.2	48.7	42.0	26.8
62.9	35.0	64.6	69.1	66.8	70.1	67.4	70.7	63.9	60.3	51.9	42.6	32.9
69.7	37.0	72.8	76.5	74.5	76.9	74.6	76.8	71.9	67.4	53.6	41.1	35.0
76.6	38.2	75.7	80.0	76.6	81.9	78.9	81.5	78.0	74.6	68.6	54.0	35.4
83.4	40.0	80.9	84.0	82.0	84.3	82.5	83.8	81.0	77.6	72.8	58.0	41.2
90.1	43.9	93.8	98.3	96.3	98.8	94.5	97.4	89.7	81.4	71.8	57.1	42.9
97.0	44.2	94.0	98.9	96.5	99.0	97.5	98.7	95.9	89.9	76.3	65.1	48.8
103.9	45.0	94.5	99.4	97.9	99.8	98.0	99.8	94.5	94.1	78.1	59.6	53.7
110.7	47.8	100.4	105.5	105.4	106.5	104.4	106.1	104.5	97.1	88.3	64.9	54.1
117.5	49.8	111.0	116.2	112.4	117.9	114.4	117.0	107.2	109.1	99.1	81.4	56.1
124.3	50.5	108.0	114.4	111.0	115.0	111.8	115.2	105.4	100.2	87.6	76.4	61.6
131.2	54.1	109.6	113.5	91.9	100.0	110.8	116.8	107.2	104.6	87.4	91.1	63.7
138.1	57.9	119.2	135.7	128.6	135.1	134.0	132.5	119.1	110.7	84.0	90.0	67.1

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.6	19.9	20.1	20.2	20.2	20.2	20.2	20.1	20.1	20.1	20.0	19.8
1.2	19.6	20.0	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.0
8.1	19.5	19.9	20.2	20.2	20.2	20.2	20.2	20.1	20.2	20.2	20.2	20.0
14.9	19.6	21.1	23.4	24.0	23.0	23.6	22.9	22.0	21.4	20.2	20.2	20.1
21.9	20.0	25.5	28.4	27.7	26.1	25.9	24.7	21.0	20.5	20.2	20.2	20.2
28.6	20.3	27.3	31.7	32.1	31.2	31.3	29.8	27.8	25.2	23.9	23.8	21.5
35.4	20.8	31.2	37.0	37.3	36.7	37.6	36.4	33.2	27.1	25.6	25.4	20.9
42.3	21.4	35.2	41.1	41.6	40.1	40.6	39.5	35.9	32.5	29.9	29.6	24.5
49.1	22.2	37.2	44.3	45.3	44.3	44.8	43.4	39.8	35.7	34.1	32.5	24.8
56.1	22.7	40.6	48.9	48.9	47.8	48.0	46.6	42.2	37.8	35.5	35.7	29.0
62.9	23.1	41.4	51.4	51.4	50.5	51.0	50.2	46.4	40.7	39.5	37.7	32.0
69.7	23.5	46.6	55.4	55.2	53.6	53.7	52.3	47.5	44.2	42.9	42.5	34.2
76.6	24.3	46.1	58.5	58.7	57.4	57.2	55.7	49.2	46.8	45.5	45.2	35.7

Experiment Number 12

83.4	25.0	48.9	61.1	62.4	61.3	62.1	60.3	54.4	50.7	48.6	47.1	38.9
90.1	26.1	51.2	65.2	64.5	61.4	59.8	58.7	54.3	53.4	51.2	51.3	40.1
97.0	26.2	55.3	69.9	70.4	68.4	67.1	64.8	58.1	55.2	53.8	53.4	47.4
103.9	26.4	59.1	74.0	74.3	73.0	73.7	70.7	64.7	61.4	58.4	57.1	48.9
110.7	27.1	59.9	71.4	72.7	72.8	74.0	73.0	68.1	62.9	60.2	60.8	50.8
117.5	28.1	70.8	80.6	80.8	79.4	79.7	77.3	72.3	67.9	65.5	64.8	60.7
124.3	28.8	66.2	80.8	80.8	79.6	79.2	77.8	72.2	70.4	68.3	68.3	59.7
131.2	30.3	71.8	87.8	87.2	85.5	85.8	83.3	76.8	74.7	71.5	71.9	64.7
138.1	32.0	73.9	92.0	92.3	90.6	91.3	89.3	82.1	79.6	76.9	77.5	69.1

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.8	20.1	20.3	20.3	20.2	20.2	20.2	20.1	20.0	19.9	19.9	19.6
1.2	19.8	20.1	20.3	20.3	20.2	20.2	20.2	20.1	20.1	20.1	20.1	19.7
8.1	19.9	20.3	20.4	20.4	20.3	20.3	20.2	20.2	20.2	20.0	20.0	19.7
14.9	20.4	23.3	24.5	23.7	22.8	22.9	22.8	22.4	21.9	20.2	20.1	19.8
21.9	21.1	27.1	29.6	28.7	25.8	24.6	24.0	22.7	21.7	20.3	20.2	20.0
28.6	21.4	32.7	33.5	33.1	31.8	32.5	32.6	29.4	25.0	24.0	24.3	21.5
35.4	22.3	36.4	38.5	38.7	38.1	39.2	39.1	35.4	35.1	30.1	28.3	21.5
42.3	23.5	37.3	40.1	40.3	39.9	40.5	40.8	38.2	37.8	34.0	32.4	21.8
49.1	24.7	42.3	43.0	43.4	43.1	44.5	45.1	42.9	41.9	36.6	35.3	21.8
56.1	25.4	44.9	48.6	49.1	49.0	50.0	50.1	46.5	45.0	40.8	38.5	25.2
62.9	26.1	51.4	54.5	54.5	53.8	54.7	54.5	50.1	48.2	44.1	43.0	28.9
69.7	28.7	56.1	56.5	56.5	54.8	55.1	54.4	49.3	49.8	46.4	46.1	31.7
76.6	31.4	57.8	60.4	60.5	59.4	60.2	60.2	56.1	55.2	49.8	48.0	33.7
83.4	33.7	64.4	65.0	64.4	60.9	61.3	59.9	56.1	56.8	53.3	51.5	34.9
90.1	33.3	62.6	65.5	65.7	65.4	66.6	66.5	63.3	63.4	58.5	56.5	36.9
97.0	35.4	68.3	72.0	71.7	70.8	72.1	72.7	67.8	66.2	60.0	59.3	39.4
103.9	36.4	74.1	76.1	76.8	76.3	77.6	77.2	68.4	67.7	63.9	62.8	42.3
110.7	39.0	77.6	81.4	81.5	81.4	83.1	83.9	78.9	75.6	69.8	68.4	45.0
117.5	39.6	81.0	86.3	86.7	85.7	85.8	84.5	78.5	76.8	72.7	70.9	48.2
124.3	43.1	90.1	91.3	90.9	89.1	90.4	90.2	84.4	82.2	77.8	75.6	50.1
131.2	47.3	95.3	97.8	97.1	94.1	93.8	92.0	85.5	84.3	82.3	81.0	53.2
138.1	55.7	103.7	103.7	103.2	101.4	102.6	102.7	92.8	87.2	84.6	83.2	58.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.2	-0.1	-0.2	-0.2	-0.1
8.1	-0.8	-0.8	-0.6	-0.3
14.9	-0.9	-1.0	-0.9	-0.4
21.9	-0.9	-1.0	-0.8	-0.3
28.6	-0.7	-0.7	-0.5	-0.2
35.4	-1.0	-0.9	-1.0	-0.5
42.3	-0.7	-0.7	-0.6	-0.2
49.1	-1.0	-0.9	-0.6	-0.3
56.1	-0.9	-0.9	-1.0	-0.2
62.9	-1.0	-1.2	-1.2	-0.7
69.7	-1.1	-1.1	-1.1	-0.6
76.6	-0.7	-0.7	-0.7	-0.6
83.4	-1.2	-1.2	-1.3	-0.4
90.1	-0.9	-0.9	-0.6	-0.4
97.0	-1.6	-1.4	-1.0	-0.5
103.9	-1.6	-1.6	-1.1	-0.7
110.7	-0.8	-1.0	-0.9	-0.3
117.5	-1.2	-1.2	-1.0	-0.3
124.3	-1.4	-1.3	-0.9	-0.6
131.2	-0.9	-1.1	-1.2	-0.5
138.1	-1.0	-1.2	-1.2	-1.1

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.2	0.1	0.1	0.2	0.0
8.1	0.8	0.8	0.7	0.3
14.9	1.0	1.1	1.0	0.5
21.9	0.6	0.8	0.8	0.5
28.6	1.0	1.1	1.0	0.4
35.4	0.7	0.7	0.8	0.5
42.3	0.8	0.6	0.5	0.1
49.1	0.9	0.9	0.9	0.2
56.1	0.8	0.9	0.9	0.3
62.9	0.9	0.8	0.6	0.0
69.7	0.9	1.0	1.1	0.5
76.6	0.9	0.8	0.8	0.5
83.4	0.8	0.8	0.7	0.6
90.1	1.3	1.2	1.1	0.4
97.0	1.2	1.1	0.9	0.6
103.9	1.1	1.3	1.3	1.2
110.7	1.2	1.1	1.0	0.5
117.5	0.8	0.8	0.7	0.3
124.3	1.5	1.5	1.2	0.4
131.2	1.7	1.6	1.3	0.6
138.1	0.8	0.8	0.8	0.7

Experiment Number 13

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.0	21.7	21.9	21.5	21.6	21.2	21.4	20.8	20.8	20.5	20.3	19.7
5.2	21.9	21.7	21.8	21.4	21.5	21.2	21.4	20.9	21.1	20.8	20.5	19.9
12.2	22.8	25.5	29.3	28.4	28.5	28.0	26.5	24.6	23.0	21.2	21.0	20.1
18.9	24.8	34.0	40.1	37.9	37.8	36.3	34.7	29.2	25.3	22.5	21.1	20.1
25.9	27.0	37.8	42.7	40.6	41.7	40.6	40.5	34.8	29.7	26.6	25.3	20.6
32.6	28.4	43.8	51.3	49.7	48.5	47.6	46.3	39.7	36.1	31.4	24.0	20.3
39.4	30.1	46.4	52.8	49.2	50.7	49.2	50.3	43.1	40.4	36.9	30.1	20.5
46.3	31.9	50.7	59.7	55.6	57.4	53.2	55.0	47.7	44.7	41.8	34.5	22.7
53.1	33.8	53.6	61.2	56.8	60.1	55.9	59.5	51.9	53.7	45.9	41.1	23.7
60.1	35.5	59.4	68.3	67.3	68.8	66.6	67.2	57.6	57.4	54.2	45.7	24.6
66.8	37.9	63.2	72.8	69.8	72.2	69.9	71.9	64.9	64.1	57.2	45.9	31.9
73.6	38.9	70.0	81.3	76.3	78.9	74.9	75.1	66.7	65.5	60.2	49.1	35.6
80.5	42.9	78.8	89.2	84.0	86.7	82.6	84.2	67.3	67.7	60.6	50.7	39.0
87.3	44.9	80.8	94.6	88.1	92.7	85.0	88.3	77.0	76.6	66.2	56.4	40.5
94.1	46.6	86.1	101.1	96.3	98.0	92.7	96.7	80.0	81.0	73.4	56.6	43.5
101.0	47.6	84.5	99.6	97.0	102.0	96.3	101.0	84.8	85.6	75.0	62.0	44.3
107.8	49.9	91.0	105.2	99.9	102.9	98.3	100.4	85.6	90.2	83.4	65.5	45.9
114.7	51.1	92.9	104.4	100.4	105.4	100.1	104.4	90.0	92.7	83.2	70.7	47.6
121.5	53.1	93.6	84.1	80.4	102.9	57.7	93.1	76.1	92.8	84.9	74.5	50.5
128.2	56.4	94.8	111.1	99.1	112.5	98.0	97.1	91.1	102.6	92.2	78.8	54.3

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.7	22.1	21.9	21.6	21.6	21.4	21.3	21.0	20.7	20.5	20.3	19.7
5.2	22.5	22.2	22.1	21.8	21.6	21.4	21.6	21.2	21.0	20.9	20.8	20.1
12.2	24.4	30.6	31.5	31.4	31.1	30.4	29.9	25.0	24.2	23.3	22.4	20.3
18.9	26.9	39.4	40.1	40.1	39.7	37.8	37.8	29.2	23.8	22.7	21.8	20.3
25.9	29.2	45.8	48.0	47.8	47.2	45.7	45.1	39.2	29.0	25.8	24.7	20.6
32.6	29.3	47.3	49.0	49.6	49.7	48.9	48.5	44.5	39.3	33.2	24.1	20.6
39.4	32.5	50.6	51.8	50.1	51.7	49.6	50.2	47.3	43.7	40.0	31.3	20.7
46.3	33.2	54.8	58.0	57.0	57.5	56.8	57.5	53.4	50.7	45.5	38.5	23.3
53.1	35.0	59.1	62.6	62.8	63.2	62.9	62.5	59.1	53.0	48.1	43.6	26.7
60.1	38.9	70.2	74.0	71.1	74.0	71.3	72.8	67.5	62.7	54.0	46.2	29.4
66.8	41.6	72.7	78.0	77.3	78.9	75.1	79.1	73.4	67.9	60.7	47.9	33.7
73.6	42.8	79.6	84.4	83.0	84.9	81.5	84.5	79.8	74.1	63.4	51.3	35.8
80.5	45.2	82.8	89.9	89.0	92.3	91.3	92.8	83.1	80.9	70.3	48.7	40.9
87.3	46.5	84.8	90.2	90.1	90.6	90.0	91.0	86.1	81.0	67.9	56.0	41.8
94.1	47.8	86.5	92.9	91.2	92.5	92.2	93.5	86.1	81.8	71.0	59.8	45.9
101.0	51.4	95.3	100.1	99.2	101.0	99.2	99.6	93.2	88.5	82.6	65.0	51.2
107.8	53.7	99.6	104.1	101.3	103.2	100.0	102.4	96.4	92.5	84.1	70.6	53.4
114.7	55.1	101.4	105.2	103.8	105.7	103.3	106.4	103.0	98.2	88.0	75.0	57.2
121.5	57.1	107.0	111.2	110.1	111.9	111.6	114.4	113.9	106.6	92.0	77.4	59.7
128.2	57.9	106.5	115.0	113.3	114.8	112.8	117.8	112.4	106.8	101.9	94.0	62.1

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	21.7	21.5	21.4	21.3	21.2	21.2	20.9	20.7	20.5	20.4	19.8
5.2	21.7	21.7	21.5	21.4	21.3	21.3	21.2	21.1	21.0	20.8	20.6	20.1
12.2	21.8	21.9	21.6	21.4	21.3	21.3	21.3	21.2	21.0	20.9	20.8	20.2
18.9	22.0	24.4	25.6	24.9	24.0	23.7	23.2	23.2	21.8	21.2	21.0	20.5
25.9	22.2	26.8	29.9	29.4	28.1	27.7	26.5	23.9	22.1	21.2	21.1	20.6
32.6	22.4	29.0	33.3	33.6	32.4	33.0	31.8	30.6	27.7	24.4	24.2	22.2
39.4	22.7	33.0	38.3	37.9	36.6	36.8	35.8	33.9	32.3	29.6	27.9	22.1
46.3	23.0	36.8	41.8	41.6	40.8	41.1	40.4	37.9	35.8	31.8	30.6	25.3
53.1	24.2	40.9	46.4	46.7	46.1	46.7	45.8	43.6	40.9	34.4	33.8	27.0
60.1	24.4	41.5	52.2	52.3	50.9	50.5	49.0	44.9	41.5	37.9	37.7	30.7
66.8	24.7	45.0	54.0	54.5	53.4	53.8	52.5	49.6	46.4	42.2	40.9	33.2
73.6	25.3	47.5	58.6	58.6	57.4	58.2	56.8	52.6	47.8	44.3	43.4	37.3
80.5	26.1	51.3	61.6	61.6	60.4	60.6	60.0	54.9	50.9	48.4	46.6	39.3
87.3	26.9	53.3	66.6	66.1	63.8	63.4	60.8	54.8	51.5	49.9	49.3	42.9
94.1	26.9	54.2	67.7	68.7	67.8	68.7	67.5	63.3	57.9	53.8	53.3	47.3
101.0	28.9	64.8	71.4	71.8	70.1	69.2	67.6	60.5	59.7	58.6	57.5	47.6
107.8	28.9	65.9	76.9	75.3	73.7	73.6	71.0	64.7	61.8	60.6	61.5	53.2

114.7	30.2	71.5	79.8	79.3	77.3	75.9	73.5	67.4	66.8	64.8	65.0	55.4
121.5	29.9	66.0	82.2	82.2	81.5	82.5	80.6	73.2	70.3	67.9	69.0	62.6
128.2	31.7	71.7	90.1	90.0	87.4	86.7	82.9	74.9	72.7	72.1	71.0	60.6

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.5	21.5	21.5	21.5	21.2	21.2	21.1	20.9	20.6	20.3	20.1	19.6
5.2	21.4	21.5	21.4	21.3	21.1	21.1	21.2	21.0	21.0	20.7	20.5	20.0
12.2	21.5	21.6	21.5	21.4	21.2	21.2	21.2	21.0	20.9	20.7	20.5	20.1
18.9	23.4	27.7	28.4	26.9	25.2	25.0	24.4	23.3	22.6	21.1	20.8	20.2
25.9	23.3	30.1	31.6	31.3	30.1	30.4	30.3	26.8	25.4	22.8	21.9	20.5
32.6	23.3	33.9	35.8	36.0	35.3	36.5	36.5	33.2	32.0	28.1	26.5	22.8
39.4	24.6	36.2	40.1	39.9	39.2	39.7	39.6	36.1	35.3	31.4	29.4	21.7
46.3	26.0	39.3	43.3	43.1	42.0	42.6	42.7	40.1	38.3	34.6	33.8	21.6
53.1	26.4	44.6	45.8	46.1	45.7	47.1	47.5	44.3	42.9	37.9	36.6	25.0
60.1	27.5	49.7	50.3	49.9	49.0	49.8	49.1	44.4	43.5	42.7	41.4	26.6
66.8	28.8	52.5	54.4	54.2	53.4	54.9	54.8	49.4	47.3	46.0	45.1	30.6
73.6	33.0	56.7	56.4	55.7	54.4	54.7	54.1	48.9	50.0	49.7	48.5	33.4
80.5	33.9	62.9	62.6	62.5	61.0	62.3	62.5	58.7	59.6	53.0	51.3	34.9
87.3	39.8	70.2	70.1	70.0	68.2	69.4	69.0	61.0	60.4	56.8	55.7	36.5
94.1	36.0	74.3	74.5	74.6	72.8	73.8	73.0	66.9	62.5	60.7	60.0	38.2
101.0	39.0	79.5	80.9	80.4	78.4	79.9	79.6	71.8	68.7	66.0	65.2	41.2
107.8	38.4	78.2	79.3	80.0	78.7	80.4	80.2	73.1	71.8	69.0	66.7	44.5
114.7	43.8	84.9	85.6	84.7	82.3	83.2	83.0	76.7	75.6	72.1	70.6	47.8
121.5	43.8	87.4	87.9	87.6	86.6	88.0	87.0	80.2	79.2	76.8	73.8	50.8
128.2	43.0	89.9	94.3	93.4	91.8	92.4	91.6	86.6	83.9	79.0	78.0	53.0

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.2	-0.7	-0.8	-0.6	-0.3
12.2	-0.7	-0.7	-0.7	-0.4
18.9	-0.9	-0.9	-0.7	-0.1
25.9	-0.7	-0.7	-0.4	-0.1
32.6	-0.6	-0.6	-0.4	-0.1
39.4	-0.8	-0.7	0.1	-0.2
46.3	-1.0	-1.0	0.3	-0.2
53.1	-0.9	-0.8	-0.5	-0.2
60.1	-0.9	-0.9	-0.9	-0.4
66.8	-1.0	-0.8	-0.6	-0.2
73.6	-1.2	-1.1	-0.8	-0.3
80.5	-0.8	-0.8	-0.5	-0.3
87.3	-1.3	-1.3	-1.1	-0.6
94.1	-1.3	-1.2	-1.3	-0.7
101.0	-1.4	-1.3	-1.1	-0.3
107.8	-1.3	-1.4	-1.2	-0.8
114.7	-1.3	-1.2	-1.0	-0.4
121.5	-1.1	-1.2	-1.1	-0.4
128.2	-1.2	-1.4	-1.4	-0.5

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.2	0.7	0.7	0.7	0.6
12.2	1.1	1.0	0.6	0.3
18.9	0.9	0.9	0.6	0.4
25.9	0.6	0.7	0.4	0.1
32.6	0.8	0.7	0.5	0.1
39.4	0.9	0.9	0.8	0.4
46.3	0.7	0.7	0.8	0.3
53.1	0.9	0.9	0.9	0.5
60.1	0.8	0.8	0.8	0.5
66.8	1.2	1.1	0.9	0.6
73.6	0.9	0.9	0.8	0.6
80.5	1.1	0.9	0.8	0.5
87.3	1.1	1.0	0.9	0.8
94.1	1.2	1.2	0.8	0.3
101.0	1.2	1.1	1.0	0.5
107.8	1.3	1.2	1.2	0.9
114.7	0.7	0.8	1.1	0.8
121.5	1.1	1.1	1.1	0.6
128.2	1.5	1.4	1.1	0.6

Experiment Number 14

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.8	21.5	21.4	21.1	21.1	20.5	20.8	20.3	20.2	19.9	19.8	19.2
5.4	22.6	22.4	22.4	21.9	21.8	21.1	21.4	20.9	21.0	20.7	20.5	19.6
12.1	22.8	22.6	22.6	22.1	21.9	21.3	21.6	21.0	21.1	20.8	20.7	19.8
19.0	24.7	25.3	26.2	26.8	26.4	27.0	25.6	25.7	24.7	23.8	21.9	19.9
25.7	31.7	32.0	33.7	34.0	32.4	32.1	29.8	25.3	22.1	21.7	21.2	19.8
32.5	36.1	36.3	37.6	37.8	37.6	37.6	35.2	31.0	23.6	21.5	21.3	20.2
39.4	38.6	38.7	40.3	41.0	40.7	40.8	38.4	36.3	32.0	24.7	23.8	22.2
46.1	37.7	39.6	40.7	41.5	40.7	41.6	41.1	41.5	35.0	28.0	26.9	22.0
53.1	43.9	45.0	46.6	47.1	46.2	47.1	44.6	44.0	36.5	31.6	30.5	23.1
59.8	50.2	50.3	51.3	51.9	51.2	51.9	49.6	47.8	39.5	35.7	33.8	25.5
66.6	53.2	53.9	55.8	57.0	56.5	57.4	53.8	51.3	43.8	39.0	36.2	28.4
73.5	57.3	57.6	59.5	59.8	57.9	58.7	55.7	50.5	43.8	41.0	38.5	31.7
80.3	59.8	60.4	62.6	63.1	62.2	61.7	58.3	55.2	51.6	48.8	43.6	33.1
87.0	64.3	64.7	67.0	66.8	63.8	65.1	62.5	58.1	52.3	47.7	44.1	36.5
93.9	68.4	68.7	71.4	72.2	70.8	71.6	67.8	64.4	56.2	50.9	47.0	39.4
100.7	68.8	70.4	73.0	73.2	72.6	73.7	70.5	68.9	59.6	54.0	49.4	40.8
107.6	76.1	76.6	80.1	81.2	78.4	79.0	74.5	72.2	66.4	59.9	53.5	44.0
114.3	78.2	79.0	81.0	81.1	79.5	80.1	75.9	73.9	65.6	59.3	56.3	44.9
121.1	85.7	87.1	92.5	94.1	90.6	91.7	83.9	78.6	71.1	63.8	58.1	49.1
128.0	83.8	87.6	91.9	93.8	92.9	93.2	86.0	81.8	73.7	67.8	62.9	49.6
134.8	90.7	91.5	95.0	96.1	94.4	94.4	89.3	84.9	77.8	70.6	64.5	54.6
141.7	87.7	91.6	95.3	96.5	96.3	96.8	92.8	88.7	83.2	78.6	70.7	53.2
148.5	92.7	95.4	99.0	100.4	98.5	99.8	94.4	89.1	81.1	75.2	70.1	61.3
155.2	102.8	105.2	109.7	111.5	109.4	111.1	103.8	96.9	84.6	77.8	72.0	62.6
162.1	100.7	103.1	105.9	107.2	104.7	107.8	105.5	105.1	89.2	81.3	76.3	64.3
168.8	114.2	114.9	119.0	120.4	116.1	116.5	111.5	106.6	92.6	81.7	77.4	64.1
175.7	116.7	118.4	123.3	124.4	120.9	120.9	114.9	108.7	98.4	88.6	80.2	65.8
182.5	116.7	119.5	123.1	124.9	122.2	125.3	119.1	120.4	108.0	92.0	85.0	71.7
189.3	124.2	126.9	132.9	133.3	130.4	130.7	125.6	120.7	108.0	98.0	87.5	71.8

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.3	22.1	21.8	21.4	21.4	21.1	21.1	20.6	20.4	20.1	19.9	19.2
5.4	23.0	22.7	22.6	22.3	22.2	21.8	21.6	21.0	20.7	20.5	20.4	19.4
12.1	23.3	23.1	23.2	23.3	23.5	23.4	23.2	22.3	21.4	20.8	20.5	19.8
19.0	28.5	31.3	31.1	30.7	29.8	29.0	28.1	26.9	23.8	21.8	20.9	20.1
25.7	33.3	36.1	36.0	37.1	37.2	36.7	35.5	29.7	23.7	21.2	20.9	20.0
32.5	37.7	40.7	40.8	41.3	40.8	40.2	39.1	33.7	27.8	22.3	21.7	20.3
39.4	40.7	43.3	44.2	45.8	45.5	44.9	44.4	38.4	29.2	26.4	25.7	22.2
46.1	44.3	46.8	47.0	47.3	47.2	46.6	46.0	40.4	33.7	31.4	29.2	21.7
53.1	46.7	49.0	49.7	50.9	50.8	50.5	49.3	42.7	35.2	33.4	31.4	22.2
59.8	51.5	54.5	54.4	55.1	54.5	53.8	53.4	46.3	40.7	37.7	35.1	23.4
66.6	55.6	58.2	58.0	59.5	60.3	61.1	59.8	49.0	41.8	39.1	37.0	24.7
73.5	58.1	61.7	62.2	62.6	62.7	62.7	61.3	55.9	47.5	42.5	40.8	28.0
80.3	62.0	65.7	66.3	66.8	67.0	67.1	66.3	57.5	49.5	46.1	43.2	31.4
87.0	71.2	75.8	75.8	77.0	76.8	75.3	73.2	61.9	51.3	48.2	45.9	32.9
93.9	70.9	74.2	74.4	75.8	76.1	75.7	75.0	70.1	58.1	52.9	49.4	36.4
100.7	76.8	81.9	82.3	83.7	83.3	82.5	81.0	72.2	59.1	55.6	52.9	41.3
107.6	80.5	85.5	85.3	86.4	85.5	84.5	82.6	68.2	62.6	60.4	53.5	44.1
114.3	85.0	91.2	91.2	93.4	91.8	89.0	86.9	76.0	67.8	62.0	55.3	45.8
121.1	89.5	95.1	95.4	96.7	94.6	93.6	90.6	77.6	72.0	62.1	57.2	47.9
128.0	89.6	93.5	94.5	94.8	94.7	94.6	93.2	88.2	78.6	68.8	61.4	49.7
134.8	94.4	100.5	101.3	102.7	103.3	103.1	102.0	92.9	76.7	73.0	64.4	51.2
141.7	102.4	108.2	109.3	109.3	108.0	104.2	101.2	85.6	85.1	76.0	69.2	52.4
148.5	100.9	105.2	106.0	107.2	107.5	106.9	105.4	88.8	85.8	80.1	73.4	55.4
155.2	110.2	118.1	117.8	119.2	118.1	116.1	112.3	91.6	90.3	81.8	77.0	60.3
162.1	116.7	124.9	125.2	127.8	126.6	125.3	121.1	103.5	90.5	80.9	74.1	62.8
168.8	116.8	121.4	123.3	125.4	126.6	127.1	125.2	112.0	96.8	88.3	81.8	65.5
175.7	121.0	126.7	126.8	128.8	128.6	127.3	125.5	109.6	98.0	91.9	86.7	68.5
182.5	123.2	128.8	128.9	129.4	128.9	128.1	126.3	117.6	104.5	97.3	89.8	71.8
189.3	130.0	136.4	137.5	139.7	140.9	140.5	138.6	122.3	113.7	101.7	92.0	72.9

Thermocouples located at sprinkler number 3

Experiment Number 14

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.4	22.4	22.0	21.6	21.3	21.1	21.2	20.7	20.5	20.2	20.0	19.4
5.4	22.5	21.8	22.0	21.9	22.2	22.4	22.0	20.9	20.6	20.2	19.4	19.9
12.1	22.9	22.5	22.1	22.1	22.2	22.4	21.9	21.1	20.8	20.4	19.6	20.1
19.0	23.1	23.0	22.5	22.9	23.3	23.5	23.1	22.5	22.3	21.8	21.4	20.5
25.7	26.6	28.7	26.1	27.2	27.2	28.2	28.0	27.0	25.1	23.4	22.3	20.7
32.5	28.2	29.4	29.1	29.8	29.8	29.0	28.5	29.6	30.3	28.4	27.1	20.8
39.4	30.1	32.3	32.0	32.2	32.8	33.1	33.0	31.7	32.4	30.0	26.4	21.2
46.1	29.0	27.4	32.2	32.9	32.9	32.5	32.4	33.8	35.6	33.9	31.4	22.6
53.1	32.9	32.9	37.1	38.4	38.7	38.4	38.0	36.2	37.0	35.8	34.6	21.8
59.8	38.9	41.5	41.2	42.6	42.0	42.4	42.4	41.4	42.2	38.9	34.8	25.6
66.6	32.9	34.2	37.6	36.7	37.5	37.8	39.5	43.4	46.1	42.9	37.0	27.1
73.5	36.1	41.7	43.1	43.6	44.7	47.6	48.8	49.0	48.3	44.8	41.1	26.9
80.3	39.6	42.2	45.2	46.7	47.6	48.3	49.1	49.6	51.0	46.4	43.6	32.4
87.0	45.0	50.6	54.5	55.0	53.4	53.7	53.2	51.5	52.4	50.6	48.2	35.8
93.9	41.6	46.7	50.2	50.7	51.9	53.0	54.1	54.8	57.3	54.0	52.5	36.1
100.7	44.4	48.8	50.0	51.4	54.6	56.1	56.9	56.8	58.7	57.3	55.8	37.7
107.6	50.9	57.8	60.3	61.1	61.2	62.8	62.5	62.2	62.4	59.1	57.5	41.2
114.3	48.9	58.7	59.3	61.2	61.1	63.1	63.6	64.2	65.8	64.7	58.9	43.4
121.1	50.7	56.9	59.9	61.9	64.0	67.0	68.0	68.9	70.9	65.5	61.7	45.4
128.0	57.7	67.2	67.0	71.4	69.7	71.4	71.0	71.0	74.0	70.0	68.5	48.1
134.8	62.9	71.6	71.1	73.6	72.6	75.2	75.3	74.0	78.5	72.6	66.3	47.8
141.7	60.1	68.1	70.6	74.4	75.9	78.6	78.5	78.1	79.6	72.8	68.2	52.9
148.5	56.3	61.4	68.9	70.8	74.6	77.2	76.9	76.5	75.7	74.7	73.7	53.6
155.2	63.9	73.2	72.8	79.9	77.6	83.5	81.0	79.7	82.7	79.1	81.3	55.0
162.1	66.7	75.1	77.2	83.3	82.2	84.1	84.5	85.2	90.2	83.0	79.2	58.8
168.8	67.8	71.7	75.6	79.0	80.8	84.9	85.1	85.5	91.5	88.8	85.8	60.6
175.7	76.7	88.8	87.9	94.3	91.4	94.3	94.2	93.7	100.5	93.6	86.6	66.3
182.5	75.9	85.0	87.8	93.4	93.9	98.0	98.0	98.1	102.1	94.5	84.9	67.2
189.3	84.3	96.1	93.6	99.6	98.0	102.2	101.4	101.5	104.1	93.2	84.5	68.1

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.0	21.9	21.9	21.6	21.1	21.0	20.8	20.4	20.0	19.8	19.5	19.3
5.4	22.5	22.4	22.4	22.0	21.6	21.5	21.4	21.0	20.7	20.4	20.3	19.9
12.1	22.8	22.7	22.7	22.4	21.9	21.8	21.5	21.2	20.8	20.4	20.2	19.9
19.0	22.9	23.2	23.1	23.2	23.0	23.2	23.4	23.1	23.3	23.5	23.3	20.3
25.7	24.9	26.4	25.7	28.3	28.3	28.5	28.5	28.1	28.6	26.2	22.6	20.3
32.5	26.4	27.4	27.4	29.3	30.4	31.0	31.4	31.3	31.6	29.6	28.5	20.5
39.4	33.2	32.5	31.7	35.7	36.1	36.6	36.3	33.9	33.8	31.9	26.6	21.8
46.1	31.2	31.2	31.4	31.5	33.4	33.5	34.0	34.1	35.2	36.1	34.2	21.9
53.1	34.6	36.8	36.0	40.3	40.2	40.9	40.8	40.2	41.4	39.7	37.6	23.4
59.8	36.9	37.7	37.0	39.2	39.9	40.4	40.6	40.5	42.3	42.0	42.8	25.9
66.6	45.5	43.2	41.3	48.1	49.0	49.8	50.8	47.9	45.7	42.6	43.1	27.3
73.5	45.2	42.2	41.7	49.6	50.6	51.3	51.7	50.1	49.3	45.7	42.6	29.5
80.3	40.3	40.0	40.0	45.8	47.9	49.0	50.3	51.7	52.9	53.7	53.6	30.4
87.0	41.8	47.1	45.6	49.2	52.2	53.0	53.9	53.3	55.4	53.6	53.4	31.7
93.9	47.5	47.4	47.2	57.9	58.5	59.7	59.8	59.7	60.7	60.0	56.4	37.2
100.7	46.6	50.6	48.3	51.5	53.4	54.5	56.5	60.2	63.5	61.7	58.4	39.3
107.6	54.5	55.7	54.3	59.0	60.2	61.5	63.0	63.4	66.8	65.6	64.9	39.4
114.3	48.4	51.8	55.4	56.3	60.3	60.7	62.2	61.7	65.7	66.8	65.7	46.5
121.1	50.3	57.1	57.6	60.0	62.0	62.7	64.5	65.8	65.0	65.9	67.7	45.8
128.0	50.6	57.6	58.3	61.3	65.5	66.0	69.4	68.6	73.9	73.2	72.3	53.1
134.8	55.3	60.3	60.7	65.1	66.4	69.3	69.9	70.9	74.8	74.1	71.5	49.4
141.7	62.0	72.1	70.6	74.2	76.3	77.6	79.1	78.1	79.8	79.1	79.2	55.8
148.5	58.7	63.0	62.4	70.1	74.9	75.2	76.8	81.0	82.7	82.3	83.5	59.9
155.2	66.7	69.5	67.6	71.1	73.8	76.2	78.4	81.1	82.2	81.5	84.9	60.8
162.1	65.7	69.0	71.6	72.4	74.5	76.8	79.4	81.0	85.3	84.4	85.3	66.4
168.8	65.9	81.7	75.2	86.9	89.5	92.3	94.4	92.9	94.4	91.9	90.9	61.9
175.7	66.9	85.5	81.1	89.7	94.3	95.1	96.5	97.3	98.7	95.5	94.3	65.0
182.5	69.7	77.4	80.2	84.4	87.1	89.9	91.6	92.7	95.1	95.0	97.0	73.1
189.3	72.3	88.2	88.1	94.9	99.6	101.9	103.9	104.7	107.0	102.7	104.1	74.1

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.4	0.1	0.0	0.1	0.1	5.4	0.1	-0.1	0.1	0.1
12.1	-0.2	-0.3	-0.3	-0.2	12.1	0.4	0.5	0.5	0.4
19.0	-0.6	-0.4	-0.3	-0.1	19.0	0.6	0.6	0.6	0.3
25.7	-0.7	-0.7	-0.6	-0.3	25.7	0.5	0.6	0.6	0.3
32.5	-0.5	-0.5	-0.4	-0.2	32.5	0.4	0.5	0.5	0.2
39.4	-0.3	-0.4	-0.4	-0.3	39.4	0.5	0.5	0.4	0.1
46.1	-0.6	-0.6	-0.5	-0.3	46.1	0.6	0.6	0.6	0.1
53.1	-0.5	-0.5	-0.5	-0.3	53.1	0.6	0.6	0.6	0.2
59.8	-0.5	-0.5	-0.4	-0.3	59.8	0.5	0.7	0.7	0.4
66.6	-0.6	-0.7	-0.6	-0.4	66.6	0.5	0.5	0.5	0.4
73.5	-0.6	-0.7	-0.7	-0.4	73.5	0.6	0.5	0.5	0.2
80.3	-0.6	-0.6	-0.5	-0.3	80.3	0.5	0.5	0.6	0.3
87.0	-0.6	-0.6	-0.7	-0.3	87.0	0.6	0.5	0.7	0.4
93.9	-0.7	-0.7	-0.7	-0.5	93.9	0.8	0.7	0.8	0.2
100.7	-0.7	-0.8	-0.5	-0.4	100.7	0.7	0.6	0.6	0.1
107.6	-0.6	-0.7	-0.7	-0.4	107.6	0.7	0.6	0.6	0.2
114.3	-0.8	-0.8	-0.7	-0.3	114.3	0.8	0.7	0.8	0.6
121.1	-0.7	-0.7	-0.3	-0.4	121.1	0.7	0.6	0.7	0.2
128.0	-0.7	-1.0	-0.9	-0.5	128.0	0.9	0.8	0.9	0.4
134.8	-0.7	-0.8	-0.7	-0.5	134.8	0.7	0.7	0.9	0.5
141.7	-0.6	-0.8	-0.9	-0.5	141.7	0.7	0.6	0.7	0.1
148.5	-0.8	-0.8	-0.5	-0.3	148.5	0.8	0.7	0.7	0.2
155.2	-0.6	-0.8	-0.8	-0.7	155.2	0.8	0.8	0.9	0.4
162.1	-1.0	-1.0	-0.9	-0.6	162.1	1.1	1.1	1.2	0.4
168.8	-0.8	-0.9	-0.9	-0.6	168.8	0.9	1.0	1.1	0.5
175.7	-0.9	-0.9	-0.8	-0.7	175.7	1.1	1.1	1.3	0.7
182.5	-1.0	-0.9	-0.6	-0.5	182.5	0.7	0.7	0.9	0.4
189.3	-1.1	-1.2	-1.2	-0.9	189.3	1.4	1.8	1.5	1.0

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
5.4	1.5	0.6
12.1	1.5	0.7
19.0	1.5	0.7
25.7	1.7	0.5
32.5	2.0	0.6
39.4	1.8	1.0
46.1	2.2	0.7
53.1	2.3	0.9
59.8	2.0	1.0
66.6	2.1	1.2
73.5	2.4	0.9
80.3	2.2	0.7
87.0	2.4	1.2
93.9	2.3	1.3
100.7	2.7	1.2
107.6	2.4	0.7
114.3	2.1	1.1
121.1	2.6	0.8
128.0	2.4	1.2
134.8	2.8	0.9
141.7	2.3	1.4
148.5	2.3	1.5
155.2	2.5	1.4
162.1	2.3	1.3
168.8	2.6	1.5
175.7	2.1	1.2
182.5	3.0	1.7
189.3	2.5	1.0

Experiment Number 15

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	23.1	22.6	22.3	21.9	21.7	21.2	21.3	20.4	20.3	19.9	19.8	18.9
4.7	23.5	23.0	22.9	22.4	22.4	21.7	22.0	21.1	20.9	20.5	20.4	19.6
11.5	23.9	23.4	23.2	22.7	22.6	21.9	22.1	21.3	21.0	20.6	20.5	19.8
18.5	25.2	25.3	26.1	26.5	26.9	27.0	25.9	26.7	24.3	22.2	21.4	19.9
25.2	31.6	31.4	32.3	32.1	30.8	30.5	28.4	25.1	22.8	21.6	21.1	19.9
32.1	34.8	35.0	37.0	37.3	37.0	36.9	34.3	29.8	23.5	21.5	21.1	20.1
38.8	37.1	37.3	38.6	38.4	37.8	37.5	35.6	33.4	27.4	24.9	24.2	21.9
45.6	38.5	38.5	39.9	40.4	39.6	39.5	37.9	33.8	28.8	26.9	26.0	21.7
52.5	44.8	45.4	47.1	47.3	46.1	46.7	43.6	40.4	33.8	29.6	28.3	22.5
59.3	47.3	48.0	49.4	49.7	48.2	48.4	45.4	40.2	36.1	32.4	30.9	22.9
66.2	49.3	50.1	51.7	52.3	51.0	50.6	48.8	45.0	37.4	35.1	33.3	25.3
72.9	51.7	53.2	55.3	56.2	55.3	56.1	53.5	51.4	42.0	38.8	36.4	25.1
79.7	54.3	55.1	57.5	58.6	57.7	58.4	56.5	52.5	44.8	42.6	39.3	29.9
86.6	62.7	62.9	65.2	65.3	63.0	62.3	59.0	54.2	48.2	44.3	41.5	31.5
93.4	64.1	65.1	67.7	68.3	66.4	66.4	62.7	56.7	49.7	47.3	44.8	33.1
100.1	68.8	68.9	72.6	72.9	69.7	70.0	65.4	59.5	51.5	49.3	45.6	35.5
107.0	71.3	71.5	74.1	74.3	71.8	72.5	68.4	62.0	54.5	50.9	48.5	35.3
113.8	75.9	76.6	79.3	80.4	78.8	79.6	75.1	67.8	59.0	54.5	50.2	39.0
120.7	78.0	78.7	81.8	81.5	79.9	80.2	75.4	68.8	60.2	56.4	53.9	42.4
127.5	78.6	80.3	83.0	83.2	82.3	82.7	78.4	76.3	67.6	62.6	58.4	44.8
134.2	79.4	80.8	86.0	87.6	89.3	91.5	86.1	84.4	74.2	64.7	58.9	47.3
141.1	86.8	88.2	92.6	93.6	91.6	92.5	87.9	85.9	77.4	67.8	62.8	51.8
147.8	95.6	96.7	101.0	102.0	99.0	99.4	92.3	81.3	75.0	70.3	65.5	53.9
154.8	98.7	99.9	103.2	103.6	99.1	99.5	93.8	87.2	78.9	72.2	68.9	56.3
161.6	101.0	103.2	107.9	108.8	105.3	105.5	99.7	94.2	87.2	78.0	70.2	58.1
168.3	106.5	108.3	112.8	113.9	110.3	109.8	101.7	93.4	86.9	78.9	74.5	64.1
175.2	109.1	112.5	116.9	117.2	115.0	116.2	109.4	102.9	92.2	79.3	75.2	65.0
181.9	109.5	112.5	117.0	119.1	116.4	117.6	112.6	113.1	99.2	89.2	78.2	68.4
188.9	112.9	115.9	121.4	124.1	121.7	123.0	116.6	110.6	96.3	88.2	81.0	67.8
195.6	123.3	127.3	132.9	132.0	128.6	125.6	118.9	109.0	99.5	89.9	85.2	71.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	23.4	23.0	22.6	22.1	22.0	21.5	21.4	20.5	20.4	20.0	19.7	19.0
4.7	24.1	23.8	23.4	22.7	22.6	22.0	22.0	21.0	21.0	20.7	20.5	19.6
11.5	24.3	24.0	23.6	22.9	22.9	22.4	22.3	21.2	21.3	21.0	20.7	19.7
18.5	27.4	29.0	29.3	29.6	29.5	29.2	28.6	26.5	24.5	22.4	21.5	20.0
25.2	31.2	33.6	33.9	33.7	33.9	33.2	32.2	24.7	22.7	21.6	21.0	19.9
32.1	34.0	36.2	36.8	36.1	37.0	36.5	35.8	32.7	29.4	23.7	21.7	20.1
38.8	38.5	40.6	41.1	40.2	40.5	39.3	38.2	29.7	27.4	25.8	24.5	21.6
45.6	40.2	42.5	43.2	42.1	43.4	43.0	42.4	36.8	31.8	28.2	27.1	21.5
52.5	44.4	46.2	46.4	45.4	45.9	44.9	44.4	39.6	34.1	31.3	29.7	21.8
59.3	48.5	53.0	53.6	53.3	54.0	53.6	52.1	45.2	37.6	34.0	33.1	23.5
66.2	52.5	55.4	55.2	53.9	54.4	53.4	51.9	42.0	39.2	36.7	34.6	26.8
72.9	55.9	58.4	59.0	57.8	59.3	58.4	57.2	51.3	43.8	39.5	36.0	26.9
79.7	58.7	62.6	63.0	62.6	63.3	63.2	61.7	57.3	49.2	42.4	39.1	29.6
86.6	62.0	64.9	65.8	65.9	66.8	66.6	65.3	56.5	50.2	45.2	42.3	32.0
93.4	67.0	70.5	70.7	70.2	71.2	69.6	68.0	57.1	52.2	48.6	45.5	32.6
100.1	66.1	68.3	68.3	66.5	68.4	67.7	66.6	60.5	58.8	51.3	47.4	37.3
107.0	69.9	75.3	77.3	79.0	80.9	81.0	80.1	67.6	60.1	54.8	51.1	39.9
113.8	72.0	75.7	76.2	74.9	76.4	75.7	75.9	70.8	65.9	57.0	54.3	41.6
120.7	80.9	86.1	86.7	87.5	89.0	87.9	85.7	75.7	64.1	58.7	53.8	44.6
127.5	78.7	81.9	84.0	83.5	86.4	87.5	87.4	85.8	75.9	63.9	55.3	45.9
134.2	82.8	89.2	90.3	90.9	92.4	93.2	92.1	84.5	76.1	69.5	62.1	47.6
141.1	85.8	92.1	93.7	93.4	95.6	96.5	94.9	87.3	81.6	72.1	66.9	48.8
147.8	94.4	100.7	100.8	101.3	101.6	100.4	98.2	90.3	83.1	77.4	72.7	51.6
154.8	100.3	107.3	109.0	109.2	110.2	110.2	106.9	89.2	82.4	76.5	70.3	55.5
161.6	99.1	103.2	104.2	102.9	106.0	105.9	105.5	98.1	88.8	79.1	73.1	57.4
168.3	105.1	112.0	113.1	114.2	116.3	115.9	113.7	99.0	90.2	82.4	75.3	62.7
175.2	113.2	119.8	121.7	122.0	123.9	123.5	121.4	108.8	94.0	82.1	74.1	63.3
181.9	114.8	119.7	120.7	118.8	120.6	119.7	118.0	108.4	101.3	97.6	86.5	66.4
188.9	115.9	124.2	126.7	127.4	129.9	128.8	126.4	116.4	107.4	99.2	84.1	68.0

195.6	128.7	134.3	135.8	135.5	137.9	136.6	134.2	126.5	114.4	102.3	84.4	71.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	23.8	23.5	23.1	22.6	22.2	21.8	21.5	20.8	20.3	20.0	19.6	19.1
4.7	24.0	23.9	23.8	23.3	22.7	22.3	22.1	21.5	21.3	21.0	20.5	19.8
11.5	24.1	24.0	23.9	23.4	22.8	22.3	22.0	21.6	21.4	21.0	20.7	20.0
18.5	24.2	24.2	24.2	23.9	23.6	23.4	23.5	22.7	22.4	21.6	21.2	20.2
25.2	25.0	25.6	25.6	26.2	25.7	25.9	25.6	25.1	25.5	24.3	24.3	20.3
32.1	28.0	29.6	28.2	28.7	28.4	28.8	29.2	29.4	29.8	25.4	21.8	20.2
38.8	29.1	30.3	30.6	30.7	30.2	30.4	30.8	30.9	31.1	27.4	24.3	20.8
45.6	29.0	30.3	31.3	31.5	31.9	32.2	32.7	33.0	34.1	31.6	28.6	21.9
52.5	30.0	31.5	32.3	32.6	33.1	33.5	33.8	35.2	35.7	34.1	32.1	21.9
59.3	35.8	39.3	37.4	37.6	37.2	38.3	38.4	38.8	38.8	37.0	36.9	23.9
66.2	33.9	35.8	35.9	36.6	37.8	38.9	39.0	40.1	41.6	39.0	37.1	27.4
72.9	34.0	38.6	38.7	40.8	40.1	42.1	42.8	42.7	44.4	42.5	42.1	29.2
79.7	38.9	45.1	43.9	46.2	44.9	44.9	45.0	45.6	48.7	45.9	44.9	29.4
86.6	42.3	45.7	43.2	45.6	45.5	47.1	46.8	46.8	49.3	47.6	47.5	32.9
93.4	42.8	46.9	45.8	48.0	47.8	49.7	50.2	51.7	52.8	50.8	49.0	33.9
100.1	41.8	44.8	47.5	49.0	50.2	52.5	53.4	55.0	57.7	53.0	47.9	36.7
107.0	49.2	56.2	54.8	56.6	56.0	58.2	58.3	58.1	61.3	56.6	51.7	37.5
113.8	52.9	59.4	59.2	60.2	59.6	62.0	62.2	62.4	62.9	56.8	52.6	40.5
120.7	51.5	56.4	58.3	60.0	59.8	61.8	62.6	62.9	65.3	61.9	58.1	42.5
127.5	55.4	61.9	62.1	63.1	62.9	64.9	65.6	65.1	67.0	64.2	62.1	44.4
134.2	57.6	64.3	65.0	65.8	66.6	70.9	70.4	67.4	67.8	65.8	67.4	46.7
141.1	58.1	66.3	65.4	67.0	67.2	70.3	71.0	71.7	72.5	68.9	67.8	49.8
147.8	62.8	72.1	72.7	73.4	72.9	75.1	76.1	75.7	76.1	69.1	63.6	51.8
154.8	60.1	63.5	65.9	67.4	70.5	73.2	74.9	75.9	78.0	74.9	74.2	52.6
161.6	63.3	70.5	73.2	75.4	75.6	78.1	80.4	80.0	84.4	78.9	77.3	54.2
168.3	70.8	80.2	78.7	81.0	80.3	83.9	85.2	82.8	85.1	79.1	78.1	57.6
175.2	69.6	82.4	81.5	84.3	82.6	85.5	87.1	89.6	90.1	81.0	78.8	60.4
181.9	75.6	85.2	86.7	88.6	88.5	91.3	92.8	92.5	94.7	88.5	82.9	64.7
188.9	72.5	81.8	85.9	89.4	88.7	91.2	91.9	92.9	97.3	93.7	85.7	67.0
195.6	82.1	93.4	94.2	101.1	98.0	102.3	100.5	100.7	102.9	98.1	93.9	68.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	23.2	23.0	22.9	22.4	21.9	21.6	21.3	20.6	19.9	19.6	19.3	19.1
4.7	23.8	23.6	23.6	22.9	22.4	22.1	21.9	21.3	20.6	20.2	20.0	19.6
11.5	23.9	23.7	23.6	23.2	22.9	22.6	22.1	21.4	20.7	20.3	20.1	19.7
18.5	23.9	24.0	23.9	23.8	23.6	23.7	23.8	23.5	23.7	23.1	21.6	20.2
25.2	26.2	26.9	26.5	27.4	27.9	28.4	28.9	27.1	26.9	25.8	24.4	20.4
32.1	26.6	28.0	27.9	28.4	28.5	28.8	28.8	29.0	30.1	28.3	26.0	20.5
38.8	31.1	30.7	29.7	31.8	31.7	32.4	33.0	32.2	32.6	31.1	28.6	21.5
45.6	32.7	32.2	31.2	37.2	36.5	36.8	36.6	35.1	34.9	33.3	29.4	21.5
52.5	36.3	35.8	35.2	36.9	37.1	37.7	38.0	37.5	38.4	36.8	36.8	22.9
59.3	34.7	35.7	36.4	37.7	37.4	38.4	38.9	40.2	42.3	41.2	39.7	22.1
66.2	38.0	38.3	37.2	40.3	40.7	41.1	42.0	42.2	43.0	42.5	40.0	24.2
72.9	41.9	41.6	41.7	46.7	46.7	47.4	47.6	46.0	46.0	44.2	43.7	26.3
79.7	39.9	40.9	41.6	42.3	42.3	43.1	44.4	45.1	46.9	47.4	46.5	30.8
86.6	37.0	41.2	41.3	44.2	45.7	46.5	47.7	48.1	49.0	49.7	50.1	32.1
93.4	39.0	45.8	46.1	50.0	51.6	52.3	52.3	52.0	51.7	51.1	51.8	34.2
100.1	51.7	56.0	56.6	55.5	55.1	55.6	55.4	55.0	56.2	55.9	56.6	34.7
107.0	49.0	52.3	51.4	53.1	53.4	53.9	54.9	55.2	57.8	60.3	60.7	36.9
113.8	49.2	51.0	52.7	52.9	52.7	53.9	54.7	57.4	59.5	60.2	62.0	40.4
120.7	60.7	56.7	56.5	64.0	64.2	65.8	67.4	65.3	66.2	63.4	62.2	42.3
127.5	56.9	58.8	58.5	61.0	63.4	65.3	65.9	65.4	67.2	66.1	67.0	46.9
134.2	60.0	61.1	60.6	64.7	66.7	67.9	69.3	69.3	73.0	72.7	72.1	45.1
141.1	60.1	60.2	59.1	61.2	63.5	64.4	65.7	68.4	70.8	71.9	73.3	58.3
147.8	54.1	57.7	57.3	64.7	67.8	70.4	72.7	73.7	76.7	75.1	76.5	59.4
154.8	66.7	74.0	70.2	77.6	79.3	79.4	80.9	81.0	83.5	80.2	79.3	58.5
161.6	60.8	63.4	65.1	67.4	68.9	70.4	71.2	74.5	77.5	77.7	81.0	62.8
168.3	67.8	73.4	71.8	78.2	81.5	82.6	83.9	84.6	87.6	87.2	89.2	62.5
175.2	72.9	80.9	79.9	84.0	86.0	86.8	88.1	86.8	89.8	92.1	93.1	61.3
181.9	66.5	75.3	73.1	75.4	80.7	82.3	84.1	84.0	86.7	86.7	92.5	71.5

188.9	66.2	75.9	77.9	81.6	86.2	87.2	88.6	89.6	91.2	88.0	92.7	75.1
195.6	77.9	88.2	88.3	93.9	98.9	100.8	101.9	101.4	103.2	101.8	101.0	69.1

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.7	-0.1	0.1	-0.1	-0.1
11.5	-0.3	-0.3	-0.3	-0.3
18.5	-0.5	-0.4	-0.4	-0.1
25.2	-0.5	-0.5	-0.5	-0.3
32.1	-0.4	-0.3	-0.3	-0.1
38.8	-0.4	-0.4	-0.4	-0.2
45.6	-0.5	-0.5	-0.5	-0.3
52.5	-0.6	-0.7	-0.7	-0.4
59.3	-0.6	-0.6	-0.6	-0.3
66.2	-0.5	-0.6	-0.5	-0.4
72.9	-0.5	-0.6	-0.4	-0.3
79.7	-0.7	-0.7	-0.6	-0.4
86.6	-0.7	-0.7	-0.4	-0.3
93.4	-0.7	-0.7	-0.5	-0.2
100.1	-0.7	-0.7	-0.7	-0.4
107.0	-0.8	-0.9	-0.8	-0.5
113.8	-0.7	-0.7	-0.4	-0.4
120.7	-0.6	-0.6	-0.4	-0.3
127.5	-0.7	-0.8	-0.7	-0.5
134.2	-0.4	-0.5	-0.4	-0.5
141.1	-0.8	-0.9	-0.8	-0.4
147.8	-0.8	-0.9	-0.6	-0.4
154.8	-0.8	-0.9	-0.8	-0.5
161.6	-0.9	-0.9	-0.8	-0.4
168.3	-1.1	-1.0	-0.8	-0.6
175.2	-0.8	-0.8	-0.7	-0.5
181.9	-0.8	-0.9	-0.7	-0.6
188.9	-0.7	-0.7	-0.7	-0.7
195.6	-0.7	-1.0	-0.8	-0.7

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.7	-0.1	-0.1	0.0	-0.1
11.5	0.3	0.4	0.4	0.2
18.5	0.5	0.5	0.4	-0.1
25.2	0.5	0.4	0.4	0.2
32.1	0.6	0.5	0.5	0.1
38.8	0.3	0.3	0.3	0.2
45.6	0.5	0.5	0.4	0.1
52.5	0.5	0.5	0.5	0.3
59.3	0.5	0.5	0.6	0.3
66.2	0.7	0.7	0.6	0.2
72.9	0.6	0.6	0.7	0.4
79.7	0.6	0.5	0.5	0.3
86.6	0.6	0.7	0.7	0.3
93.4	0.8	0.9	0.9	0.6
100.1	0.6	0.7	0.8	0.6
107.0	0.5	0.5	0.6	0.4
113.8	0.7	0.7	0.7	0.3
120.7	0.5	0.5	0.7	0.6
127.5	0.5	0.4	0.6	0.2
134.2	0.6	0.7	0.8	0.4
141.1	0.6	0.5	0.5	0.1
147.8	0.9	0.9	1.0	0.1
154.8	0.7	0.7	0.9	0.4
161.6	0.8	0.8	0.9	0.4
168.3	0.8	0.9	0.9	0.4
175.2	0.5	0.6	0.8	0.7
181.9	0.6	0.7	0.9	0.5
188.9	0.8	0.7	1.0	0.6
195.6	0.8	0.8	1.0	0.6

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
4.7	1.1	0.6
11.5	1.1	0.5
18.5	1.3	0.5
25.2	1.7	0.6
32.1	1.4	0.8
38.8	1.6	1.0
45.6	1.6	1.0
52.5	2.1	1.0
59.3	1.8	1.0
66.2	1.8	1.0
72.9	2.3	0.8
79.7	2.3	0.8
86.6	2.0	1.1
93.4	1.8	1.5
100.1	2.0	0.8
107.0	2.0	1.1
113.8	2.6	0.7
120.7	3.0	1.2
127.5	2.2	1.2
134.2	1.9	1.2
141.1	2.6	1.2
147.8	2.2	1.7
154.8	2.5	1.3
161.6	2.4	1.6
168.3	2.8	1.1
175.2	2.7	1.3

181.9	2.3	1.1
188.9	3.1	1.2
195.6	2.9	1.1

Experiment Number 16

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.2	21.2	21.1	21.1	21.1	21.0	21.0	20.8	20.8	20.5	20.3	19.5
2.5	21.2	21.2	21.2	21.2	21.1	21.0	21.0	20.9	20.7	20.4	20.1	19.4
9.4	21.6	24.2	29.9	32.0	31.8	31.5	28.9	29.1	25.8	24.8	22.2	19.6
16.3	27.5	42.3	49.6	49.8	45.5	47.6	42.6	38.8	26.4	21.7	21.0	19.8
23.1	34.1	60.4	70.5	71.0	64.0	63.8	57.3	49.9	34.5	30.0	28.7	20.3
30.0	40.9	71.6	83.3	83.8	78.8	80.5	74.6	73.9	66.3	60.9	43.7	20.4
36.8	47.4	89.4	100.5	102.5	96.2	100.7	93.6	89.5	75.9	65.8	44.1	26.1
43.7	55.2	109.7	122.9	121.8	116.7	117.6	111.5	102.8	88.7	74.5	55.3	23.5
50.6	58.0	72.7	68.6	67.4	100.9	91.3	111.7	128.5	109.3	96.2	69.5	29.7

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.7	21.0	21.1	21.0	21.0	21.0	21.0	20.8	20.6	20.5	20.2	19.4
2.5	20.8	21.0	21.1	21.0	21.0	21.0	20.9	20.8	20.7	20.6	20.3	19.5
9.4	23.2	35.6	35.6	34.7	32.2	32.1	30.5	27.5	23.7	21.8	20.8	19.8
16.3	31.9	52.9	51.5	51.0	49.7	47.3	44.8	39.8	32.1	21.8	20.6	19.9
23.1	39.3	70.0	69.8	70.0	69.3	68.8	65.0	55.9	40.0	32.9	29.2	20.5
30.0	44.0	88.9	89.6	91.5	91.7	90.7	88.0	82.9	59.2	42.3	27.4	20.8
36.8	58.8	112.0	112.9	115.0	114.3	111.1	107.9	93.6	80.2	67.4	46.8	25.5
43.7	71.2	147.4	149.1	149.0	146.3	129.3	119.0	108.8	76.4	71.9	53.8	26.0
50.6	77.8	145.2	152.6	163.7	164.1	161.7	160.7	160.7	128.1	96.3	59.9	35.5

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.4	21.8	21.4	21.4	21.3	21.2	21.1	20.8	20.6	20.4	20.2	19.6
2.5	21.4	21.8	21.2	21.2	21.2	21.2	21.1	20.9	20.6	20.4	20.2	19.8
9.4	21.5	21.9	21.3	21.3	21.2	21.3	21.2	21.0	20.8	20.7	20.3	19.8
16.3	21.7	27.7	28.6	28.9	26.0	25.9	24.8	23.9	22.4	21.0	20.8	19.9
23.1	22.4	34.9	36.4	37.1	33.9	34.1	32.0	27.9	25.7	23.4	22.1	20.6
30.0	24.1	46.4	54.3	56.2	51.0	53.0	48.2	40.1	35.6	31.1	31.8	23.2
36.8	25.8	50.7	65.0	64.8	60.0	60.9	56.9	49.4	46.7	44.0	42.0	28.0
43.7	28.8	66.6	84.4	85.7	79.5	81.3	78.1	66.3	60.0	56.0	54.9	33.7
50.6	31.7	79.2	93.7	96.3	92.8	95.7	91.2	80.5	73.1	71.3	68.2	38.6

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.6	21.8	21.6	21.5	21.3	21.3	21.2	20.9	20.6	20.4	20.1	19.4
2.5	21.7	21.8	21.5	21.3	21.1	21.2	21.3	21.0	20.7	20.4	20.1	19.4
9.4	21.7	21.8	21.6	21.5	21.3	21.3	21.3	21.0	20.8	20.5	20.3	19.7
16.3	23.2	29.8	33.9	33.3	30.6	29.2	27.9	26.1	24.8	21.9	21.0	20.2
23.1	24.9	41.1	43.9	43.5	41.9	41.7	40.8	34.8	31.9	26.7	24.6	21.8
30.0	27.7	50.1	58.9	58.0	55.3	56.1	54.4	45.4	41.2	38.6	34.5	23.3
36.8	30.5	59.9	70.0	69.6	66.3	68.8	68.3	57.1	52.2	47.2	44.3	23.9
43.7	34.4	69.8	80.7	80.3	79.1	81.9	81.3	66.6	64.8	58.8	56.1	25.5
50.6	40.4	88.1	101.0	100.6	98.6	101.4	100.2	84.9	80.8	72.3	69.5	33.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.5	0.0	-0.1	-0.1	0.0
9.4	-1.1	-1.0	-0.7	-0.2
16.3	-1.1	-1.1	-0.7	-0.1
23.1	-1.5	-1.5	-1.0	-0.5
30.0	-1.2	-1.1	-0.8	-0.2
36.8	-1.6	-1.5	-0.7	0.2
43.7	-1.5	-1.5	-0.9	-0.9
50.6	-1.4	-1.2	-0.6	-0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.5	0.2	0.2	0.2	0.2
9.4	1.1	1.0	0.9	0.4
16.3	1.3	1.3	1.3	0.7
23.1	1.4	1.1	0.8	0.3
30.0	1.8	1.5	1.2	0.3
36.8	1.6	1.6	1.4	1.0
43.7	2.3	2.2	1.9	0.5
50.6	1.3	1.8	1.6	0.3

Experiment Number 17

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.4	20.3	20.3	19.8	19.9	19.4	19.7	19.0	18.9	18.6	18.4	17.8
0.3	20.7	20.6	20.5	20.2	20.3	19.9	20.0	19.0	18.8	18.4	18.2	18.0
7.2	20.7	22.0	23.6	24.9	26.0	25.7	24.8	27.3	23.5	21.9	21.8	17.9
14.1	29.4	48.2	54.8	53.6	49.1	50.8	45.3	33.3	26.1	20.2	19.2	18.1
20.8	33.7	56.1	61.5	61.5	57.4	58.5	54.7	52.0	44.4	37.9	25.6	18.4
27.7	40.5	76.2	83.0	83.6	80.0	82.9	78.0	68.7	56.2	42.0	25.7	18.7
34.5	52.0	100.7	113.4	113.6	109.5	111.3	104.3	96.8	85.5	69.7	51.7	23.5
41.4	60.6	116.7	130.3	132.7	126.7	128.1	121.9	117.6	104.6	78.0	56.8	21.5

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.7	20.2	20.1	19.6	19.6	19.3	19.4	19.0	18.7	18.4	18.2	17.7
0.3	20.8	20.6	20.4	19.8	20.2	19.7	20.2	19.6	19.4	19.2	18.9	17.9
7.2	22.6	28.5	29.8	31.0	30.8	32.7	32.7	31.1	28.8	25.8	21.3	18.2
14.1	31.6	57.4	58.3	59.6	59.3	59.5	55.4	49.1	30.0	20.6	19.7	18.5
20.8	40.3	71.0	71.8	72.2	71.8	70.6	69.0	63.0	49.3	38.7	33.3	18.8
27.7	48.4	90.4	92.7	95.2	94.4	91.3	90.6	81.9	61.4	51.5	32.1	19.3
34.5	55.9	110.7	110.8	113.6	112.6	111.4	109.0	93.9	79.8	74.0	61.7	25.5
41.4	64.6	123.1	126.9	129.4	130.2	129.0	125.5	112.4	93.9	78.7	64.3	27.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.5	20.7	19.8	19.6	19.4	19.3	19.2	18.9	18.7	18.5	18.3	17.9
0.3	20.9	21.1	20.2	20.0	19.9	19.8	19.7	19.3	19.0	18.7	18.6	18.2
7.2	20.6	21.0	20.3	20.1	20.0	20.0	19.9	19.6	19.3	19.0	18.7	18.4
14.1	21.0	27.8	28.4	29.9	26.7	27.5	26.4	23.0	20.2	19.5	19.2	18.7
20.8	21.9	34.9	40.7	41.4	38.0	39.6	35.6	30.9	27.6	25.3	22.6	20.4
27.7	23.5	45.2	52.9	55.5	50.5	50.5	46.9	39.0	35.6	32.1	30.4	21.3
34.5	25.7	52.1	62.5	66.2	62.7	64.5	60.8	50.7	45.3	41.5	42.7	24.7
41.4	28.1	63.2	80.4	84.3	79.5	80.8	75.4	65.7	61.2	56.2	56.7	36.2

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.5	20.3	20.2	20.0	19.7	19.7	19.6	19.1	18.6	18.5	18.3	17.8
0.3	20.8	20.4	20.1	19.9	19.7	19.6	19.5	19.1	18.5	18.3	18.2	17.8
7.2	20.6	20.5	20.4	20.2	19.8	19.6	19.5	19.1	18.5	18.5	18.4	18.1
14.1	22.2	27.2	29.8	28.9	26.9	26.4	24.7	22.7	22.3	20.2	18.8	18.4
20.8	24.8	41.9	45.5	44.8	43.4	44.5	44.2	37.2	35.5	27.0	24.1	20.9
27.7	27.7	51.8	58.0	57.2	55.2	56.5	56.2	46.1	41.5	37.1	33.5	21.9
34.5	31.6	65.6	70.3	69.8	66.6	67.8	66.9	57.2	52.2	49.1	46.3	22.2
41.4	37.6	79.6	91.0	90.1	87.5	89.5	87.7	74.0	68.1	64.9	62.8	25.3

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.3	-0.1	0.1	-0.1	-0.1
7.2	-1.3	-1.5	-1.4	-0.4
14.1	-0.9	-0.9	-0.8	-0.8
20.8	-1.5	-1.4	-1.2	-0.5
27.7	-1.2	-1.1	-0.7	-0.1
34.5	-1.3	-1.5	-1.6	-0.7
41.4	-1.7	-1.8	-1.8	-1.2

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.3	-0.1	-0.1	-0.1	-0.1
7.2	0.9	0.8	0.8	0.6
14.1	1.2	1.3	1.0	0.5
20.8	1.7	1.7	1.3	0.7
27.7	1.5	1.4	1.2	0.7
34.5	1.8	1.5	1.2	0.4
41.4	2.0	2.0	1.5	0.5

Experiment Number 18

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	19.6	19.7	19.3	19.4	19.0	19.3	18.6	18.6	18.3	17.9	17.2
0.3	20.0	19.9	20.0	19.8	19.7	19.3	19.4	18.8	18.5	18.2	17.9	17.3
7.2	20.1	20.3	21.3	22.1	23.3	24.9	23.8	25.5	23.4	20.6	18.5	17.5
14.1	26.4	42.0	51.6	53.9	46.9	48.7	44.0	36.2	21.6	19.3	18.3	17.7
20.8	35.1	62.6	69.5	70.4	64.9	65.9	59.6	55.3	42.1	34.3	26.4	18.1
27.8	40.8	79.2	88.1	88.1	81.5	83.2	78.9	73.8	55.1	38.9	24.4	18.3
34.5	55.4	108.2	119.6	120.2	112.4	112.8	104.1	87.7	75.2	62.0	36.0	21.3
41.5	58.5	114.6	127.1	128.5	120.4	122.2	115.5	100.4	96.6	80.4	52.9	20.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.3	19.7	19.6	19.2	19.2	18.8	19.0	18.6	18.3	18.1	17.8	17.3
0.3	20.4	20.0	19.9	19.3	19.7	19.2	19.5	18.9	18.6	18.3	18.0	17.6
7.2	23.0	33.4	32.9	33.3	32.0	31.8	29.9	26.8	22.8	19.7	18.4	17.6
14.1	31.1	57.1	55.9	57.4	57.8	56.5	54.0	51.1	31.4	20.9	18.5	17.9
20.8	39.5	68.7	69.0	69.9	67.9	67.0	65.1	61.9	50.7	35.7	31.2	18.4
27.8	49.6	94.3	96.2	98.4	97.0	95.0	93.0	85.9	70.2	58.0	33.0	18.9
34.5	59.7	118.0	116.7	119.6	118.1	117.8	115.3	97.4	84.2	65.6	46.0	26.0
41.5	68.2	64.4	112.7	57.9	110.7	100.5	98.8	109.1	97.6	89.4	71.8	24.6

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.8	20.1	19.2	19.0	18.9	18.9	18.8	18.5	18.3	18.0	17.8	17.4
0.3	20.1	20.4	19.5	19.4	19.3	19.3	19.3	19.1	18.8	18.5	18.1	18.0
7.2	19.9	20.3	19.6	19.5	19.4	19.3	19.3	19.1	18.9	18.7	18.2	18.1
14.1	20.2	27.3	28.2	30.9	26.7	27.1	24.8	22.5	22.2	20.3	19.1	18.2
20.8	21.1	33.3	38.3	39.8	36.1	36.3	33.6	28.4	26.5	21.9	21.2	18.8
27.8	22.3	40.9	47.0	48.7	45.3	45.7	44.7	39.6	36.0	31.7	32.0	21.7
34.5	24.1	50.3	61.4	64.0	61.5	62.4	59.7	52.7	46.8	42.0	41.5	26.8
41.5	28.1	63.1	85.2	86.9	81.8	83.6	78.2	68.4	62.4	55.5	56.1	33.5

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.7	19.6	19.4	19.3	19.1	19.0	19.0	18.7	18.3	18.0	17.8	17.3
0.3	19.9	19.8	19.6	19.4	19.1	19.0	19.0	18.8	18.3	18.0	17.8	17.3
7.2	19.9	19.9	19.7	19.7	19.4	19.3	19.2	18.7	18.1	17.9	17.8	17.6
14.1	23.2	29.5	32.7	32.4	29.7	27.9	26.0	22.8	21.4	20.5	18.7	17.9
20.8	24.4	44.3	46.7	45.7	42.8	43.2	42.1	34.6	31.0	26.6	26.1	21.0
27.8	27.9	51.3	54.5	54.1	52.7	54.8	54.5	45.5	44.1	38.0	33.1	22.1
34.5	32.2	73.1	76.7	75.0	70.0	71.5	71.3	59.8	53.6	49.2	45.8	22.0
41.5	38.2	82.5	89.3	88.4	85.4	87.6	86.1	70.7	66.1	63.8	62.7	23.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.3	-0.1	0.0	-0.1	0.0
7.2	-0.9	-1.0	-0.9	-0.3
14.1	-1.5	-1.2	-0.5	-0.1
20.8	-1.6	-1.6	-1.6	-1.0
27.8	-1.9	-1.9	-1.3	0.0
34.5	-0.9	-1.2	-1.2	-0.5
41.5	-0.6	-0.9	-1.1	-0.8

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.3	0.1	-0.1	0.1	0.1
7.2	0.9	0.8	0.8	0.4
14.1	1.7	1.7	1.5	1.1
20.8	1.7	1.7	1.6	0.9
27.8	1.6	1.3	1.1	0.6
34.5	2.0	1.7	1.2	-0.4
41.5	1.0	1.2	1.4	0.9

Experiment Number 19

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.4	20.4	20.5	20.6	20.6	20.5	20.6	20.5	20.6	20.6	20.4	19.8
6.1	20.4	20.5	20.5	20.5	20.6	20.6	20.6	20.6	20.6	20.6	20.4	19.9
12.9	20.8	20.8	20.9	20.8	20.9	20.8	20.8	20.8	20.9	20.8	20.9	20.2
19.6	27.1	28.4	30.7	31.6	31.4	31.7	30.0	31.5	26.7	23.4	22.3	20.6
26.5	40.6	40.0	42.8	44.5	43.5	45.0	43.4	40.5	33.9	26.8	21.8	20.9
33.3	54.5	55.5	60.2	61.7	58.8	59.5	57.5	57.1	46.6	38.0	29.3	23.7
40.2	64.8	68.4	75.0	76.2	73.9	74.3	71.8	63.5	47.3	36.2	32.1	25.9
47.0	86.1	88.0	94.7	96.8	94.1	94.4	88.1	79.6	63.4	43.3	39.0	27.3
53.7	92.8	96.2	101.0	100.7	96.9	94.6	92.7	79.4	68.6	58.7	51.0	28.8
60.6	98.7	103.1	108.9	111.0	107.3	106.6	103.2	88.7	78.2	65.9	59.4	32.9
67.4	122.7	130.3	142.6	144.8	138.1	139.9	133.7	115.0	90.0	77.1	72.1	43.7
74.3	137.9	149.9	163.4	167.8	164.2	164.0	152.5	137.2	98.2	87.3	83.0	53.3
81.0	161.9	169.5	180.5	181.2	173.5	170.2	167.1	143.2	111.6	102.6	93.6	56.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.6	20.7	20.7	20.7	20.7	20.7	20.6	20.6	20.6	20.4	20.0
6.1	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.6	20.7	20.7	20.7	20.1
12.9	20.8	20.9	21.0	21.0	21.3	21.5	21.7	21.0	20.8	20.8	20.9	20.3
19.6	28.9	29.1	35.0	35.4	37.7	37.5	36.9	24.7	23.6	23.3	21.9	20.5
26.5	41.6	41.2	49.1	48.3	50.5	50.4	48.6	40.2	31.4	24.3	21.8	21.0
33.3	56.0	57.9	64.5	63.5	66.6	65.4	65.2	56.3	42.4	31.5	26.2	22.3
40.2	70.3	67.8	78.0	74.6	79.9	75.1	77.0	51.7	49.8	40.7	33.4	25.3
47.0	87.3	86.8	97.9	96.8	100.0	99.3	98.8	76.2	57.4	48.3	43.6	26.2
53.7	91.7	90.6	99.3	99.0	101.5	101.7	101.1	89.1	72.2	57.3	54.4	35.6
60.6	105.8	101.8	113.1	110.4	112.3	109.9	110.1	90.1	79.2	65.5	58.8	38.7
67.4	124.6	127.0	141.7	139.0	145.9	142.6	140.0	111.5	94.1	78.1	62.3	46.2
74.3	136.5	131.5	147.5	145.5	152.5	154.2	153.8	143.9	128.2	97.3	85.0	52.1
81.0	163.1	161.7	184.7	182.1	189.1	186.7	185.3	163.5	140.8	114.4	101.2	64.0

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.6	20.5	20.5	19.9
6.1	20.6	20.6	20.6	20.7	20.7	20.7	20.7	20.7	20.6	20.5	20.5	20.0
12.9	20.7	20.9	20.7	20.7	20.9	21.4	21.7	21.5	21.7	21.1	20.8	20.2
19.6	32.8	33.3	33.5	32.0	32.1	32.4	32.9	32.2	28.7	24.9	23.5	20.9
26.5	42.3	44.9	46.0	43.7	43.4	43.8	44.9	43.1	36.5	23.1	21.7	20.6
33.3	45.1	49.5	51.8	51.6	51.7	52.7	52.9	51.8	49.6	37.7	28.5	21.5
40.2	53.4	62.5	62.3	63.7	63.8	67.7	67.3	62.1	61.5	52.7	41.6	22.6
47.0	67.7	75.3	74.1	74.2	74.1	76.7	77.2	75.1	74.5	55.7	46.1	29.4
53.7	72.5	84.6	80.3	84.0	82.5	88.5	87.3	88.7	90.0	61.5	46.2	34.1
60.6	81.6	93.5	91.2	93.0	91.2	94.4	93.2	93.1	93.2	75.4	60.8	40.0
67.4	84.7	95.0	94.8	97.5	96.3	103.1	101.3	104.2	101.7	86.7	73.3	47.8
74.3	91.0	107.6	103.6	111.1	114.0	121.6	121.0	126.0	129.1	107.3	83.1	59.8
81.0	120.9	145.6	141.8	142.2	143.2	151.1	153.2	150.8	136.7	103.5	84.6	68.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.8	20.8	20.9	20.7	20.7	20.7	20.5	20.5	20.4	20.2	19.7
6.1	20.9	20.8	20.8	20.9	20.7	20.8	20.7	20.6	20.6	20.4	20.3	19.7
12.9	22.4	22.9	22.8	23.8	23.4	23.6	23.5	23.0	23.9	22.6	22.4	20.3
19.6	32.2	33.2	32.2	35.6	35.0	35.5	35.6	32.4	31.8	28.3	23.9	21.2
26.5	46.2	43.6	37.9	48.6	47.1	47.4	46.8	43.0	35.5	25.2	21.8	21.4
33.3	52.3	49.1	45.3	55.3	53.3	55.0	55.6	53.1	52.7	44.8	35.6	24.6
40.2	55.0	53.1	52.6	60.5	61.8	64.0	66.8	64.3	65.5	61.2	41.7	25.2
47.0	66.8	66.9	60.9	83.4	82.4	84.8	85.2	83.0	83.1	68.8	52.1	25.1
53.7	79.9	73.6	71.7	86.3	88.0	89.8	91.3	87.1	83.5	73.9	60.6	29.5
60.6	93.0	87.6	80.3	96.0	95.5	96.3	95.8	91.7	93.3	87.8	84.1	37.2
67.4	77.1	74.8	75.5	89.3	92.3	94.1	94.0	95.3	99.3	99.3	93.3	42.4
74.3	92.0	86.4	86.2	100.9	106.1	112.7	114.8	116.8	117.6	110.1	98.4	52.0
81.0	93.8	101.6	102.1	111.2	117.7	121.8	129.8	137.9	142.9	134.7	125.7	58.2

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

6.1	0.0	0.1	0.0	0.0	6.1	0.0	-0.1	-0.1	0.0
12.9	-0.3	-0.4	-0.4	-0.4	12.9	0.3	0.3	0.3	0.4
19.6	-0.4	-0.5	-0.5	-0.5	19.6	0.4	0.5	0.5	0.4
26.5	-0.5	-0.5	-0.5	-0.4	26.5	0.5	0.5	0.5	0.2
33.3	-0.9	-0.8	-0.8	-0.4	33.3	0.6	0.6	0.5	0.3
40.2	-0.7	-0.6	-0.5	-0.4	40.2	0.8	0.6	0.5	0.5
47.0	-0.7	-0.6	-0.5	-0.4	47.0	0.6	0.5	0.6	0.4
53.7	-0.5	-0.5	-0.4	-0.4	53.7	0.5	0.4	0.6	0.2
60.6	-1.0	-0.9	-0.6	-0.6	60.6	0.8	0.6	0.8	0.5
67.4	-1.0	-0.9	-0.5	-0.5	67.4	0.6	0.6	0.9	0.3
74.3	-0.9	-0.9	-0.5	-0.8	74.3	1.0	1.0	1.1	0.7
81.0	-0.6	-0.7	-0.5	-0.7	81.0	0.9	0.9	1.0	0.7

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
6.1	2.6	1.5
12.9	2.9	1.5
19.6	2.8	2.1
26.5	3.1	1.8
33.3	2.8	1.8
40.2	3.4	2.1
47.0	3.3	1.9
53.7	3.1	2.2
60.6	3.9	2.5
67.4	4.2	3.1
74.3	3.7	3.3
81.0	4.6	2.7

Experiment Number 20

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	25.0	24.7	24.8	24.4	24.4	23.8	23.9	23.2	22.9	22.5	22.3	21.1
6.8	26.1	25.7	25.8	25.2	25.3	24.7	25.2	24.2	23.4	22.9	22.7	21.7
13.6	28.8	29.5	29.8	30.1	29.6	29.2	27.9	28.1	26.5	24.4	23.7	22.1
20.3	34.8	35.7	36.8	36.6	35.9	34.4	33.9	30.5	28.1	24.5	24.0	22.7
27.2	43.4	46.0	49.3	51.0	50.1	51.7	48.3	46.7	42.0	26.9	25.2	23.7
33.9	60.2	61.4	65.6	67.4	64.5	63.6	60.5	54.6	50.1	37.5	32.5	27.0
40.8	80.0	82.1	87.6	88.0	86.2	85.4	81.9	75.6	55.2	40.8	38.9	27.9
47.6	89.3	94.3	101.0	101.2	98.5	96.4	94.1	84.7	76.2	53.1	49.0	30.7
54.3	104.3	108.5	114.1	115.8	113.1	113.1	108.7	102.9	93.0	67.9	62.0	32.4
61.3	111.8	116.9	124.0	125.3	121.9	120.3	114.9	104.4	90.8	76.6	72.2	40.8
68.0	122.6	131.5	137.6	138.8	134.8	134.0	128.1	120.7	98.5	86.2	79.3	57.3
74.9	140.0	149.9	158.2	160.9	158.5	158.4	152.3	145.4	109.4	94.9	87.0	61.2

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	27.3	26.5	26.0	25.6	25.3	24.8	24.5	23.8	22.9	22.4	22.2	21.2
6.8	27.4	26.9	26.5	26.1	25.7	25.1	24.8	23.8	22.9	22.6	22.4	22.0
13.6	29.6	30.0	30.7	30.0	30.9	30.4	29.6	28.4	26.7	24.4	23.2	22.1
20.3	40.3	44.0	44.7	43.0	45.6	44.3	42.4	36.7	26.0	24.1	23.3	22.3
27.2	53.9	58.5	60.7	58.6	61.4	62.3	60.7	53.2	36.5	26.9	24.5	23.0
33.9	60.0	62.8	67.5	63.1	69.0	68.4	68.5	57.8	52.2	35.5	32.7	27.5
40.8	82.7	89.0	93.1	90.4	96.3	95.1	92.4	74.1	53.3	44.7	38.8	26.3
47.6	89.0	93.4	96.3	96.8	101.4	102.5	101.3	90.4	70.4	56.8	51.7	31.2
54.3	96.3	100.1	102.8	99.7	104.2	104.2	105.1	97.7	77.2	64.7	60.1	39.7
61.3	103.1	110.3	114.1	113.0	117.9	119.6	119.9	110.0	94.7	78.0	65.9	47.7
68.0	134.0	144.8	150.8	150.4	156.9	156.6	153.3	129.9	102.6	85.5	75.7	48.0
74.9	152.2	164.8	167.5	162.0	168.6	166.3	164.6	157.5	130.3	102.0	95.6	59.9

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	27.2	26.8	26.1	25.6	25.0	24.7	24.4	23.8	23.2	22.7	22.2	21.4
6.8	27.2	27.2	26.3	25.9	25.3	24.6	24.3	24.1	23.6	23.4	23.1	22.0
13.6	27.8	27.3	27.8	27.5	27.4	27.4	27.6	27.1	27.0	25.6	25.3	22.4
20.3	36.1	38.3	37.8	38.1	37.6	38.2	39.5	37.0	36.1	29.9	25.8	22.3
27.2	47.0	50.8	49.3	49.8	50.4	53.3	54.7	50.4	47.1	28.1	24.3	22.4
33.9	52.9	60.5	56.7	58.0	57.4	59.0	61.0	59.6	59.8	44.8	35.2	23.8
40.8	62.4	70.3	67.2	69.3	70.5	73.1	73.6	72.2	69.2	52.2	41.9	25.7
47.6	69.4	85.1	77.8	81.5	80.2	84.2	85.6	89.7	79.0	59.7	44.9	35.0
54.3	83.6	99.1	89.4	93.0	93.4	97.4	99.1	97.8	95.4	73.0	58.2	40.0
61.3	90.6	108.4	99.1	101.6	102.7	106.1	107.6	101.1	97.9	80.0	63.8	47.0
68.0	88.9	106.0	102.0	107.3	108.0	112.6	114.9	118.1	123.6	99.5	69.7	57.9
74.9	103.9	131.2	121.7	130.3	129.3	135.2	138.1	143.3	152.8	125.7	90.6	66.3

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	26.4	25.7	25.6	24.8	24.3	24.1	23.7	23.1	22.6	22.4	22.1	21.6
6.8	27.3	26.6	26.7	25.0	24.7	24.5	24.3	23.8	23.4	22.9	22.6	22.3
13.6	29.5	29.3	28.7	29.5	29.1	29.4	29.2	28.8	28.9	27.5	26.6	23.0
20.3	37.1	35.5	34.9	38.6	38.5	39.7	40.6	40.9	40.4	30.6	26.2	23.5
27.2	48.5	46.5	43.3	53.4	51.7	53.0	53.6	51.7	53.3	32.7	27.5	24.6
33.9	59.0	56.1	51.6	63.1	62.5	63.8	64.5	60.6	60.8	53.8	39.9	25.7
40.8	69.7	68.3	65.8	72.5	71.5	71.3	70.9	70.5	74.2	66.9	51.4	27.3
47.6	75.1	73.5	71.0	82.6	83.1	84.9	85.5	83.5	76.5	70.5	59.4	29.6
54.3	94.6	87.2	76.4	97.5	96.4	97.0	97.1	91.2	86.7	72.3	65.3	38.7
61.3	95.6	95.4	89.9	101.1	101.0	103.4	106.3	99.8	98.8	91.2	87.6	45.2
68.0	118.2	115.3	108.3	120.7	120.8	123.8	124.1	119.4	115.0	106.2	100.1	52.7
74.9	131.0	124.4	112.2	141.1	140.6	142.8	143.0	133.4	133.1	122.7	116.9	62.2

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.8	-0.2	-0.2	-0.2	-0.1
13.6	-0.4	-0.3	-0.4	-0.4
20.3	-0.3	-0.5	-0.5	-0.5
27.2	-0.4	-0.4	-0.2	-0.3

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.8	0.2	0.1	0.1	-0.1
13.6	0.3	0.3	0.3	0.2
20.3	0.5	0.6	0.5	0.2
27.2	0.4	0.3	0.5	0.3

33.9	-0.6	-0.7	-0.4	-0.2	33.9	0.7	0.7	0.7	0.2
40.8	-0.7	-0.6	-0.3	-0.3	40.8	0.6	0.7	0.6	0.3
47.6	-0.8	-0.8	-0.5	-0.6	47.6	0.6	0.7	0.7	0.2
54.3	-0.5	-0.6	-0.5	-0.5	54.3	0.8	0.7	0.7	0.3
61.3	-0.6	-0.7	-0.4	-0.5	61.3	0.8	0.7	0.8	0.5
68.0	-1.2	-1.0	-0.7	-0.6	68.0	0.9	0.9	1.2	0.7
74.9	-0.9	-1.0	-0.8	-0.7	74.9	0.9	0.8	0.9	0.4

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
6.8	2.2	1.1
13.6	2.4	1.8
20.3	3.3	2.0
27.2	3.8	2.1
33.9	3.2	2.8
40.8	2.6	2.2
47.6	3.0	2.5
54.3	3.9	2.5
61.3	4.0	3.0
68.0	4.6	2.4
74.9	4.1	3.4

Experiment Number 21

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.3	21.2	21.3	21.0	20.9	20.6	20.6	20.1	19.9	19.6	19.3	17.8
1.7	21.4	21.2	21.1	20.9	20.8	20.5	20.5	20.0	19.9	19.6	19.2	18.1
8.5	21.4	21.8	23.8	25.4	25.4	26.0	24.8	26.1	22.7	20.9	19.6	18.3
15.4	25.1	34.8	38.3	38.9	35.1	35.9	33.6	31.7	22.3	20.1	19.5	18.2
22.2	28.2	41.1	43.5	44.0	42.4	43.6	41.5	39.1	32.8	29.0	25.1	18.6
29.0	33.1	56.2	62.3	61.6	55.5	56.2	50.6	44.9	39.4	30.8	22.1	18.4
36.0	37.2	63.3	68.4	69.5	66.9	67.3	63.7	59.8	52.4	44.2	24.9	19.4
42.7	39.4	70.9	77.7	77.1	72.9	75.1	71.7	67.9	56.9	49.2	33.1	20.5
49.6	41.8	76.4	86.2	87.8	86.2	86.2	82.8	75.2	70.3	62.2	43.5	20.7
56.4	46.6	89.6	99.2	100.3	96.1	97.6	93.2	86.2	79.7	70.8	57.7	30.3
63.2	51.1	99.1	110.7	111.5	106.3	105.3	104.3	101.0	93.6	74.3	55.5	31.9
70.2	56.3	105.8	116.0	116.4	112.2	113.4	109.7	99.5	96.1	74.0	62.8	38.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.1	21.5	21.4	21.0	21.0	20.6	20.6	20.1	19.9	19.6	19.3	18.0
1.7	21.4	21.9	21.7	22.8	21.3	20.7	20.5	20.3	20.1	19.8	19.4	18.3
8.5	22.4	28.3	28.4	29.5	28.4	27.7	27.6	29.0	25.4	23.8	20.0	18.7
15.4	29.9	50.5	49.2	49.2	47.7	46.7	43.7	35.3	22.8	20.7	19.5	18.2
22.2	31.3	50.6	50.5	49.9	48.1	45.9	44.1	39.7	31.3	27.3	24.4	18.5
29.0	33.7	57.4	57.9	58.7	58.1	57.4	56.0	52.0	42.7	32.0	21.4	18.5
36.0	39.1	67.7	68.5	70.5	69.1	68.0	67.6	66.1	59.4	49.1	36.6	20.0
42.7	44.2	84.9	86.5	87.4	86.2	83.9	79.5	73.2	63.1	52.0	39.1	22.6
49.6	48.8	88.9	90.3	92.7	91.4	88.9	88.5	76.6	67.4	57.8	43.6	23.5
56.4	53.6	100.2	101.5	104.5	105.8	104.7	101.6	88.1	78.2	61.1	44.9	30.2
63.2	58.5	110.2	113.3	115.3	113.6	111.0	110.7	98.7	91.7	67.3	55.2	32.4
70.2	61.7	113.6	115.6	117.5	116.8	114.3	113.6	106.8	100.6	81.5	63.7	36.0

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.7	21.0	20.6	20.6	20.5	20.5	20.4	20.2	20.0	19.6	19.1	18.1
1.7	20.7	21.1	20.6	20.5	20.3	20.2	20.2	20.0	19.9	19.7	19.3	18.4
8.5	20.6	21.0	20.5	20.5	20.5	20.5	20.5	20.3	20.1	19.8	19.4	18.5
15.4	20.7	21.7	21.7	22.7	21.8	22.4	22.1	21.7	21.5	20.6	20.1	18.8
22.2	21.1	28.6	30.8	31.3	28.4	27.9	26.0	22.3	21.1	20.5	19.9	19.0
29.0	21.7	33.1	37.2	38.7	36.2	36.8	34.7	29.8	26.7	25.7	26.0	22.2
36.0	22.5	37.2	42.8	43.4	40.4	40.0	38.5	34.7	33.0	31.4	31.8	22.2
42.7	23.2	40.5	48.6	49.1	46.7	47.1	45.1	40.3	37.5	35.6	35.4	25.2
49.6	24.9	48.0	61.7	62.9	58.1	58.1	55.0	49.1	44.4	42.3	42.0	30.7
56.4	25.7	54.6	65.0	66.2	63.6	63.6	61.4	54.7	51.4	48.6	49.7	35.6
63.2	27.1	55.6	73.2	74.0	69.2	69.2	65.3	59.9	56.9	55.5	55.3	38.8
70.2	28.0	60.3	81.0	82.1	77.4	78.9	75.2	68.8	65.6	63.3	63.8	45.7

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.4	20.7	20.7	20.7	20.5	20.4	20.4	20.0	19.8	19.2	18.9	18.1
1.7	20.5	20.6	20.6	20.5	20.3	20.3	20.2	19.9	19.7	19.4	19.2	18.4
8.5	20.5	20.7	20.6	20.5	20.3	20.3	20.3	20.0	19.8	19.5	19.2	18.3
15.4	21.2	25.8	29.1	28.4	27.1	26.9	25.8	23.3	22.4	20.3	19.8	18.6
22.2	22.2	32.3	35.0	34.5	33.0	33.3	32.7	28.4	26.3	22.4	21.8	19.3
29.0	23.5	38.5	41.3	40.4	38.8	39.7	39.7	34.5	30.6	29.2	26.2	21.5
36.0	24.9	42.3	46.8	46.3	44.6	45.4	45.6	40.1	36.0	34.4	31.6	21.0
42.7	27.2	55.2	56.1	55.7	54.0	55.1	54.8	45.5	40.8	41.0	38.8	21.2
49.6	28.1	54.4	58.1	58.2	57.5	58.9	57.9	50.7	48.3	46.8	46.5	24.7
56.4	31.9	58.8	67.6	67.2	65.1	66.2	65.2	54.1	52.8	52.1	52.0	29.0
63.2	35.7	80.5	81.3	79.7	76.4	76.5	75.8	61.0	59.3	59.0	58.0	33.3
70.2	37.5	80.7	86.4	84.4	81.6	82.3	81.1	68.4	67.6	67.9	66.7	37.3

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.7	-0.1	-0.1	-0.1	0.0
8.5	-0.6	-0.9	-0.9	0.0
15.4	-1.1	-1.1	-0.9	-0.6
22.2	-0.7	-0.9	-0.6	-0.3

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.7	0.1	0.1	0.1	0.0
8.5	1.2	1.1	0.7	0.2
15.4	1.3	1.1	0.7	0.5
22.2	0.7	0.8	0.9	0.1

Experiment Number 21

29.0	-1.3	-1.2	-0.8	-0.6	29.0	1.3	1.2	1.0	0.8
36.0	-1.4	-1.6	-1.2	-0.8	36.0	1.3	1.4	1.4	0.8
42.7	-0.8	-1.0	-0.9	-0.4	42.7	1.4	1.5	1.3	0.5
49.6	-1.2	-1.0	-0.6	-0.2	49.6	1.5	1.7	1.6	1.1
56.4	-1.0	-1.1	-1.2	-0.8	56.4	1.4	1.2	1.0	0.7
63.2	-1.2	-1.3	-1.3	-0.1	63.2	1.7	1.3	1.1	0.8
70.2	-1.7	-1.8	-1.4	-1.0	70.2	1.8	1.6	1.5	0.8

Experiment Number 22

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	21.7	22.0	21.7	21.8	21.4	21.6	21.2	21.2	20.7	20.2	18.4
2.8	21.7	21.6	21.8	21.6	21.6	21.3	21.5	21.0	21.0	20.8	20.4	19.1
9.6	21.9	22.8	25.3	26.4	25.9	26.3	24.9	27.1	25.4	22.7	20.9	19.3
16.5	25.8	35.9	39.7	39.7	36.6	36.9	34.6	30.7	22.9	21.5	21.0	19.2
23.3	29.0	44.2	48.1	48.8	46.4	47.0	44.4	38.9	30.3	27.0	22.7	19.7
30.0	33.3	54.4	58.8	58.8	55.7	57.5	55.4	43.8	37.7	32.8	24.4	19.6
37.0	37.0	64.6	71.0	72.9	69.7	72.1	68.5	66.9	53.4	44.2	33.0	20.6
43.8	41.6	75.0	83.0	82.6	79.3	78.7	76.5	76.1	69.4	56.0	35.7	20.8
50.7	44.1	80.4	88.5	89.0	85.4	86.7	84.2	79.1	73.2	62.5	46.5	21.5
57.5	50.0	92.3	101.3	103.3	98.4	100.3	94.7	92.2	81.7	70.8	50.6	25.1
64.3	54.2	104.3	115.8	117.1	112.3	113.2	107.0	103.5	92.7	81.3	59.0	31.7
71.2	56.7	106.6	118.0	121.9	116.9	120.5	116.1	109.9	100.9	86.9	67.4	38.5
78.0	60.6	83.9	114.1	113.2	59.3	120.4	95.1	117.1	106.7	90.6	71.2	42.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	22.0	22.1	22.3	22.0	21.8	21.8	21.4	21.3	20.9	20.6	18.6
2.8	19.8	21.4	21.5	21.7	21.7	21.6	21.6	21.0	21.0	20.9	20.6	18.6
9.6	21.5	29.6	29.8	30.9	30.4	30.8	30.0	30.4	26.6	25.1	21.5	18.6
16.5	26.2	43.0	43.4	44.3	44.3	43.8	43.7	37.5	31.3	24.9	20.8	18.3
23.3	29.5	48.4	49.2	50.6	50.2	49.6	48.9	45.4	37.0	29.2	25.7	18.7
30.0	34.8	64.4	64.1	63.8	62.6	61.3	60.3	55.5	44.8	33.8	21.9	18.8
37.0	38.6	73.4	71.8	73.4	70.5	67.5	66.7	57.9	50.7	44.9	37.1	21.7
43.8	42.2	77.2	77.9	79.5	78.5	77.1	75.1	70.1	59.6	49.6	39.8	23.2
50.7	48.6	88.7	89.9	92.3	91.4	89.6	87.7	79.5	67.0	57.4	48.7	26.8
57.5	49.8	102.3	105.3	109.6	109.7	106.8	105.5	101.4	82.0	57.1	45.7	30.5
64.3	56.0	108.4	109.9	111.7	111.3	110.9	110.0	96.1	80.6	60.7	53.7	32.2
71.2	63.7	123.9	127.1	130.3	129.8	127.6	125.7	113.2	98.2	83.3	64.2	38.2
78.0	61.7	102.7	105.2	90.4	98.9	86.5	66.2	102.6	100.9	90.3	66.3	44.1

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.9	21.6	21.6	21.6	21.5	21.6	21.5	21.3	21.1	20.8	20.5	18.6
2.8	21.0	21.5	21.3	21.4	21.3	21.4	21.3	21.2	20.8	20.5	20.3	18.8
9.6	21.0	21.5	21.3	21.3	21.2	21.3	21.3	21.1	20.9	20.6	20.3	18.3
16.5	20.9	22.0	22.3	23.5	22.6	23.0	22.7	22.2	22.0	21.2	20.9	19.2
23.3	21.6	29.8	33.6	34.3	31.2	31.1	28.6	22.7	22.1	21.7	21.5	20.2
30.0	22.2	32.9	38.8	39.9	37.5	38.2	36.1	32.2	31.3	28.4	27.4	22.2
37.0	22.7	35.7	42.1	43.4	40.5	41.4	39.9	36.1	34.5	33.2	33.1	23.8
43.8	23.7	40.5	50.9	51.5	48.3	49.0	46.3	41.2	38.3	36.1	36.2	24.8
50.7	24.9	47.0	59.5	59.5	55.6	55.7	53.5	48.0	45.3	42.8	42.7	31.1
57.5	25.9	52.3	69.2	68.8	64.5	65.3	61.6	53.3	50.8	49.2	49.0	35.5
64.3	26.9	57.3	76.2	76.9	71.4	71.5	68.1	59.0	56.7	55.3	55.9	38.4
71.2	28.4	67.9	82.4	84.3	79.7	81.0	76.9	67.9	64.1	62.0	62.4	43.9
78.0	29.6	69.1	85.7	87.8	82.7	83.4	81.7	73.9	72.7	71.4	70.7	50.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.7	21.1	21.3	21.4	21.3	21.4	21.3	21.1	21.0	20.6	20.1	18.4
2.8	20.7	21.0	21.1	21.1	21.1	21.2	21.2	21.0	21.0	20.6	20.2	18.8
9.6	20.8	21.1	21.2	21.2	21.2	21.2	21.1	21.0	20.8	20.7	20.4	19.0
16.5	21.8	25.9	28.9	28.8	27.4	27.3	26.8	24.9	24.3	21.7	20.9	19.5
23.3	22.6	33.9	34.5	33.9	32.1	32.4	31.6	27.5	24.8	22.2	21.3	20.4
30.0	23.4	38.9	40.0	40.0	38.9	40.1	39.6	34.6	32.2	29.3	27.4	22.0
37.0	25.3	44.3	49.2	48.9	46.9	47.9	47.2	39.5	37.6	34.9	32.9	21.5
43.8	26.6	53.9	58.0	57.7	55.9	56.6	55.9	47.3	43.3	39.5	38.6	22.4
50.7	28.7	56.4	61.8	62.0	61.2	62.3	61.4	52.4	49.1	48.1	46.6	25.3
57.5	32.9	70.9	73.6	72.8	69.7	70.3	68.7	58.5	54.1	52.1	51.7	29.8
64.3	33.6	74.6	80.0	79.1	76.5	77.4	76.8	68.8	65.6	61.4	60.3	33.4
71.2	36.5	77.2	85.9	85.9	85.0	87.3	86.5	78.5	72.7	69.2	67.3	37.3
78.0	37.8	86.3	93.7	93.8	91.0	92.1	90.8	81.0	77.5	74.9	74.4	41.9

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Experiment Number 22

2.8	-0.1	-0.1	0.0	-0.1	2.8	0.1	0.1	0.1	0.1
9.6	-1.0	-1.1	-1.1	-0.2	9.6	0.9	0.7	0.6	0.3
16.5	-1.2	-1.4	-1.2	-0.3	16.5	1.1	0.9	0.9	0.4
23.3	-0.9	-0.9	-0.8	0.0	23.3	1.6	1.4	1.2	0.4
30.0	-1.0	-1.1	-1.1	-0.6	30.0	1.1	1.0	0.9	0.6
37.0	-1.1	-1.1	-0.6	-0.4	37.0	1.6	1.7	1.4	0.4
43.8	-1.4	-1.4	-1.1	-0.8	43.8	1.5	1.5	1.0	0.7
50.7	-1.5	-1.5	-1.0	-0.8	50.7	1.5	1.6	1.4	0.5
57.5	-1.5	-1.7	-1.1	-0.5	57.5	1.8	1.7	1.4	0.6
64.3	-1.6	-1.6	-1.3	-0.9	64.3	1.6	1.5	1.2	0.4
71.2	-1.2	-1.1	-0.8	-0.5	71.2	1.1	1.1	0.7	-0.3
78.0	-1.5	-1.3	-0.8	-0.5	78.0	1.0	1.2	1.1	0.6

Experiment Number 23

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.8	21.9	22.1	21.7	21.8	21.2	21.5	20.6	21.0	20.8	20.3	18.6
1.7	21.7	21.7	21.8	21.5	21.5	21.1	21.3	20.5	20.8	20.6	20.1	19.1
8.5	22.1	23.4	26.3	27.2	26.6	27.3	25.7	28.0	26.6	24.1	20.9	19.3
15.4	26.0	38.2	46.1	47.6	43.0	43.9	39.2	28.5	23.1	21.9	21.1	19.1
22.2	28.8	44.8	51.0	52.6	49.2	51.0	48.0	41.3	32.9	28.8	22.3	19.3
29.0	34.0	56.4	62.4	62.8	59.6	59.6	57.3	51.9	44.5	27.8	21.6	19.4
35.9	37.7	66.5	74.5	75.5	72.1	74.0	68.4	65.4	54.6	41.1	30.1	20.5
42.7	42.3	73.5	79.1	78.1	75.6	74.3	71.9	68.1	61.9	49.0	34.6	20.8
49.7	45.5	81.2	88.8	90.6	88.0	89.7	85.8	78.5	70.3	63.2	49.0	21.8
56.4	48.0	90.9	102.2	104.6	99.5	101.7	98.5	97.8	85.9	72.2	56.5	26.4
63.2	54.1	101.5	111.8	114.0	108.7	110.7	107.2	98.4	89.3	74.1	57.6	32.8
70.2	58.6	110.3	122.0	125.2	121.2	123.5	118.3	112.3	103.4	88.9	69.5	38.5
76.9	58.3	43.5	109.8	124.4	103.7	115.9	109.4	113.9	107.8	95.2	74.6	41.8

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.1	22.3	22.4	22.2	22.2	21.5	21.7	21.3	21.0	20.6	20.3	19.0
1.7	20.1	21.9	22.1	22.2	22.1	21.3	21.6	21.1	20.9	20.6	20.2	19.0
8.5	20.9	26.9	27.2	27.9	27.8	28.4	27.2	29.3	26.1	23.7	21.2	19.5
15.4	26.9	45.5	45.7	47.1	46.0	45.3	42.9	36.5	26.6	21.6	21.0	19.3
22.2	31.0	51.1	50.7	50.6	49.2	47.9	47.4	41.9	28.4	25.6	24.1	19.3
29.0	32.2	57.3	57.6	59.2	58.5	59.2	58.5	54.4	44.3	38.5	26.3	19.4
35.9	37.5	70.3	70.6	71.2	71.0	70.4	68.3	62.4	52.6	46.0	34.9	21.5
42.7	43.8	80.1	81.1	82.2	81.6	79.8	77.8	64.9	60.2	47.9	39.9	23.8
49.7	46.8	87.8	89.4	91.0	90.9	89.3	88.2	80.7	71.4	60.0	43.6	28.0
56.4	51.6	98.1	99.2	102.0	100.1	100.2	101.4	97.3	82.4	67.3	58.1	31.7
63.2	56.7	105.7	109.0	111.5	113.4	113.9	112.1	109.3	96.3	81.1	66.4	33.5
70.2	59.0	114.5	117.0	119.5	119.9	119.3	117.0	112.0	105.2	99.9	80.7	38.4
76.9	64.9	126.5	129.7	133.7	132.8	130.2	127.1	118.4	114.0	104.0	78.9	45.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.9	21.4	21.5	21.5	21.4	21.4	21.3	21.1	20.8	20.4	20.1	19.0
1.7	20.9	21.3	21.2	21.3	21.2	21.3	21.3	21.1	20.7	20.3	20.0	19.1
8.5	20.9	21.4	21.3	21.3	21.2	21.2	21.2	21.1	20.9	20.5	20.2	19.2
15.4	21.0	22.4	22.6	24.0	22.8	23.5	23.0	22.6	22.7	21.3	20.9	19.6
22.2	21.5	29.8	31.7	33.1	29.9	30.0	28.2	23.1	22.0	21.3	21.0	19.9
29.0	22.0	33.4	38.6	39.5	37.0	37.4	36.0	31.4	30.2	28.6	27.5	21.8
35.9	22.6	34.8	42.2	42.4	39.7	39.8	38.7	35.3	34.0	33.2	33.2	24.9
42.7	23.1	40.4	51.8	52.0	49.0	49.7	46.9	42.6	40.4	36.1	35.7	26.5
49.7	24.3	45.5	57.2	58.9	56.4	57.7	55.2	50.1	46.5	43.1	42.6	31.4
56.4	25.8	53.6	65.5	66.4	63.6	64.7	61.8	56.6	53.9	50.2	50.0	36.7
63.2	26.5	59.2	71.2	74.0	70.6	72.5	69.3	63.8	59.0	56.7	57.0	41.8
70.2	28.8	62.3	82.4	83.2	79.4	80.5	77.6	71.4	67.3	65.0	63.3	47.7
76.9	29.9	67.0	90.2	92.1	88.2	90.4	87.0	80.3	75.4	72.6	71.1	51.3

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.8	21.2	21.5	21.5	21.3	21.4	21.4	21.2	20.9	20.3	19.9	18.7
1.7	20.7	21.1	21.3	21.2	21.1	21.1	21.2	21.0	21.0	20.5	20.2	19.4
8.5	20.8	21.1	21.2	21.2	21.2	21.2	21.1	21.0	20.9	20.6	20.1	19.6
15.4	21.8	27.3	30.2	29.7	28.7	28.3	26.9	24.3	22.7	21.0	20.8	19.7
22.2	22.2	33.3	35.7	35.1	34.1	33.8	33.1	27.7	26.4	23.3	22.4	20.3
29.0	23.5	37.3	41.3	41.4	40.4	40.8	40.5	35.1	32.0	30.6	28.9	21.1
35.9	25.7	44.1	50.5	50.1	48.2	48.4	48.2	40.5	38.3	36.1	33.2	21.4
42.7	27.0	55.6	56.9	56.3	53.9	54.9	54.7	49.2	45.7	42.1	40.1	22.3
49.7	28.3	56.1	59.0	59.2	59.2	60.5	60.4	56.2	52.9	48.2	48.6	25.1
56.4	31.6	65.4	70.9	69.7	67.5	68.2	67.1	62.0	59.1	55.0	53.5	28.7
63.2	35.1	71.9	77.1	76.8	74.9	76.1	75.1	65.1	63.3	61.8	61.0	33.9
70.2	38.2	82.3	86.8	84.7	81.6	82.9	82.0	74.1	72.2	69.3	68.7	37.9
76.9	39.6	95.0	97.1	95.3	93.0	93.1	92.2	77.8	77.6	77.0	75.1	41.2

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0

Experiment Number 23

1.7	-0.1	-0.1	-0.2	-0.1	1.7	0.1	0.1	0.0	0.0
8.5	-0.5	-0.6	-0.6	-0.1	8.5	0.8	0.8	0.5	0.2
15.4	-1.1	-1.0	-0.7	0.2	15.4	0.8	0.9	0.9	0.5
22.2	-1.4	-1.5	-1.1	-0.6	22.2	1.0	0.8	0.6	0.4
29.0	-1.1	-1.3	-0.9	0.4	29.0	1.2	1.3	1.1	-0.2
35.9	-1.4	-1.4	-1.0	-1.0	35.9	1.7	1.6	1.4	0.8
42.7	-1.4	-1.4	-1.3	-0.3	42.7	1.5	1.4	1.1	-0.2
49.7	-1.0	-1.1	-0.6	-0.3	49.7	1.5	1.4	1.3	0.8
56.4	-0.8	-0.8	-0.6	-0.7	56.4	1.3	1.5	1.7	1.2
63.2	-1.3	-1.2	-0.9	-0.7	63.2	1.5	1.4	1.1	0.0
70.2	-0.7	-0.6	-0.5	-0.8	70.2	1.7	1.6	1.0	0.5
76.9	-1.3	-1.2	-0.8	-0.6	76.9	2.0	2.1	1.6	-0.3

Experiment Number 24

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	23.0	22.8	22.8	22.6	22.6	22.1	22.3	21.8	21.8	21.5	21.3	20.5
2.3	23.6	23.5	23.6	23.5	23.4	22.9	23.1	22.4	22.0	21.6	21.3	20.7
9.2	23.7	23.7	23.8	23.6	23.5	22.9	23.2	22.5	21.9	21.7	21.5	21.0
16.0	24.1	24.1	24.4	24.1	24.4	24.0	24.2	24.1	23.0	22.5	22.2	21.1
22.9	28.3	28.0	28.3	29.0	28.7	29.2	28.1	26.5	23.8	23.1	22.5	21.2
29.7	32.8	33.4	34.1	34.0	34.4	33.4	33.0	31.5	28.6	23.5	22.8	21.8
36.4	35.8	37.0	38.7	40.1	39.2	38.4	39.0	38.2	31.0	25.8	24.2	22.7
43.3	40.7	42.9	44.5	45.5	45.0	44.6	43.6	40.5	35.3	29.1	27.2	24.0
50.0	47.1	49.7	52.4	53.1	51.4	48.9	49.2	42.0	42.4	34.4	28.6	24.8
57.1	56.6	58.6	61.8	62.6	60.8	58.7	59.8	54.9	44.3	37.9	33.6	23.8
63.8	60.1	64.7	68.2	69.0	67.0	67.3	65.8	57.2	54.1	43.1	40.0	25.2
70.6	63.9	68.6	74.1	76.2	74.4	74.2	73.7	64.8	55.5	45.8	43.8	27.0
77.5	75.2	79.1	83.5	85.0	83.0	81.7	80.0	75.6	64.4	50.9	48.0	33.1
84.3	80.2	85.8	92.1	92.8	91.0	90.4	89.5	86.3	68.5	54.3	52.0	40.3
91.2	86.2	90.9	95.5	96.2	94.3	94.8	92.4	90.1	77.2	61.0	57.7	45.8
97.9	89.3	95.9	100.8	102.0	99.7	100.8	96.8	86.8	74.0	64.2	61.4	47.4
104.7	94.2	100.1	105.7	107.1	104.9	104.7	103.1	93.0	78.5	70.4	64.8	50.1
111.6	96.8	105.8	111.2	113.5	111.3	112.7	109.4	96.3	88.9	74.7	70.0	52.8
118.4	102.2	107.7	111.5	113.0	110.8	113.3	111.8	107.1	94.2	79.8	74.3	57.9
125.3	94.6	107.0	114.3	115.2	112.5	112.0	111.0	107.0	98.3	83.3	77.6	62.5
132.1	117.0	121.5	125.4	127.5	124.8	125.4	121.7	109.7	101.9	86.4	79.2	66.0
138.8	127.8	130.2	136.9	139.7	135.3	130.5	132.1	122.0	106.0	91.2	85.4	69.9
145.7	131.0	143.2	153.8	155.7	153.9	155.0	149.6	144.5	119.6	103.7	91.7	73.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	24.1	24.1	23.7	23.7	23.4	23.2	23.0	22.2	21.7	21.4	21.2	20.5
2.3	23.7	23.9	22.9	23.3	22.8	22.9	22.6	22.2	22.1	21.9	21.7	21.0
9.2	24.0	24.2	23.3	23.4	22.9	22.9	22.5	22.3	22.0	21.8	21.6	21.0
16.0	24.5	24.5	24.5	23.9	24.7	23.6	23.7	22.5	22.3	22.1	21.8	21.0
22.9	27.3	27.5	28.4	27.2	28.2	26.9	27.2	23.3	22.5	22.4	22.2	21.1
29.7	31.0	31.8	33.9	31.9	35.7	34.8	35.9	34.9	25.9	22.8	22.4	21.3
36.4	42.5	45.6	45.9	44.8	46.2	45.6	44.3	35.8	31.7	24.9	23.5	21.9
43.3	45.7	47.9	48.5	44.9	49.3	47.4	48.2	41.4	34.6	29.4	26.9	24.8
50.0	50.7	54.1	56.4	55.1	59.2	58.6	58.2	42.9	38.9	32.9	30.9	24.5
57.1	57.3	59.6	61.2	57.7	63.6	64.0	64.0	52.8	47.9	40.0	35.9	25.4
63.8	64.6	68.2	70.3	66.9	72.1	69.5	69.6	59.3	56.0	44.3	40.7	30.0
70.6	71.5	76.7	76.8	74.6	78.4	77.1	77.5	60.5	56.0	44.9	42.7	33.9
77.5	77.5	82.3	84.2	83.5	87.4	88.2	87.6	73.5	66.4	53.9	46.9	35.7
84.3	86.3	91.4	91.6	89.4	92.6	92.1	90.9	73.4	70.6	57.3	51.7	39.1
91.2	93.0	100.9	102.5	103.1	106.8	107.1	106.4	92.3	75.4	64.5	59.5	45.3
97.9	104.7	112.8	113.0	107.3	113.1	110.1	110.2	83.8	79.6	70.0	64.2	48.3
104.7	107.2	114.3	115.5	115.7	118.7	117.5	116.9	106.4	86.6	74.1	67.2	52.9
111.6	107.7	117.6	118.7	116.1	118.3	113.6	114.6	100.9	92.2	77.9	68.6	56.0
118.4	115.5	123.1	123.6	120.6	124.6	122.5	122.6	110.7	106.3	84.7	76.8	57.6
125.3	113.2	118.7	120.7	120.0	124.2	123.8	123.2	106.3	103.9	92.0	82.9	62.4
132.1	125.6	134.0	137.2	138.0	140.2	140.8	139.0	133.5	115.8	92.0	85.4	63.6
138.8	133.8	146.3	147.9	147.5	152.4	145.3	150.0	121.1	112.1	96.6	88.8	69.0
145.7	146.1	157.6	157.3	158.0	146.9	124.7	128.2	132.1	125.0	105.7	98.5	74.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	24.0	23.9	23.5	23.3	23.2	23.1	23.0	22.3	21.9	21.5	21.3	20.7
2.3	24.6	24.4	23.8	23.4	23.2	23.0	22.8	22.5	22.2	22.0	21.8	20.9
9.2	24.3	24.1	23.8	23.5	23.4	23.2	23.0	22.6	22.2	21.9	21.7	20.9
16.0	24.3	24.2	24.3	24.1	24.1	24.1	24.2	23.6	23.3	22.5	22.1	21.0
22.9	27.0	28.1	28.0	27.5	27.4	27.8	28.6	26.9	26.4	25.6	24.9	21.2
29.7	33.4	35.1	35.1	33.9	33.4	33.7	34.6	33.0	29.0	25.1	22.7	21.1
36.4	38.5	40.2	41.2	39.6	40.0	40.6	40.9	39.0	34.9	28.2	23.9	21.4
43.3	41.6	43.9	45.4	44.1	44.6	45.4	46.1	43.5	41.3	33.6	26.9	22.2
50.0	45.0	47.9	49.2	48.4	49.0	49.8	50.4	48.3	47.4	39.2	31.7	23.3
57.1	47.8	53.2	52.3	53.1	52.9	55.0	54.8	55.4	49.3	38.7	34.4	26.7
63.8	46.7	53.0	55.0	56.8	57.1	59.0	59.2	60.7	62.6	45.1	37.3	28.3

70.6	59.7	65.1	65.6	65.1	65.3	68.3	68.8	68.7	69.2	50.8	43.2	33.0
77.5	68.2	76.3	72.1	74.3	73.1	77.2	76.4	77.0	73.9	54.4	48.1	34.0
84.3	74.2	81.7	81.6	80.8	80.8	83.1	83.9	81.2	81.7	63.4	52.1	37.5
91.2	74.8	83.4	81.6	84.7	83.9	87.0	86.6	86.4	86.8	72.3	56.6	43.6
97.9	78.1	90.6	86.3	89.0	86.4	90.4	90.2	91.0	93.0	78.3	62.6	48.8
104.7	77.9	96.8	91.0	94.0	93.6	97.6	97.9	100.4	104.0	80.3	66.3	50.6
111.6	76.1	82.9	86.5	87.1	87.6	88.5	90.6	100.1	105.5	87.7	74.4	52.8
118.4	87.0	99.0	98.7	99.3	98.9	103.9	105.3	108.2	103.3	86.4	76.8	56.5
125.3	95.2	105.0	107.7	105.8	105.1	106.7	106.7	108.3	111.4	94.1	80.3	62.7
132.1	97.2	108.7	106.0	107.4	106.9	109.0	108.2	107.8	108.9	100.5	85.8	63.8
138.8	102.2	107.1	118.4	116.9	116.9	118.7	117.3	118.0	118.5	105.4	92.6	66.3
145.7	116.7	128.4	132.1	128.9	130.8	137.1	137.5	136.8	133.2	112.3	99.3	72.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	23.6	23.4	23.3	23.0	22.7	22.6	22.4	21.9	21.6	21.3	21.1	20.7
2.3	24.4	24.4	24.3	23.9	23.5	23.3	23.1	22.3	21.9	21.6	21.3	20.9
9.2	24.3	24.4	24.4	24.3	23.9	23.7	23.5	22.6	22.2	21.8	21.6	21.1
16.0	24.4	25.6	25.2	26.2	26.0	26.3	26.3	25.2	24.5	23.4	22.9	21.6
22.9	30.7	30.2	29.0	31.8	31.3	31.4	31.5	29.2	28.9	26.0	24.0	21.7
29.7	39.5	37.7	32.8	40.6	39.2	39.3	38.6	34.1	27.4	23.9	22.8	21.7
36.4	40.9	39.9	36.7	44.6	44.1	45.6	46.4	43.5	38.4	27.4	25.1	22.9
43.3	46.1	43.1	40.0	47.9	47.7	48.4	48.5	44.4	40.3	30.4	28.4	23.0
50.0	45.8	44.9	41.7	51.4	51.8	52.3	52.6	50.4	49.0	37.1	34.5	23.5
57.1	54.8	52.4	48.0	57.1	56.7	56.8	56.9	54.4	54.3	42.2	38.8	25.0
63.8	61.8	58.6	49.7	64.3	63.4	63.9	63.9	61.2	58.6	50.7	44.9	27.7
70.6	70.4	65.7	56.4	71.3	70.8	71.3	71.5	67.2	64.5	51.4	46.9	27.9
77.5	74.2	69.9	59.5	76.6	75.5	76.8	76.6	72.7	70.6	56.1	52.4	34.0
84.3	74.0	70.6	66.5	81.6	80.6	80.8	79.8	76.2	74.6	64.1	59.1	37.4
91.2	79.2	76.5	69.2	88.1	87.0	87.7	86.1	82.1	81.8	71.1	63.3	39.4
97.9	90.3	85.2	72.0	93.2	91.8	93.4	92.5	89.2	86.3	72.7	63.6	43.3
104.7	91.9	87.6	81.6	97.3	97.4	98.7	99.7	96.7	98.5	78.9	68.8	46.3
111.6	95.6	93.1	87.0	100.9	102.1	104.4	103.0	103.4	102.0	93.7	86.2	49.9
118.4	85.0	86.7	83.9	96.9	97.8	99.1	98.3	99.4	100.8	97.5	93.8	53.8
125.3	105.0	98.0	89.0	107.2	106.8	108.9	109.8	104.4	101.6	93.1	87.6	56.7
132.1	115.5	108.3	96.9	118.5	117.8	117.4	115.3	111.7	113.2	102.2	90.7	60.3
138.8	119.5	114.2	106.7	124.9	123.9	125.8	125.8	121.8	122.4	109.3	90.6	61.7
145.7	122.7	115.7	110.2	133.5	135.7	138.1	139.0	129.1	129.9	117.5	107.2	66.7

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.3	-0.1	0.0	-0.1	0.1
9.2	-0.1	0.0	-0.1	-0.1
16.0	-0.4	-0.3	-0.3	-0.1
22.9	-0.3	-0.3	-0.4	-0.3
29.7	-0.3	-0.3	-0.3	-0.3
36.4	-0.3	-0.3	-0.4	-0.3
43.3	-0.4	-0.4	-0.3	-0.2
50.0	-0.4	-0.4	-0.4	-0.4
57.1	-0.5	-0.5	-0.4	-0.4
63.8	-0.4	-0.6	-0.5	-0.4
70.6	-0.5	-0.6	-0.5	-0.4
77.5	-0.5	-0.5	-0.4	-0.6
84.3	-0.5	-0.5	-0.6	-0.3
91.2	-0.5	-0.6	-0.4	-0.4
97.9	-0.5	-0.7	-0.4	-0.5
104.7	-0.5	-0.5	-0.5	-0.5
111.6	-0.4	-0.5	-0.2	-0.5
118.4	-0.3	-0.5	-0.4	-0.5
125.3	-0.7	-0.7	-0.6	-0.5
132.1	-0.6	-0.7	-0.7	-0.6
138.8	-0.8	-0.9	-0.8	-0.8
145.7	-0.7	-0.9	-0.6	-0.5

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.3	-0.1	-0.1	-0.1	-0.1
9.2	0.1	-0.1	-0.1	-0.1
16.0	0.2	0.2	0.2	0.1
22.9	0.2	0.2	0.3	0.2
29.7	0.3	0.2	0.3	0.1
36.4	0.2	0.2	0.3	0.2
43.3	0.4	0.4	0.4	0.2
50.0	0.5	0.4	0.6	0.2
57.1	0.4	0.4	0.5	0.4
63.8	0.5	0.4	0.5	0.2
70.6	0.6	0.6	0.5	0.3
77.5	0.4	0.3	0.5	0.2
84.3	0.5	0.5	0.7	0.3
91.2	0.8	0.5	0.6	0.6
97.9	0.6	0.6	0.7	0.3
104.7	0.4	0.5	0.7	0.6
111.6	0.6	0.5	0.7	0.4
118.4	0.7	0.5	0.8	0.4
125.3	0.5	0.5	0.8	0.3
132.1	0.6	0.6	0.8	0.3
138.8	0.8	0.5	0.8	0.3
145.7	0.7	0.6	0.8	0.3

Velocity probes in channels above burner

Experiment Number 24

Time	Channel 1	Channel 2
0.0	0.0	0.0
2.3	1.1	0.9
9.2	1.8	1.0
16.0	2.1	1.2
22.9	1.9	1.3
29.7	1.8	1.2
36.4	2.8	1.5
43.3	2.5	1.9
50.0	2.5	1.9
57.1	2.6	1.8
63.8	3.4	1.7
70.6	3.1	1.7
77.5	2.8	1.8
84.3	2.8	1.9
91.2	3.3	1.9
97.9	2.6	2.2
104.7	3.0	1.9
111.6	3.2	1.9
118.4	2.8	2.3
125.3	3.4	2.2
132.1	2.8	2.6
138.8	3.2	2.2
145.7	3.2	2.7

Experiment Number 25

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	27.0	26.8	26.9	26.4	26.2	25.4	25.5	24.7	24.4	24.0	23.6	22.6
2.9	27.1	26.9	27.0	26.5	26.3	25.6	25.9	25.0	25.1	24.8	24.3	23.1
9.8	27.6	27.1	27.0	26.5	26.4	25.7	26.1	25.1	25.2	24.9	24.5	23.2
16.6	29.3	29.6	30.2	30.3	30.0	29.8	29.3	28.7	26.6	25.7	25.1	23.5
23.4	35.6	35.4	36.5	37.0	36.7	37.0	35.1	34.9	30.5	26.2	25.5	23.6
30.3	42.2	42.1	44.0	43.6	43.2	43.6	41.5	41.4	38.0	31.1	26.0	23.9
37.0	45.6	48.0	51.6	52.5	51.3	51.1	49.1	48.5	44.5	34.9	30.7	26.7
43.9	56.8	57.4	60.6	61.4	60.1	60.9	59.8	53.8	46.8	36.9	32.9	25.8
50.7	65.9	67.4	70.3	71.6	70.9	72.0	68.9	65.5	60.1	44.5	38.8	26.5
57.4	70.3	76.3	81.0	82.2	79.4	77.8	76.4	67.3	58.2	48.0	44.2	29.0
64.4	78.1	82.1	85.9	87.2	85.2	85.6	82.9	79.4	69.8	57.1	51.7	32.8
71.1	83.2	88.7	93.3	94.4	91.8	90.9	89.0	76.8	65.3	60.0	57.9	36.8
78.1	89.6	93.0	98.0	99.9	98.0	97.2	95.5	85.3	69.3	64.3	59.6	45.8
84.8	94.6	100.9	108.2	109.9	106.4	101.5	101.6	82.4	74.8	67.0	64.0	50.1
91.6	92.1	98.7	102.6	106.3	104.0	104.9	102.3	100.4	94.2	79.6	71.5	49.8
98.5	99.2	105.1	109.2	111.1	108.8	108.5	105.3	102.6	94.8	81.0	74.5	51.1
105.3	106.7	112.1	117.3	120.1	118.3	117.0	115.7	107.6	91.1	81.7	77.7	59.8
112.2	114.6	119.7	125.7	126.2	124.0	125.5	123.1	115.7	107.8	89.6	81.9	61.6
118.9	113.0	123.6	133.3	137.0	132.3	131.1	127.8	121.6	106.7	93.5	88.9	63.4
125.7	128.2	134.0	140.8	142.6	138.5	140.5	136.6	133.8	113.0	97.0	92.3	68.3

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	28.5	28.2	27.6	27.1	26.7	26.4	26.2	25.2	24.6	24.3	23.9	22.9
2.9	29.1	28.4	28.7	27.7	27.8	27.1	26.9	25.4	24.9	24.6	24.0	23.2
9.8	29.3	28.7	28.7	27.6	28.2	27.0	27.0	25.6	25.2	25.0	24.5	23.5
16.6	31.8	31.5	33.1	30.5	32.4	31.0	30.6	27.5	26.4	25.4	24.8	23.5
23.4	37.6	36.6	38.6	38.1	40.4	41.6	41.3	37.8	28.8	25.8	25.0	23.6
30.3	46.1	47.0	48.8	47.4	51.0	50.1	49.6	39.3	31.5	30.6	28.0	24.4
37.0	48.0	48.8	51.1	48.0	53.3	51.6	53.3	50.8	44.2	32.5	31.3	26.9
43.9	55.2	55.9	61.5	57.2	62.5	61.2	61.6	58.6	46.4	36.8	34.6	26.5
50.7	64.5	67.5	69.4	67.7	71.2	71.8	72.1	63.3	50.8	45.5	42.1	29.8
57.4	68.8	71.5	75.4	74.0	78.8	79.1	78.6	63.0	53.5	47.8	44.2	33.0
64.4	70.7	70.4	76.4	71.1	78.1	74.8	77.0	75.3	67.9	54.4	50.1	37.2
71.1	85.3	93.3	95.1	93.3	95.4	95.6	95.2	76.7	68.2	57.7	52.5	40.4
78.1	94.3	103.9	105.3	102.9	107.4	107.3	105.2	77.8	75.7	66.0	58.0	45.9
84.8	99.4	104.2	107.0	102.4	109.2	106.6	107.9	93.5	86.5	74.8	66.2	49.3
91.6	100.6	103.8	111.7	107.8	114.9	112.4	115.4	106.2	95.3	79.2	74.0	54.4
98.5	100.8	101.5	111.4	103.0	113.9	113.1	116.4	110.4	93.4	82.4	74.4	60.4
105.3	112.0	117.7	121.4	117.1	121.8	118.7	119.5	103.5	94.8	85.0	77.3	62.2
112.2	116.6	124.3	125.7	127.2	131.0	129.6	128.9	121.1	110.7	94.8	83.9	63.3
118.9	130.1	138.0	140.8	136.9	143.5	138.7	136.7	107.8	107.3	94.5	88.2	64.8
125.7	133.8	119.8	69.8	58.2	120.5	113.3	135.4	107.7	119.9	100.7	96.3	69.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	28.5	28.5	28.1	27.5	27.0	26.6	26.2	25.1	24.5	24.2	23.8	23.1
2.9	28.6	28.8	28.5	27.7	27.2	26.9	26.5	25.6	24.7	24.3	24.0	23.2
9.8	29.3	28.6	28.7	27.7	27.2	26.8	26.5	25.6	24.9	24.5	24.4	23.6
16.6	29.9	30.9	30.2	30.2	29.7	29.8	30.2	29.4	29.5	28.3	27.8	23.8
23.4	34.6	37.0	36.0	36.3	35.8	36.6	37.3	36.0	34.6	29.4	25.5	23.5
30.3	41.9	43.2	43.1	43.6	43.5	44.1	45.2	43.2	39.8	33.7	26.1	24.0
37.0	47.4	48.7	48.7	49.3	49.1	50.0	50.3	49.5	46.1	36.1	30.3	25.3
43.9	51.9	58.5	54.6	56.5	56.4	58.3	58.5	56.7	55.0	41.2	35.3	26.1
50.7	55.7	62.5	58.2	60.3	60.2	62.6	62.4	61.4	60.5	46.1	38.9	29.3
57.4	59.3	67.7	63.5	65.9	65.6	68.2	68.8	68.9	69.2	54.1	44.6	32.0
64.4	66.8	76.3	71.4	74.5	73.4	77.5	76.4	75.3	73.2	56.8	50.5	34.1
71.1	71.7	77.5	77.1	76.9	76.1	78.1	79.5	79.6	82.2	64.1	53.4	41.3
78.1	78.5	85.2	84.8	85.2	86.6	89.8	90.4	90.0	89.7	73.2	59.0	45.5
84.8	83.9	94.2	88.6	90.6	91.8	94.9	96.5	98.8	100.4	70.6	59.0	49.2
91.6	83.2	90.1	92.0	92.2	94.4	97.7	99.9	103.6	106.6	86.3	67.7	54.9
98.5	90.1	97.2	97.7	99.3	101.0	102.9	103.5	104.0	101.9	87.2	73.8	58.0
105.3	90.4	101.8	99.2	105.1	105.3	109.6	110.7	112.4	114.0	88.3	74.3	60.0

112.2	95.9	102.5	104.9	106.4	109.6	112.7	113.1	112.6	111.2	92.1	83.7	61.6
118.9	96.0	110.0	106.7	109.5	110.7	115.4	116.1	117.0	119.0	97.4	85.4	66.6
125.7	87.2	97.1	101.0	108.5	109.9	114.3	118.8	123.4	123.0	110.2	95.3	69.1

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	28.1	27.8	27.8	27.0	26.5	26.2	25.8	24.8	24.3	24.0	23.7	22.9
2.9	28.6	28.4	28.3	27.5	26.6	26.2	25.7	25.3	24.7	24.4	23.9	23.2
9.8	28.7	28.5	28.4	27.5	27.0	26.8	26.4	25.6	24.9	24.4	23.8	23.3
16.6	30.0	29.7	29.5	30.2	30.2	30.9	30.9	30.0	30.3	30.3	30.0	24.0
23.4	40.8	38.9	36.7	41.7	41.4	41.7	41.5	38.3	35.5	27.7	25.7	23.9
30.3	47.8	44.5	39.6	47.6	46.6	47.1	46.9	44.6	41.9	29.8	27.4	25.0
37.0	52.5	49.2	43.9	53.1	52.3	53.2	53.4	49.1	48.3	35.2	31.8	25.2
43.9	59.0	55.4	49.0	61.0	59.2	60.3	60.1	56.1	53.3	47.3	42.1	25.7
50.7	62.6	58.3	52.4	64.3	62.9	63.7	64.9	62.1	62.4	52.6	44.5	26.9
57.4	66.6	64.5	60.6	66.5	65.6	65.9	66.3	65.8	66.4	60.1	53.4	30.0
64.4	73.0	71.6	67.7	74.3	73.1	74.0	73.2	71.2	73.6	62.4	55.7	32.2
71.1	73.9	71.8	66.6	77.5	78.0	79.3	79.5	78.1	79.6	72.6	62.7	34.9
78.1	76.3	70.9	69.1	80.3	79.8	82.5	82.7	84.2	85.3	79.2	75.4	40.7
84.8	89.5	84.2	74.7	91.4	90.9	91.9	92.0	89.4	87.9	77.1	75.5	43.7
91.6	99.5	94.5	83.4	102.8	101.1	102.0	101.9	97.7	94.7	82.7	71.3	47.9
98.5	99.4	95.7	84.4	107.3	105.9	108.0	108.7	105.2	99.7	88.0	77.5	55.0
105.3	107.2	98.8	91.2	109.8	109.9	110.3	110.7	108.6	107.6	97.8	83.3	56.7
112.2	101.5	95.6	89.7	107.7	107.2	107.6	108.5	107.2	109.8	105.8	91.0	58.0
118.9	110.9	104.0	96.9	115.6	116.6	118.6	120.0	116.4	115.4	104.6	96.3	64.5
125.7	115.8	108.4	102.4	122.9	124.2	126.3	128.0	124.9	122.1	106.3	95.7	66.9

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.9	0.0	0.1	0.0	0.1
9.8	-0.1	-0.2	-0.3	-0.2
16.6	-0.4	-0.3	-0.3	-0.2
23.4	-0.2	-0.2	-0.3	-0.4
30.3	-0.3	-0.4	-0.3	-0.2
37.0	-0.4	-0.4	-0.4	-0.4
43.9	-0.4	-0.6	-0.5	-0.4
50.7	-0.5	-0.6	-0.5	-0.4
57.4	-0.6	-0.6	-0.4	-0.5
64.4	-0.5	-0.5	-0.4	-0.3
71.1	-0.6	-0.7	-0.8	-0.5
78.1	-0.6	-0.7	-0.6	-0.5
84.8	-0.6	-0.7	-0.5	-0.4
91.6	-0.5	-0.5	-0.3	-0.5
98.5	-0.5	-0.5	-0.3	-0.4
105.3	-0.7	-0.8	-0.8	-0.4
112.2	-0.9	-0.9	-0.7	-0.5
118.9	-0.6	-0.7	-0.5	-0.5
125.7	-0.7	-0.7	-0.5	-0.5

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.9	0.0	-0.1	0.0	0.1
9.8	0.3	0.3	0.3	0.1
16.6	0.1	0.1	0.2	0.1
23.4	0.5	0.5	0.4	0.1
30.3	0.3	0.2	0.3	0.2
37.0	0.4	0.4	0.6	0.2
43.9	0.4	0.4	0.5	0.2
50.7	0.2	0.2	0.5	0.2
57.4	0.4	0.4	0.5	0.4
64.4	0.7	0.6	0.8	0.3
71.1	0.5	0.5	0.6	0.4
78.1	0.5	0.4	0.6	0.3
84.8	0.7	0.5	0.6	0.3
91.6	0.5	0.6	0.8	0.3
98.5	0.5	0.5	0.7	0.5
105.3	0.5	0.3	0.8	0.5
112.2	0.6	0.6	0.8	0.3
118.9	0.5	0.4	0.7	0.2
125.7	0.8	0.8	1.1	0.7

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
2.9	1.3	1.0
9.8	1.6	1.0
16.6	2.1	1.5
23.4	1.8	1.4
30.3	2.4	2.2
37.0	2.3	2.5
43.9	2.3	1.9
50.7	2.7	2.1
57.4	2.4	1.9
64.4	3.1	2.6
71.1	2.3	2.3
78.1	2.6	2.0
84.8	3.2	2.4

91.6	2.9	2.1
98.5	3.4	2.2
105.3	2.3	2.1
112.2	3.3	2.7
118.9	4.0	2.3
125.7	3.3	2.6

Experiment Number 26

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.5	21.3	21.3	21.2	21.1	20.9	20.8	20.3	20.0	19.7	19.2	17.5
2.7	21.6	21.3	21.2	21.1	21.0	20.8	20.7	20.3	20.2	20.1	19.8	18.4
9.5	21.6	22.4	24.0	24.4	24.0	24.2	22.6	22.8	21.8	21.3	20.5	18.7
16.3	23.3	29.3	32.8	33.6	31.8	32.0	29.4	27.6	22.4	20.6	20.2	18.3
23.3	26.2	36.9	38.5	37.9	34.5	33.9	32.6	28.7	21.7	20.4	20.0	18.2
30.0	26.9	37.6	39.7	40.0	37.9	38.3	36.7	35.9	32.9	28.1	22.4	18.3
37.0	29.0	43.4	46.3	46.5	44.6	45.2	43.3	37.9	34.0	28.8	23.4	18.2
43.7	31.5	49.1	52.0	52.6	50.5	50.3	48.2	44.3	40.4	31.0	23.8	19.1
50.5	32.8	51.3	54.6	55.8	53.9	55.2	52.2	53.1	49.1	42.7	30.3	19.0
57.4	34.9	55.4	59.9	60.8	59.3	60.0	58.4	55.6	54.2	47.1	34.8	19.7
64.3	36.7	60.1	65.2	66.1	64.7	65.1	63.0	63.7	56.7	50.9	40.1	22.4
71.2	39.0	66.3	72.9	74.4	71.3	72.1	69.7	68.7	63.7	54.9	42.3	24.8
77.9	40.2	70.0	75.2	76.6	73.9	75.0	73.3	70.7	67.6	59.8	49.2	27.3
84.7	43.9	75.8	80.8	80.9	77.3	78.9	76.9	73.4	69.0	57.0	49.4	29.4
91.7	46.5	81.4	89.2	89.4	85.2	88.6	86.0	82.8	75.1	63.5	50.8	32.0
98.5	46.7	80.1	86.4	88.7	87.0	88.8	86.2	84.5	80.8	72.8	61.0	35.5
105.3	49.8	88.9	97.6	100.5	96.5	100.2	94.6	90.0	79.5	75.6	63.7	36.5
112.2	52.4	93.5	102.2	103.6	100.0	100.5	96.7	95.6	87.2	81.2	68.5	39.9
119.0	55.3	96.2	103.9	105.7	103.1	103.9	101.6	101.0	98.4	96.9	86.7	41.6
125.9	57.1	102.2	111.7	113.4	108.5	110.7	104.5	102.6	99.0	93.7	71.0	45.0
132.7	55.2	86.9	52.3	67.7	70.3	86.4	86.3	101.9	100.5	69.2	82.8	45.9
139.5	57.6	84.2	109.0	112.2	89.5	107.4	96.4	103.6	99.2	86.6	73.0	48.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.2	21.2	21.2	21.1	21.0	20.8	20.7	20.4	20.1	19.8	19.4	17.5
2.7	19.4	21.4	21.3	21.3	21.0	20.8	20.7	20.3	20.0	19.6	19.3	18.1
9.5	19.8	24.3	24.9	25.7	25.6	25.6	25.1	26.0	22.6	20.7	19.9	18.2
16.3	22.5	33.1	33.4	33.8	33.6	33.1	31.6	29.3	24.2	20.6	19.7	17.9
23.3	24.2	39.0	39.1	40.1	40.1	39.7	38.9	35.4	26.6	20.8	19.6	18.0
30.0	25.9	40.2	41.4	42.8	42.5	42.5	41.3	35.5	32.0	27.5	22.0	18.8
37.0	28.6	48.0	48.7	49.5	49.1	48.7	48.0	45.5	39.5	33.2	23.0	19.0
43.7	30.0	50.9	50.9	50.6	50.4	49.1	49.2	47.7	42.6	36.7	27.7	21.1
50.5	31.4	54.7	56.0	58.8	60.1	61.0	60.5	54.1	42.9	34.5	27.2	21.3
57.4	34.0	60.6	60.8	61.7	61.5	60.3	60.2	56.3	53.4	43.5	34.1	21.8
64.3	36.6	65.6	66.8	68.2	68.1	68.2	67.4	62.8	58.6	52.3	39.3	25.2
71.2	39.4	71.4	72.1	74.3	74.5	72.7	70.1	64.3	58.4	52.1	44.5	26.6
77.9	39.2	72.2	73.9	74.4	75.0	75.4	75.6	73.8	68.9	62.3	54.2	28.8
84.7	43.5	81.0	81.5	82.7	81.9	81.7	81.2	75.9	69.0	60.7	53.4	32.3
91.7	47.1	83.7	84.8	85.3	84.6	83.3	83.6	81.0	73.7	67.4	57.0	34.1
98.5	47.1	87.0	88.2	89.5	88.9	87.8	87.7	85.7	78.3	66.7	55.0	37.7
105.3	53.2	100.5	101.7	102.4	101.2	100.2	99.0	93.7	82.2	71.3	59.7	39.9
112.2	54.1	102.5	103.6	105.1	104.9	104.0	101.3	96.3	89.7	83.1	71.9	41.9
119.0	51.9	98.1	100.7	103.4	103.0	104.5	104.5	103.2	98.8	90.2	73.4	45.8
125.9	57.1	105.6	107.2	110.2	110.9	110.8	110.7	107.1	93.6	81.9	76.3	49.1
132.7	61.9	116.1	117.9	120.8	121.4	121.0	119.0	107.3	104.1	94.6	75.9	53.2
139.5	63.5	120.3	121.0	122.5	121.9	121.9	120.7	115.3	107.6	100.2	79.6	55.4

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	21.1	20.6	20.6	20.5	20.5	20.5	20.3	20.1	19.7	19.3	17.7
2.7	20.8	21.2	20.5	20.5	20.4	20.4	20.4	20.2	20.1	19.7	19.4	18.0
9.5	20.6	21.1	20.4	20.4	20.4	20.4	20.4	20.2	20.1	19.7	19.4	18.0
16.3	20.7	21.1	20.5	20.5	20.4	20.5	20.6	20.4	20.3	20.0	19.8	18.7
23.3	20.9	24.9	25.8	26.7	24.8	24.5	23.4	21.7	21.2	20.6	20.1	19.3
30.0	21.2	26.7	30.5	30.6	28.5	28.6	26.9	24.5	23.1	21.7	21.2	19.8
37.0	21.5	30.3	34.8	35.2	32.8	32.7	31.2	28.6	26.8	25.1	24.8	20.1
43.7	21.9	32.4	36.5	37.1	35.2	34.9	34.1	31.3	29.9	28.1	28.1	21.2
50.5	22.0	33.4	38.8	38.9	37.5	37.1	36.0	32.8	32.0	30.4	30.0	23.6
57.4	23.2	38.9	46.1	45.7	43.1	43.1	41.5	37.7	35.0	33.4	33.7	27.0
64.3	23.2	40.5	47.0	47.7	45.0	45.0	43.3	39.3	37.8	37.3	37.2	28.4
71.2	23.7	42.1	50.6	51.4	48.7	49.2	47.5	43.0	40.8	40.0	40.0	31.5
77.9	24.3	43.8	55.0	55.3	52.8	53.1	51.2	46.5	44.8	43.1	42.6	33.8

84.7	24.6	45.5	55.9	57.7	56.0	57.5	55.8	51.7	48.9	47.6	47.3	38.1
91.7	25.4	52.0	62.8	64.0	61.5	62.7	60.8	56.9	54.6	49.6	50.7	40.4
98.5	26.2	53.6	62.4	64.7	62.1	63.8	62.0	58.4	57.3	55.3	55.0	44.4
105.3	26.7	56.3	66.8	68.6	66.7	67.9	65.8	60.6	60.4	57.8	56.9	45.0
112.2	27.3	58.1	72.1	73.9	71.8	72.5	69.7	62.2	62.6	60.3	60.2	48.1
119.0	28.4	58.7	75.8	77.4	75.1	76.5	74.4	68.7	67.0	64.1	64.3	51.1
125.9	28.6	59.9	77.4	78.6	76.0	77.4	75.3	70.0	68.6	68.1	68.3	52.2
132.7	29.3	64.5	80.3	82.4	79.2	81.2	79.7	74.1	70.6	70.1	69.5	55.8
139.5	30.6	70.1	87.9	88.4	84.7	86.4	83.7	77.3	75.8	73.9	73.0	56.2

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.7	20.7	20.6	20.5	20.5	20.5	20.2	19.9	19.6	19.2	17.6
2.7	20.6	20.6	20.5	20.5	20.4	20.4	20.4	20.2	20.0	19.7	19.3	18.1
9.5	20.5	20.7	20.6	20.5	20.3	20.3	20.4	20.2	20.1	19.8	19.3	18.2
16.3	20.6	21.0	21.5	21.8	22.1	22.0	22.0	20.7	20.4	20.1	19.9	18.7
23.3	21.4	25.9	28.3	27.5	25.4	24.9	23.4	22.1	21.5	20.8	20.1	19.1
30.0	21.6	30.2	30.1	29.3	28.4	28.4	28.1	25.7	24.3	22.5	21.8	19.7
37.0	21.9	31.2	32.7	32.2	31.1	31.4	30.9	27.8	28.0	26.3	24.4	20.0
43.7	22.8	34.2	36.8	36.6	35.5	36.1	35.7	31.6	30.2	28.7	28.1	20.1
50.5	23.3	40.7	42.0	41.9	41.0	41.7	41.6	37.0	34.0	31.7	30.7	20.9
57.4	24.7	41.1	44.1	44.1	43.6	44.0	43.5	39.0	36.6	34.8	34.6	22.4
64.3	26.1	44.6	47.1	46.9	46.2	46.6	46.3	42.1	40.8	38.7	38.0	24.9
71.2	26.4	49.7	52.4	52.3	50.7	51.4	51.0	46.3	42.8	41.6	41.2	26.4
77.9	27.3	56.0	58.0	57.8	56.4	57.3	57.2	51.6	48.6	45.5	45.5	29.3
84.7	28.9	57.5	60.4	60.7	59.5	60.5	59.8	54.3	51.3	50.3	50.0	31.2
91.7	31.4	61.6	61.8	60.3	59.0	59.6	58.9	53.9	54.2	52.3	52.5	33.3
98.5	31.1	63.3	68.5	67.7	66.5	67.9	67.2	60.2	59.9	56.7	57.3	35.6
105.3	32.4	71.6	71.8	71.3	70.4	71.6	71.0	63.7	65.2	61.5	59.5	37.6
112.2	34.2	70.8	74.4	74.9	74.9	76.3	76.6	69.6	67.5	64.8	63.0	39.7
119.0	34.9	76.5	80.8	80.8	80.0	81.6	81.5	74.3	71.0	67.9	66.7	41.3
125.9	34.9	75.1	80.4	82.5	81.9	83.1	82.5	73.3	73.9	72.0	71.3	45.3
132.7	38.7	82.3	84.3	84.0	83.8	86.0	86.3	80.8	79.2	75.3	73.7	46.7
139.5	39.2	82.8	92.3	92.9	92.1	94.0	93.2	83.7	82.3	78.8	77.4	49.5

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.7	0.0	0.0	-0.1	-0.1
9.5	-0.4	-0.3	-0.2	-0.1
16.3	-0.9	-0.8	-0.7	0.1
23.3	-0.8	-0.7	-0.6	-0.2
30.0	-0.8	-0.8	-0.7	-0.1
37.0	-0.9	-0.9	-0.7	-0.3
43.7	-1.0	-1.0	-1.2	-0.6
50.5	-1.4	-1.3	-0.9	-0.3
57.4	-0.9	-0.9	-0.5	-0.1
64.3	-1.1	-1.2	-0.6	-0.8
71.2	-0.6	-0.7	-1.1	-0.4
77.9	-0.8	-1.1	-1.3	-0.8
84.7	-1.4	-1.3	-1.0	-0.6
91.7	-1.2	-1.2	-0.8	-0.3
98.5	-1.1	-1.1	-0.5	-0.3
105.3	-1.4	-1.5	-1.2	-0.6
112.2	-1.0	-0.9	-0.7	-0.2
119.0	-1.6	-1.7	-1.3	-0.5
125.9	-1.2	-1.3	-0.6	0.2
132.7	-1.0	-0.8	-0.7	-0.4
139.5	-1.3	-1.2	-1.1	-0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.7	0.1	0.1	0.0	0.1
9.5	1.1	0.9	0.7	0.1
16.3	1.0	0.9	0.8	0.2
23.3	1.0	0.9	0.5	0.1
30.0	1.0	1.0	0.6	0.1
37.0	0.9	0.9	0.8	0.4
43.7	0.5	0.7	0.8	0.2
50.5	1.1	1.0	0.9	0.2
57.4	1.3	1.4	1.4	0.8
64.3	0.8	0.7	0.8	0.6
71.2	1.3	1.2	1.2	0.5
77.9	1.4	1.5	1.2	0.8
84.7	1.0	0.9	0.7	0.6
91.7	1.3	1.4	1.3	0.6
98.5	1.4	1.4	1.0	0.5
105.3	0.9	1.0	1.1	0.9
112.2	1.0	1.2	1.2	0.7
119.0	1.5	1.5	1.1	0.4
125.9	1.3	1.4	1.1	0.6
132.7	1.0	0.8	0.7	0.0
139.5	1.8	1.9	1.5	0.6

Experiment Number 27

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.5	22.1	22.1	21.6	21.6	21.0	21.2	20.4	20.2	19.7	19.3	18.3
3.0	22.3	22.1	22.1	21.9	21.8	21.3	21.5	20.9	20.5	20.2	19.7	18.7
9.8	22.8	24.7	27.0	26.9	25.2	25.4	24.7	26.1	24.7	24.0	20.3	18.8
16.6	25.1	32.9	36.9	37.9	34.3	35.0	31.8	26.3	22.1	21.0	20.1	18.6
23.5	27.0	36.8	39.3	39.2	37.6	37.6	35.8	29.6	24.6	21.7	20.5	18.7
30.3	29.0	41.8	45.3	45.8	44.7	45.0	42.2	39.5	32.4	27.0	21.2	18.9
37.3	29.8	45.8	49.9	50.9	48.9	49.1	46.9	45.6	36.6	31.2	20.6	19.3
44.0	32.1	49.0	52.8	53.9	52.1	52.3	50.4	49.5	46.0	36.3	27.9	21.1
50.8	33.4	53.0	56.3	56.8	54.1	55.0	53.0	49.3	47.1	42.2	31.3	20.2
57.8	35.0	55.7	59.4	60.4	59.8	60.0	58.5	56.4	50.4	44.7	38.8	20.3
64.6	36.5	61.1	67.1	67.6	66.0	67.1	63.7	58.8	58.6	52.4	43.5	23.5
71.5	41.2	70.1	76.3	76.1	74.0	74.7	72.3	66.1	60.4	54.7	46.2	26.1
78.3	43.0	73.4	80.0	81.2	78.8	80.0	77.4	73.9	66.3	52.7	45.8	29.1
85.1	44.4	78.4	86.1	87.6	82.7	84.8	80.4	80.2	74.3	63.8	51.4	30.4
92.0	45.9	83.9	94.7	96.8	91.1	94.0	88.1	81.9	70.9	59.7	48.0	33.1
98.8	48.5	85.1	90.6	90.7	88.1	88.6	85.9	82.2	79.2	68.2	57.0	36.0
105.6	51.8	93.7	102.1	103.3	99.3	100.2	97.0	95.1	90.2	77.6	61.4	37.5
112.6	53.8	98.6	105.4	107.1	103.9	105.4	101.7	99.7	89.5	80.8	67.9	39.5
119.4	51.9	53.0	47.7	51.2	42.5	58.7	66.8	90.7	87.4	75.8	63.6	41.2
126.3	46.9	42.6	63.2	89.8	54.7	97.1	90.4	94.5	91.0	76.8	67.6	44.6
133.1	50.2	43.9	102.7	108.7	100.9	111.6	108.3	105.4	100.1	88.4	75.2	47.0

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.8	22.2	22.0	21.7	21.6	21.1	21.3	20.7	20.3	19.9	19.3	18.2
3.0	20.4	21.6	22.0	20.7	21.8	20.9	21.3	20.7	20.6	20.3	19.9	18.9
9.8	21.1	25.5	26.0	27.1	26.2	25.3	25.3	25.4	24.2	23.4	22.2	19.2
16.6	23.1	32.2	31.7	32.4	32.1	32.2	31.9	31.6	25.2	21.6	20.6	18.7
23.5	25.9	38.1	37.6	37.9	37.0	36.8	37.4	34.2	25.6	21.5	20.3	19.0
30.3	27.4	43.6	43.9	45.0	44.8	44.7	44.3	41.4	30.8	28.1	25.6	19.4
37.3	29.0	50.9	51.7	53.6	52.0	51.3	49.9	45.4	37.2	30.4	23.2	19.5
44.0	31.2	51.0	51.0	53.3	51.9	51.8	51.4	49.8	45.2	43.9	35.2	20.9
50.8	32.4	55.0	56.4	58.3	58.2	58.4	56.6	53.4	48.9	46.3	35.7	21.7
57.8	35.9	61.8	62.3	62.8	62.9	61.3	60.4	57.6	52.4	48.4	40.9	22.9
64.6	38.1	68.6	69.5	71.9	70.5	70.4	69.1	61.8	55.1	45.9	38.7	24.6
71.5	40.4	71.7	71.8	74.0	73.3	72.7	71.8	70.5	64.0	57.5	47.4	25.5
78.3	42.1	75.4	77.0	77.7	77.9	76.3	76.4	72.7	64.8	58.4	50.9	29.2
85.1	43.7	76.5	77.4	80.3	79.8	80.0	80.1	76.7	66.1	57.7	51.2	29.5
92.0	47.0	85.8	87.2	89.3	88.4	86.9	85.9	79.2	74.0	66.5	53.3	35.2
98.8	50.4	90.4	91.4	92.8	92.0	91.9	91.6	87.8	82.2	69.2	57.9	38.5
105.6	50.8	96.5	98.2	101.1	100.8	100.1	98.2	95.0	82.0	68.8	60.0	39.4
112.6	52.7	100.0	103.1	106.7	106.3	106.5	105.3	98.6	87.6	79.1	70.8	44.8
119.4	54.5	100.0	102.0	103.1	101.6	102.7	102.9	101.4	96.4	80.0	70.4	47.3
126.3	60.1	110.9	112.6	115.7	115.4	114.7	113.8	99.0	90.3	76.3	68.8	48.4
133.1	61.7	112.6	114.3	116.7	116.4	117.1	117.5	112.1	102.2	94.8	80.8	53.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.0	21.4	21.1	21.1	20.9	20.9	20.8	20.4	20.0	19.7	19.3	18.4
3.0	21.1	21.5	21.2	21.1	21.0	20.9	20.9	20.6	20.5	20.3	20.1	18.8
9.8	21.1	21.5	21.2	21.1	21.0	21.0	20.9	20.7	20.5	20.2	19.9	18.7
16.6	21.2	22.7	23.0	23.4	22.3	22.4	22.0	21.7	21.8	20.9	20.5	19.3
23.5	21.3	26.2	27.5	27.5	25.1	24.8	24.0	22.4	21.8	21.0	20.7	19.5
30.3	21.6	28.2	31.1	31.2	29.4	29.6	28.4	25.8	24.6	22.7	22.5	20.6
37.3	21.9	29.6	33.5	33.8	32.4	32.7	31.5	28.4	26.5	25.8	25.9	20.9
44.0	22.1	31.3	35.6	36.6	34.8	35.2	34.4	31.9	29.7	28.9	29.4	22.4
50.8	22.4	33.7	39.5	40.5	39.0	39.4	37.8	33.1	31.9	30.9	30.8	24.6
57.8	22.9	36.8	43.4	44.0	42.1	43.0	41.7	37.2	35.6	34.4	34.2	27.7
64.6	23.3	38.3	46.5	47.0	45.1	45.4	43.7	40.4	39.5	38.7	37.9	30.0
71.5	24.0	42.0	52.5	53.3	50.9	51.4	49.6	45.0	43.4	41.0	41.8	32.3
78.3	24.3	42.9	52.6	54.0	52.7	53.9	52.1	48.4	48.0	45.6	44.5	35.7
85.1	24.7	47.1	56.4	58.6	55.4	56.4	54.6	51.4	50.3	48.4	48.3	37.7
92.0	25.4	49.4	61.3	62.7	59.7	60.9	59.2	55.8	54.9	52.6	52.1	39.4

98.8	26.1	51.9	62.6	65.7	63.5	64.7	63.3	59.2	57.1	55.6	55.7	43.0
105.6	26.9	55.3	68.5	71.6	68.4	70.6	68.1	63.1	63.0	59.1	58.4	44.8
112.6	27.8	61.2	74.3	76.6	72.6	74.7	72.4	65.9	64.8	62.0	62.5	48.0
119.4	28.2	62.1	76.9	78.0	76.0	77.4	74.8	68.8	67.0	64.9	65.1	50.1
126.3	28.8	63.3	79.6	82.0	79.5	81.1	78.6	72.6	70.4	69.4	69.3	51.3
133.1	30.3	64.8	82.8	85.0	81.5	83.4	81.4	77.2	74.1	72.1	72.3	57.0

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.9	21.1	21.0	21.0	20.8	20.7	20.6	20.3	19.9	19.5	19.2	18.3
3.0	21.0	21.1	21.0	21.1	21.0	20.9	20.8	20.5	20.2	20.0	19.5	18.7
9.8	21.0	21.1	21.1	21.0	20.9	20.9	20.8	20.5	20.4	20.1	19.6	18.7
16.6	21.2	22.9	24.0	24.2	24.0	24.1	23.9	22.0	22.2	20.9	20.4	19.2
23.5	22.0	25.5	27.8	27.6	26.8	26.7	25.7	22.2	22.1	21.1	20.5	19.4
30.3	21.9	30.5	32.2	31.9	31.0	31.2	31.0	27.8	26.5	25.0	23.0	20.6
37.3	22.5	32.6	36.6	36.3	35.5	35.8	35.3	31.9	30.8	28.0	26.2	20.2
44.0	23.4	35.5	38.7	39.0	38.6	39.1	38.7	34.2	32.8	30.9	29.9	20.1
50.8	23.7	40.8	43.1	43.2	41.9	42.5	42.2	36.2	34.2	33.8	33.0	21.0
57.8	25.0	45.5	46.9	46.4	45.7	46.7	46.6	41.0	38.1	36.8	36.2	22.5
64.6	25.9	49.4	51.9	51.6	50.4	51.3	50.9	42.7	41.0	40.6	39.5	25.3
71.5	27.6	51.8	56.0	54.8	53.4	54.3	53.3	47.5	46.0	43.8	42.6	28.1
78.3	29.6	57.8	59.1	58.4	56.7	57.7	57.5	52.5	50.2	46.9	46.2	30.3
85.1	29.6	58.1	64.8	65.1	63.8	64.7	62.9	54.4	53.0	52.2	50.9	31.8
92.0	30.5	64.3	66.0	66.1	64.9	65.9	65.5	56.7	56.5	56.1	54.2	33.2
98.8	32.0	71.2	72.1	71.8	70.2	70.8	70.4	62.3	60.6	59.4	58.3	35.4
105.6	33.6	70.1	76.6	76.4	74.8	75.5	75.3	66.6	63.7	61.9	61.4	37.0
112.6	34.0	75.5	79.7	79.0	77.3	78.3	77.8	70.4	68.3	67.5	65.9	39.0
119.4	36.9	79.2	83.3	83.2	81.9	83.2	83.3	74.5	72.2	70.4	68.5	41.7
126.3	37.3	81.2	84.5	84.4	83.3	84.4	84.4	77.6	76.7	73.7	72.6	43.6
133.1	40.0	80.0	84.1	83.7	83.7	86.3	87.0	83.1	80.8	75.9	75.4	47.6

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
3.0	-0.1	-0.2	-0.1	0.1
9.8	-0.5	-0.6	-0.6	-0.3
16.6	-0.8	-0.9	-1.0	-0.3
23.5	-0.9	-0.7	-0.6	-0.1
30.3	-0.8	-0.7	-0.4	-0.1
37.3	-1.0	-0.8	-0.5	-0.2
44.0	-1.1	-1.2	-1.2	-0.8
50.8	-0.8	-0.8	-0.5	-0.2
57.8	-1.0	-0.9	-0.8	-0.4
64.6	-1.2	-1.0	-0.9	0.4
71.5	-1.1	-1.3	-1.2	-1.0
78.3	-0.9	-0.9	-0.6	-0.4
85.1	-0.9	-0.8	-0.4	-0.3
92.0	-1.2	-1.4	-1.2	-0.8
98.8	-1.5	-1.5	-0.9	-0.3
105.6	-0.7	-1.0	-1.3	-0.5
112.6	-0.7	-1.0	-0.7	-0.5
119.4	-1.4	-1.5	-1.1	-0.7
126.3	-1.1	-1.3	-0.9	-0.4
133.1	-1.1	-1.2	-0.7	-0.4

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
3.0	0.1	0.1	0.1	0.2
9.8	0.6	0.5	0.4	0.3
16.6	0.9	0.9	0.8	0.4
23.5	1.0	0.9	0.7	0.5
30.3	0.9	0.8	0.6	0.1
37.3	1.2	1.2	0.9	0.3
44.0	1.4	1.1	0.8	0.4
50.8	1.2	1.1	0.9	0.1
57.8	1.1	1.3	1.3	1.2
64.6	1.1	0.9	0.6	-0.1
71.5	1.3	1.3	1.1	0.8
78.3	1.2	1.2	0.9	-0.2
85.1	1.5	1.4	1.2	0.6
92.0	1.5	1.3	1.2	0.9
98.8	1.8	1.5	1.1	0.4
105.6	1.3	1.4	0.9	-0.4
112.6	1.5	1.2	0.9	0.5
119.4	1.5	1.3	0.9	0.2
126.3	1.2	1.0	1.2	0.7
133.1	1.6	1.4	1.2	0.5

Experiment Number 28

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.7	22.3	22.4	21.9	21.8	21.2	21.4	20.5	20.5	20.2	19.9	19.0
4.6	22.8	22.8	23.0	22.6	22.5	22.0	22.1	20.8	21.0	20.8	20.4	19.3
11.5	23.5	26.2	28.7	29.0	27.0	27.8	25.6	25.2	25.1	24.2	22.4	19.5
18.2	25.5	33.1	36.6	36.6	32.7	33.3	31.6	26.7	22.5	21.2	20.7	19.3
25.2	27.3	38.9	42.3	42.6	39.9	40.8	38.0	35.1	25.5	23.0	21.5	19.7
32.0	29.3	43.9	47.6	47.2	44.5	45.2	41.3	37.3	30.4	26.4	21.4	19.8
38.9	29.8	45.9	49.4	50.3	48.5	49.7	46.7	44.6	42.6	38.0	24.4	20.1
45.6	31.7	48.9	52.1	52.3	50.7	51.0	49.9	47.4	42.8	36.7	27.8	21.2
52.5	34.6	55.5	59.6	59.7	57.2	57.9	55.2	52.3	45.9	37.0	29.0	21.1
59.4	36.9	59.9	65.1	65.4	62.9	62.8	60.9	55.9	51.0	43.6	35.2	21.5
66.2	39.1	63.9	69.0	70.9	70.1	70.8	67.6	66.6	60.9	49.6	41.0	24.7
73.1	42.0	71.5	77.5	78.2	73.7	74.6	71.4	66.6	61.8	52.7	43.6	27.2
79.9	42.8	73.1	80.6	82.0	79.4	81.6	78.5	76.1	67.2	60.7	46.9	29.7
86.7	45.2	78.2	84.5	84.9	82.6	83.3	82.0	78.5	70.9	62.1	46.9	31.8
93.6	47.3	84.5	91.2	92.1	89.3	90.4	85.9	81.7	75.8	63.6	50.6	34.2
100.4	49.1	84.6	91.3	93.8	94.1	96.8	91.6	90.9	84.2	73.7	54.0	36.0
107.2	51.8	90.1	97.6	98.5	95.1	96.2	93.9	87.6	84.4	75.3	64.7	37.9
114.1	53.1	94.1	103.7	104.5	100.7	102.7	99.0	97.1	89.5	76.3	64.9	40.5
120.9	56.1	100.0	108.7	111.0	106.8	109.5	106.6	100.4	94.6	78.4	67.6	43.0
127.8	58.9	60.3	44.9	50.5	72.7	63.4	54.2	89.7	88.0	86.1	67.3	43.6

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.1	22.4	22.2	22.0	22.0	20.4	21.7	21.3	20.7	20.3	19.9	19.2
4.6	20.9	22.0	22.5	23.5	21.4	23.2	21.8	21.9	21.6	21.2	20.7	19.5
11.5	22.7	30.7	29.9	30.7	30.1	26.0	27.6	25.9	23.9	22.7	22.0	19.8
18.2	24.5	37.1	36.3	34.8	35.6	37.5	34.4	32.7	25.5	21.6	20.7	19.7
25.2	26.9	41.6	41.0	42.2	41.5	37.4	39.8	35.2	28.0	23.6	22.2	19.9
32.0	28.5	43.1	43.3	45.8	42.9	41.5	43.1	41.4	35.3	28.2	25.7	19.9
38.9	29.1	47.1	46.5	49.2	45.8	45.0	45.3	41.4	37.8	29.9	22.2	20.0
45.6	29.4	47.4	48.6	50.9	49.2	53.1	49.8	48.7	45.2	39.5	30.1	21.4
52.5	33.9	57.5	57.4	58.4	59.5	55.5	58.1	53.9	45.1	41.9	31.6	23.2
59.4	38.3	68.0	68.0	67.0	67.1	69.6	64.3	56.5	51.2	44.3	36.5	23.4
66.2	37.3	66.5	65.7	68.3	67.6	64.0	67.2	62.0	55.4	48.4	40.5	28.4
73.1	39.9	75.2	75.9	78.4	76.6	80.7	75.3	72.8	66.3	57.9	48.3	28.2
79.9	43.2	77.6	78.6	80.5	81.8	84.8	80.7	76.9	73.9	67.2	46.7	29.6
86.7	44.6	81.8	82.1	85.4	85.1	81.1	84.5	81.3	73.9	59.4	48.6	30.9
93.6	45.3	84.6	86.1	85.2	87.7	90.0	87.2	82.3	74.7	71.4	57.6	34.1
100.4	49.0	88.0	90.1	93.7	92.9	91.0	91.9	85.1	78.9	69.8	60.2	40.6
107.2	52.2	98.2	99.8	101.3	100.9	102.0	98.2	90.1	80.1	73.3	63.7	40.7
114.1	54.3	101.0	103.0	105.5	104.7	107.9	103.3	99.1	90.0	78.9	67.3	45.4
120.9	57.4	109.0	110.7	109.8	111.5	108.5	108.3	101.2	94.7	85.4	69.2	48.3
127.8	60.0	109.4	111.8	109.9	73.3	78.1	95.0	100.0	94.1	82.3	68.6	49.1

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.3	21.6	21.3	21.3	21.2	21.1	21.0	20.8	20.6	20.3	20.0	19.2
4.6	21.4	21.8	21.5	21.5	21.4	21.4	21.4	21.2	21.1	20.9	20.8	19.5
11.5	21.4	21.8	21.6	21.7	21.6	21.6	21.6	21.3	21.1	20.9	20.7	19.6
18.2	21.5	23.3	24.0	24.4	23.5	23.7	23.8	23.0	22.6	21.4	21.0	20.0
25.2	21.6	26.7	27.8	29.0	27.3	27.3	26.7	23.0	22.0	21.3	21.1	20.4
32.0	22.0	28.4	31.2	31.5	29.9	29.7	28.7	27.0	26.2	24.5	23.8	21.9
38.9	22.1	29.0	32.4	33.3	32.0	32.3	31.4	30.1	28.2	26.7	26.5	21.8
45.6	22.6	32.2	36.5	37.6	35.8	36.3	35.2	32.7	31.2	29.7	29.7	23.5
52.5	22.8	32.7	38.9	40.1	39.1	39.6	38.3	35.6	33.5	31.7	31.9	25.4
59.4	23.3	37.2	42.5	43.1	41.4	42.1	41.5	38.9	38.2	35.6	35.2	29.1
66.2	23.7	40.5	46.9	48.2	46.8	47.5	46.1	42.4	41.9	39.2	38.4	31.4
73.1	24.3	40.8	52.7	53.7	51.5	52.3	50.5	46.7	45.6	42.6	41.8	32.8
79.9	24.6	42.9	53.0	55.3	53.7	54.5	53.3	48.9	46.5	44.9	45.0	34.9
86.7	25.2	46.3	58.0	59.8	57.5	59.3	57.5	53.5	50.6	49.1	49.2	38.4
93.6	26.1	54.6	62.6	64.5	61.3	62.5	61.4	56.7	53.5	52.5	52.4	41.3
100.4	27.1	53.3	67.4	67.8	65.6	66.3	64.7	61.0	58.9	56.1	56.1	43.8
107.2	27.6	55.5	68.9	71.8	68.8	70.6	68.8	63.4	59.8	59.0	58.6	46.8

Experiment Number 28

114.1	28.0	56.6	70.3	72.9	70.7	72.2	70.5	66.2	63.5	63.1	62.0	49.4
120.9	29.5	64.8	77.0	79.3	76.6	77.9	75.4	69.8	68.3	66.2	66.1	51.8
127.8	29.7	68.3	81.5	84.1	79.8	81.5	78.7	73.2	72.1	68.8	68.7	53.8

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.2	21.3	21.4	21.4	21.2	21.2	21.1	20.7	20.4	20.1	19.8	19.1
4.6	21.3	21.4	21.5	21.6	21.4	21.4	21.3	21.1	20.9	20.7	20.4	19.8
11.5	21.2	21.6	21.6	21.5	21.3	21.3	21.4	21.1	21.1	20.7	20.2	19.8
18.2	21.8	24.6	26.5	26.4	25.6	25.6	25.3	23.5	23.0	21.2	21.0	20.0
25.2	22.2	26.8	29.2	29.0	28.4	28.9	28.7	24.4	22.6	21.6	21.1	20.2
32.0	22.7	29.6	32.2	32.2	31.4	31.8	31.4	27.8	26.5	25.3	24.3	21.8
38.9	23.8	31.6	35.3	35.2	34.3	34.9	34.7	32.3	30.3	28.8	27.1	21.1
45.6	24.7	36.2	41.0	40.2	38.8	39.2	38.3	33.9	32.1	31.5	30.9	21.1
52.5	24.2	40.7	42.1	41.8	41.7	42.4	42.0	38.6	35.3	34.5	33.6	23.3
59.4	25.3	43.4	47.1	46.5	45.3	46.5	46.3	40.7	37.6	37.0	37.1	24.8
66.2	26.6	44.4	49.1	48.4	46.2	46.8	45.8	41.4	41.1	41.1	40.0	26.9
73.1	27.7	51.7	54.9	54.6	52.8	53.4	53.3	48.0	44.7	43.8	43.3	28.7
79.9	28.1	57.3	58.9	58.9	57.8	58.7	59.0	54.2	49.9	47.2	47.2	30.8
86.7	29.5	58.1	63.0	62.3	60.4	61.4	61.0	56.7	54.9	52.7	51.7	32.6
93.6	30.5	64.3	66.7	66.3	65.4	66.7	66.2	59.3	58.6	56.5	55.1	34.6
100.4	31.8	70.2	71.3	71.8	70.8	72.4	72.1	65.7	61.7	60.4	58.8	37.0
107.2	32.8	67.1	72.7	73.0	72.1	72.7	72.5	66.9	63.7	62.6	61.5	39.6
114.1	33.8	74.3	76.0	75.1	74.7	75.3	75.2	69.5	68.8	67.6	66.0	41.2
120.9	35.6	76.8	81.5	81.0	79.7	81.4	81.0	74.4	73.7	71.3	70.4	42.3
127.8	40.4	86.5	85.1	85.0	84.3	85.8	85.8	80.1	78.2	74.9	73.1	44.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.6	-0.5	-0.6	-0.8	-0.3
11.5	-0.8	-0.8	-0.4	0.1
18.2	-0.7	-0.8	-0.6	-0.2
25.2	-1.0	-1.0	-1.0	-0.4
32.0	-0.4	-0.6	-0.5	0.0
38.9	-0.9	-0.9	-0.8	-0.2
45.6	-1.3	-1.2	-0.9	0.4
52.5	-0.9	-0.9	-0.6	-0.4
59.4	-1.5	-1.3	-0.6	-0.4
66.2	-1.3	-1.4	-1.2	-0.7
73.1	-1.1	-1.1	-0.6	-0.6
79.9	-0.9	-1.1	-1.0	-0.6
86.7	-1.1	-1.0	-0.7	-0.6
93.6	-1.5	-1.7	-1.7	-1.2
100.4	-0.9	-0.9	-0.7	-0.4
107.2	-1.3	-1.3	-0.9	-0.8
114.1	-0.7	-0.7	-0.4	-0.3
120.9	-1.4	-1.2	-1.0	-0.6
127.8	-1.0	-1.3	-1.5	-0.5

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.6	0.7	0.8	0.9	0.5
11.5	0.7	0.6	0.5	0.3
18.2	0.8	0.9	0.8	0.3
25.2	0.7	0.7	0.8	0.4
32.0	1.1	1.1	0.9	0.3
38.9	0.8	0.7	0.5	0.2
45.6	1.3	1.4	1.0	0.5
52.5	1.3	0.9	0.7	0.0
59.4	0.9	0.7	0.5	0.4
66.2	1.3	1.4	1.5	0.8
73.1	1.2	1.1	1.0	0.4
79.9	1.4	1.3	1.2	0.6
86.7	1.2	1.3	1.1	0.7
93.6	1.5	1.4	1.2	0.4
100.4	1.0	0.9	0.9	0.1
107.2	0.8	0.9	0.9	0.1
114.1	1.5	1.6	1.7	0.6
120.9	1.9	1.6	1.3	0.6
127.8	1.4	1.2	0.9	0.4

Experiment Number 29

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	25.6	25.5	25.6	25.2	25.1	24.3	24.6	23.7	23.8	23.6	23.4	22.4
0.7	26.0	26.0	26.1	25.6	25.4	24.5	24.9	24.0	24.3	24.2	23.8	22.7
7.4	25.9	26.0	26.2	25.8	25.7	24.8	25.1	23.9	24.2	24.0	23.8	22.7
14.3	26.1	26.2	26.4	26.1	26.0	25.0	25.3	24.1	24.2	24.0	23.8	22.9
21.1	27.3	27.3	27.6	27.6	27.5	27.1	26.9	26.3	24.9	24.4	24.1	23.1
28.0	27.5	27.8	28.0	27.7	27.9	27.3	27.2	25.9	24.8	24.5	24.3	23.1
34.7	29.1	29.7	30.1	30.2	29.9	29.3	28.8	26.8	25.1	24.7	24.4	23.3
41.5	33.5	33.5	34.3	34.3	33.9	32.9	31.8	29.2	27.2	26.5	25.2	23.9
48.5	34.7	35.1	35.7	35.9	36.1	34.6	34.4	32.2	28.0	27.4	26.5	24.9
55.2	35.6	36.2	36.9	36.9	36.7	35.7	36.1	33.5	29.3	28.3	27.2	25.2
62.2	35.4	36.0	37.6	37.2	37.7	35.9	37.4	37.2	34.4	33.5	30.4	25.8
68.9	36.1	37.6	39.7	40.3	39.9	39.0	38.9	37.4	39.0	37.0	32.3	25.2
75.7	43.2	45.3	48.8	49.6	47.9	46.3	45.4	43.1	42.1	35.4	32.9	24.5
82.6	43.5	46.0	49.4	50.4	49.5	47.4	49.2	46.0	44.6	37.5	34.5	25.6
89.3	48.8	51.1	53.8	54.2	52.7	51.6	51.8	48.1	47.7	39.0	35.8	26.0
96.3	54.1	55.6	58.5	59.5	58.0	58.3	56.6	49.0	48.0	42.0	38.7	27.2
103.0	58.5	60.5	63.0	63.8	62.3	62.2	60.8	56.4	52.3	44.6	40.2	33.2
109.8	60.8	62.1	64.2	65.8	64.3	63.1	64.2	56.3	49.8	44.6	42.9	36.5
116.6	61.6	64.3	67.6	69.3	68.4	68.5	67.7	62.8	54.9	46.3	43.0	36.2
123.4	57.9	62.6	67.6	67.7	66.7	66.5	65.7	61.6	62.6	53.6	47.7	38.1
130.2	66.1	70.8	75.0	75.2	73.1	71.0	69.2	62.2	64.1	56.5	49.6	39.4
137.1	69.7	72.3	74.0	74.3	72.7	72.7	71.4	69.2	66.9	53.4	50.5	41.7
143.9	70.0	75.4	78.5	79.7	77.0	76.9	75.0	65.0	66.6	56.2	52.1	42.1
150.8	73.8	78.2	81.0	81.2	80.5	80.7	78.3	71.7	68.3	63.7	56.4	46.5
157.6	76.0	82.0	86.5	87.6	85.6	84.9	84.0	77.1	70.9	60.7	57.7	47.7
164.3	80.3	84.2	88.0	88.8	87.0	84.1	86.7	72.3	67.9	62.0	57.6	48.7
171.2	82.5	87.0	91.5	92.8	91.8	90.1	89.2	84.4	76.6	63.8	61.0	51.3
178.0	87.6	91.7	94.5	93.5	92.2	88.8	92.2	83.2	72.2	65.7	62.8	55.3
184.9	82.0	91.5	94.8	94.4	94.4	94.9	95.2	91.1	84.5	73.2	67.1	54.5
191.7	90.4	95.0	100.4	101.4	99.1	98.9	99.1	94.0	77.3	70.0	67.5	56.3
198.4	91.1	99.7	106.7	106.8	105.7	100.1	102.7	95.1	85.5	76.1	72.3	57.5
205.3	92.6	101.4	106.4	107.8	106.3	104.4	104.1	101.2	95.8	79.5	73.8	61.6
212.1	101.4	105.4	112.7	115.4	112.2	112.6	110.7	106.5	92.6	78.9	75.1	63.0
219.0	103.6	110.8	118.4	120.7	117.2	118.2	115.5	111.7	99.0	83.5	79.6	65.1
225.8	107.1	114.4	121.9	123.7	122.5	121.9	118.1	112.8	105.7	88.2	82.7	67.2
232.5	114.4	117.5	122.5	126.2	125.9	125.9	122.4	108.4	97.8	87.9	84.0	67.7

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	26.7	26.3	26.1	25.7	25.5	25.2	25.1	24.2	23.9	23.6	23.3	22.7
0.7	27.2	26.9	27.1	26.1	26.4	25.7	25.7	24.5	24.3	24.0	23.7	22.9
7.4	26.9	26.8	26.9	26.1	26.1	25.5	25.4	24.4	24.2	23.9	23.7	22.9
14.3	27.3	27.0	27.3	26.3	26.4	25.7	25.6	24.5	24.4	24.0	23.7	22.9
21.1	27.8	27.7	28.3	27.5	28.5	27.8	28.0	25.5	24.9	24.4	23.9	23.0
28.0	29.9	28.7	29.6	27.8	29.9	27.5	28.5	25.4	25.0	24.4	23.8	23.0
34.7	30.9	29.6	31.1	29.1	31.8	30.5	31.3	28.2	25.4	24.8	24.1	23.2
41.5	33.5	33.3	35.7	33.0	35.9	34.0	35.2	27.6	27.5	26.4	25.1	23.6
48.5	36.1	35.4	37.5	36.1	38.3	37.3	37.5	30.1	28.3	27.4	26.8	24.1
55.2	36.6	35.5	37.9	35.0	38.8	38.0	38.4	34.1	33.1	28.9	28.0	24.4
62.2	41.1	41.5	43.8	40.7	44.2	42.2	43.1	35.0	31.5	30.0	28.9	24.9
68.9	43.2	44.5	45.4	43.4	46.5	46.0	45.2	39.0	33.9	32.6	31.5	25.2
75.7	41.0	42.2	44.8	42.5	46.0	46.6	47.2	44.5	41.0	36.0	33.7	25.3
82.6	44.5	46.2	48.7	46.4	49.9	48.1	48.3	44.8	44.9	37.4	34.7	28.7
89.3	51.0	54.5	56.4	54.6	56.6	56.7	56.0	51.0	49.1	43.3	37.8	28.8
96.3	56.0	58.2	59.4	57.9	60.9	60.0	59.9	50.1	45.6	41.3	37.6	31.7
103.0	56.9	59.0	61.2	60.1	63.2	63.1	63.3	57.3	49.1	42.5	39.9	34.7
109.8	59.2	61.5	63.8	60.6	66.1	67.1	66.7	54.4	53.3	45.9	42.4	36.4
116.6	66.4	69.1	70.3	67.2	71.0	68.7	69.6	55.1	56.2	49.3	45.0	37.5
123.4	67.0	68.1	71.7	68.8	74.0	71.2	72.3	60.9	58.9	52.8	48.2	38.1
130.2	73.4	77.9	79.5	77.4	81.5	81.0	81.2	73.0	65.1	55.7	51.5	40.8
137.1	71.4	73.9	75.2	72.6	77.2	78.2	78.7	76.1	70.0	57.7	53.9	42.6
143.9	76.4	80.8	82.3	79.5	82.9	79.8	81.1	70.3	66.1	58.3	54.1	43.2

150.8	82.3	88.4	89.5	86.0	89.9	87.1	86.8	77.9	70.1	60.7	57.2	45.6
157.6	83.3	87.3	89.2	88.3	91.8	91.0	90.2	83.0	76.2	62.9	58.7	49.0
164.3	86.5	90.6	92.7	92.8	94.7	95.4	94.6	88.0	79.3	66.9	60.8	50.3
171.2	90.9	95.9	96.8	97.0	98.6	99.6	99.2	85.0	77.9	68.6	64.3	50.8
178.0	89.1	92.2	94.0	93.0	97.0	97.9	98.0	90.3	79.8	69.7	65.9	53.5
184.9	94.2	98.8	102.7	101.4	104.3	104.5	103.9	97.8	86.2	75.2	70.8	54.8
191.7	97.3	102.6	105.7	102.9	106.3	104.3	104.7	95.8	87.0	77.7	70.8	56.8
198.4	102.8	108.0	109.7	107.5	111.5	109.2	110.6	100.2	92.6	79.2	74.7	60.1
205.3	109.8	118.3	119.6	118.3	119.6	119.3	117.7	99.7	97.7	81.3	76.6	61.1
212.1	111.0	115.9	117.8	116.7	119.4	118.6	117.1	104.7	99.1	82.4	78.7	63.6
219.0	105.9	113.6	119.6	119.2	122.8	123.9	122.9	118.1	109.0	86.3	81.0	65.3
225.8	116.0	123.7	125.3	123.4	129.0	128.4	127.8	117.2	104.2	89.3	82.0	67.4
232.5	121.6	128.9	133.3	131.0	135.9	131.5	131.8	115.1	106.0	96.5	85.3	70.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	26.6	26.5	26.1	26.0	25.9	25.5	25.3	24.4	23.8	23.5	23.2	22.8
0.7	26.9	26.8	26.4	26.3	26.4	25.9	25.6	24.5	24.1	23.7	23.5	23.1
7.4	26.7	26.7	26.4	26.3	26.5	26.0	25.6	24.6	24.2	23.9	23.6	23.1
14.3	26.6	26.7	26.6	26.4	26.6	26.3	25.9	24.8	24.3	24.0	23.8	23.0
21.1	27.1	27.5	27.3	27.1	27.4	27.2	27.2	26.3	25.7	24.5	24.2	23.3
28.0	28.6	28.9	28.8	28.8	28.7	28.6	28.8	28.1	27.9	25.9	24.5	23.3
34.7	30.6	31.4	31.3	31.4	31.1	30.8	30.8	29.5	28.4	25.9	24.2	23.1
41.5	34.7	34.2	34.5	34.2	34.2	34.2	34.6	32.1	28.2	25.0	24.4	23.3
48.5	37.2	37.1	37.7	37.7	37.7	37.6	37.8	36.4	33.1	26.9	25.7	23.5
55.2	36.6	38.1	37.9	38.6	39.0	39.5	40.2	39.3	36.5	28.6	27.1	23.7
62.2	39.7	40.6	40.2	40.6	40.9	41.4	41.4	40.5	38.0	30.6	29.4	24.3
68.9	38.5	43.0	40.8	41.6	42.8	43.9	44.3	42.7	38.4	32.0	30.5	25.3
75.7	40.5	44.4	43.7	44.3	45.5	46.3	46.3	45.9	43.1	34.4	32.7	26.8
82.6	43.4	46.6	46.2	46.9	47.4	48.2	48.0	47.9	47.2	41.2	38.1	27.9
89.3	43.0	48.0	46.7	47.8	47.9	48.1	48.1	51.3	51.4	42.4	39.5	28.8
96.3	44.0	53.9	51.0	50.8	49.9	51.0	51.5	52.8	52.6	45.6	39.4	30.3
103.0	50.3	54.9	53.4	54.6	54.1	55.7	56.3	56.7	56.0	50.4	44.2	32.3
109.8	50.4	56.0	54.5	56.1	57.8	58.9	60.3	58.9	56.6	50.5	45.9	33.4
116.6	51.8	59.0	56.9	59.6	60.4	61.3	62.0	60.5	59.6	53.1	50.2	34.7
123.4	54.9	63.5	61.1	62.4	63.0	64.4	64.9	64.9	64.8	56.0	48.0	36.5
130.2	57.1	63.0	62.6	63.2	64.0	65.3	66.3	66.2	65.4	58.4	48.4	38.8
137.1	58.3	68.3	66.1	67.6	68.0	69.7	70.4	70.3	70.1	59.9	53.1	42.6
143.9	61.8	70.8	67.5	69.6	70.7	72.8	73.9	73.9	74.0	64.0	54.3	44.2
150.8	64.0	74.8	70.5	72.7	74.0	77.0	77.8	77.8	78.6	66.8	56.6	46.2
157.6	71.3	83.7	77.4	79.4	79.4	81.7	83.1	82.4	80.6	66.7	58.3	46.8
164.3	73.2	86.3	80.5	82.0	82.0	84.4	85.2	82.4	82.2	72.1	64.4	49.6
171.2	74.1	84.2	79.9	82.4	83.7	86.3	86.4	86.0	86.2	74.4	63.7	51.4
178.0	63.9	70.6	70.8	72.8	73.9	77.5	78.8	84.4	84.4	74.5	68.2	51.2
184.9	74.7	87.1	81.5	85.6	84.4	87.7	88.3	87.9	89.5	82.9	73.4	54.2
191.7	77.9	91.7	85.9	89.6	88.9	93.1	94.2	93.6	96.3	84.7	73.4	55.6
198.4	79.7	90.5	88.4	89.0	88.2	91.1	93.1	94.2	96.9	88.5	75.1	60.0
205.3	77.9	97.0	92.0	92.8	93.9	96.3	97.1	97.3	100.0	90.2	78.2	61.1
212.1	89.6	101.5	97.7	99.0	100.5	104.4	106.0	102.6	105.7	90.5	80.6	62.6
219.0	92.9	108.2	101.2	105.1	104.2	107.9	106.9	107.0	109.5	97.3	81.1	65.1
225.8	98.2	114.2	106.5	110.1	110.0	114.7	115.3	115.1	114.0	96.2	83.6	66.7
232.5	94.5	110.1	105.0	108.6	107.4	110.9	111.1	112.8	118.5	103.7	94.4	68.6

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	26.7	26.5	26.5	25.8	25.4	25.1	24.7	24.1	23.6	23.3	23.1	22.6
0.7	27.1	27.0	26.9	26.1	25.7	25.5	25.1	24.5	24.2	23.9	23.6	22.8
7.4	27.1	27.0	27.0	26.5	26.2	26.0	25.3	24.4	24.2	23.8	23.5	22.9
14.3	27.0	27.0	27.0	26.4	26.0	25.8	25.4	24.6	24.2	23.9	23.6	23.0
21.1	27.0	27.1	27.2	27.1	27.1	27.3	27.6	26.9	26.4	24.8	24.1	23.3
28.0	29.4	29.4	29.2	29.7	29.6	29.8	29.7	28.4	28.4	27.6	25.6	23.5
34.7	32.8	32.2	30.8	33.4	33.0	33.1	32.7	30.3	27.2	25.1	24.4	23.5
41.5	36.2	35.2	32.6	37.4	36.5	36.6	36.5	34.5	32.1	25.8	25.2	23.6
48.5	39.4	37.7	35.2	39.8	39.1	39.5	39.7	38.3	35.1	26.8	26.4	23.7
55.2	39.3	38.1	35.8	40.6	40.1	40.3	40.8	39.5	36.7	29.2	28.4	24.0

Experiment Number 29

62.2	42.6	40.9	37.0	44.6	43.8	44.0	43.3	40.8	36.7	32.0	30.3	24.7
68.9	43.8	42.5	40.5	44.3	43.9	44.3	44.1	42.5	41.6	34.6	32.7	24.6
75.7	46.3	44.5	40.9	47.7	47.2	47.7	47.5	45.4	43.8	35.3	33.7	26.2
82.6	48.3	45.9	42.6	50.3	49.8	50.1	50.4	48.8	46.7	38.5	36.5	27.1
89.3	48.9	47.8	44.4	52.7	51.9	52.2	52.5	50.5	49.5	43.5	39.3	27.5
96.3	52.4	50.9	49.6	54.1	53.9	54.1	54.8	53.5	53.7	49.8	46.4	29.2
103.0	56.1	53.5	49.7	58.6	57.9	58.3	58.3	56.3	54.8	49.7	46.0	31.3
109.8	58.1	56.7	52.3	60.6	60.9	61.2	60.6	58.6	58.1	50.1	45.6	33.3
116.6	58.6	56.8	52.6	61.6	61.9	63.0	63.7	61.9	61.9	52.6	46.5	34.2
123.4	59.7	59.0	53.5	66.2	66.5	67.5	67.9	65.9	65.0	58.1	48.9	35.8
130.2	69.8	66.0	59.8	71.9	71.1	71.8	71.8	67.5	64.9	54.7	51.4	37.3
137.1	71.0	66.0	59.2	73.2	72.7	73.7	74.0	70.5	68.4	58.1	53.2	39.4
143.9	72.8	71.6	67.1	74.3	73.4	73.3	73.7	72.0	70.0	60.0	56.4	41.5
150.8	70.6	69.3	64.6	78.1	76.8	77.6	76.8	74.8	74.2	68.5	58.5	43.7
157.6	70.4	68.1	66.0	73.1	73.5	74.7	75.5	75.0	77.0	74.1	73.3	44.7
164.3	76.6	72.6	69.6	81.2	82.1	82.3	82.3	80.9	80.7	71.0	63.0	46.2
171.2	82.0	78.1	70.8	83.9	84.4	85.9	86.0	83.2	83.6	71.4	63.8	48.5
178.0	77.6	79.0	75.4	84.6	86.8	87.1	87.6	86.7	88.7	84.4	81.7	50.6
184.9	78.1	74.6	73.7	81.5	81.5	82.5	84.5	86.8	88.1	85.0	76.6	51.3
191.7	80.8	82.5	76.2	91.4	91.3	93.6	94.7	92.5	92.8	89.6	80.2	52.3
198.4	82.2	85.1	79.9	95.3	95.3	97.3	99.1	98.1	98.7	92.6	81.7	53.4
205.3	95.7	91.8	88.6	99.4	99.4	100.6	102.2	98.8	100.5	91.5	77.1	56.0
212.1	96.9	91.8	84.6	101.9	101.6	102.9	105.1	103.0	104.6	94.7	80.7	59.4
219.0	100.0	95.0	92.3	104.3	103.9	105.4	106.2	105.2	105.8	97.6	84.6	60.8
225.8	110.5	103.1	89.4	114.0	112.1	112.6	111.0	107.4	102.9	89.6	86.0	62.8
232.5	110.2	109.5	104.3	115.1	114.2	114.9	114.7	111.0	111.2	103.0	90.8	65.3

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.7	0.0	0.0	0.0	0.0
7.4	-0.1	0.0	0.0	0.0
14.3	-0.2	-0.2	-0.2	-0.1
21.1	-0.1	-0.1	-0.2	0.0
28.0	-0.2	-0.2	-0.2	0.0
34.7	-0.4	-0.3	-0.2	-0.1
41.5	-0.3	-0.3	-0.2	-0.1
48.5	-0.3	-0.3	-0.3	-0.2
55.2	-0.3	-0.3	-0.2	-0.3
62.2	-0.2	-0.3	-0.2	-0.3
68.9	-0.3	-0.3	-0.4	-0.3
75.7	-0.3	-0.3	-0.2	-0.2
82.6	-0.5	-0.5	-0.3	-0.3
89.3	-0.5	-0.6	-0.5	-0.3
96.3	-0.4	-0.4	-0.5	-0.4
103.0	-0.4	-0.4	-0.3	-0.5
109.8	-0.3	-0.5	-0.3	-0.3
116.6	-0.4	-0.4	-0.4	-0.3
123.4	-0.5	-0.4	-0.2	-0.2
130.2	-0.5	-0.5	-0.3	-0.4
137.1	-0.2	-0.4	-0.3	-0.3
143.9	-0.5	-0.5	-0.2	-0.3
150.8	-0.4	-0.5	-0.4	-0.5
157.6	-0.3	-0.4	-0.4	-0.3
164.3	-0.5	-0.5	-0.5	-0.5
171.2	-0.5	-0.5	-0.4	-0.3
178.0	-0.4	-0.6	-0.3	-0.5
184.9	-0.5	-0.5	-0.4	-0.4
191.7	-0.5	-0.4	-0.2	-0.4
198.4	-0.5	-0.5	-0.4	-0.5
205.3	-0.4	-0.6	-0.5	-0.5
212.1	-0.4	-0.5	-0.4	-0.4
219.0	-0.7	-0.6	-0.5	-0.5
225.8	-0.5	-0.6	-0.4	-0.4

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
0.7	-0.1	0.0	0.0	-0.1
7.4	-0.1	0.0	0.0	-0.1
14.3	0.1	0.1	0.1	0.1
21.1	0.1	0.0	0.0	-0.1
28.0	0.1	0.1	0.2	0.1
34.7	0.3	0.2	0.2	0.1
41.5	0.2	0.2	0.3	0.2
48.5	0.2	0.2	0.2	0.1
55.2	0.2	0.3	0.3	-0.1
62.2	0.3	0.3	0.3	0.2
68.9	0.1	0.2	0.3	0.3
75.7	-0.1	0.2	0.4	0.3
82.6	0.3	0.4	0.4	0.3
89.3	0.4	0.3	0.3	0.2
96.3	0.4	0.6	0.7	0.4
103.0	0.3	0.3	0.5	0.4
109.8	0.5	0.4	0.4	0.3
116.6	0.6	0.5	0.5	0.3
123.4	0.5	0.5	0.5	0.2
130.2	0.3	0.2	0.5	0.3
137.1	0.5	0.5	0.6	0.3
143.9	0.5	0.4	0.5	0.2
150.8	0.6	0.6	0.8	0.4
157.6	0.4	0.4	0.6	0.4
164.3	0.5	0.7	0.8	0.5
171.2	0.5	0.5	0.6	0.3
178.0	0.6	0.6	0.7	0.3
184.9	0.5	0.5	0.7	0.4
191.7	0.4	0.3	0.5	0.2
198.4	0.5	0.5	0.7	0.4
205.3	0.6	0.4	0.6	0.2
212.1	0.7	0.5	0.7	0.6
219.0	0.5	0.5	0.8	0.5
225.8	0.6	0.5	0.8	0.3

232.5	-0.3	-0.4	-0.1	-0.4	232.5	0.7	0.7	0.9	0.7

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
0.7	0.0	0.0
7.4	1.2	0.8
14.3	1.6	0.7
21.1	1.6	1.3
28.0	1.5	0.8
34.7	1.6	1.4
41.5	1.7	1.6
48.5	1.5	1.2
55.2	2.1	1.3
62.2	1.7	1.6
68.9	2.3	1.1
75.7	1.7	1.6
82.6	2.4	1.4
89.3	2.0	1.3
96.3	2.1	1.5
103.0	2.0	1.7
109.8	1.9	1.5
116.6	2.5	1.7
123.4	2.8	2.0
130.2	2.1	1.6
137.1	2.9	1.7
143.9	2.5	1.9
150.8	2.7	2.0
157.6	2.1	2.2
164.3	2.7	1.7
171.2	2.4	2.4
178.0	2.2	2.3
184.9	2.1	1.7
191.7	2.8	2.0
198.4	3.2	2.0
205.3	3.1	1.8
212.1	3.6	1.8
219.0	3.1	1.9
225.8	3.3	1.7
232.5	3.1	1.9

Experiment Number 30

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	26.3	26.2	26.4	26.0	25.8	24.8	25.1	24.0	24.0	23.7	23.5	22.6
1.4	27.0	26.9	27.1	26.6	26.5	25.2	25.9	24.4	24.9	24.6	24.4	23.4
8.4	27.0	26.7	26.8	26.4	26.3	25.4	25.8	24.6	24.9	24.6	24.5	23.5
15.1	28.0	28.1	28.3	28.4	28.5	27.8	28.0	26.7	25.4	24.9	24.6	23.6
22.0	30.2	30.2	30.5	30.8	30.5	29.9	29.9	26.5	25.4	24.9	24.6	23.6
28.8	35.0	34.7	36.0	35.9	35.5	33.9	33.3	30.5	25.9	25.2	24.9	23.7
35.5	38.8	39.5	41.0	41.4	40.7	40.3	39.0	36.1	29.2	27.6	25.7	24.5
42.4	41.5	42.2	43.3	43.3	42.1	41.0	41.2	39.1	33.4	29.8	28.4	26.7
49.1	42.2	44.0	45.1	45.3	44.8	44.2	44.5	42.6	40.4	33.5	31.3	26.1
56.1	42.6	45.4	47.2	49.4	49.3	49.7	48.0	47.5	46.1	40.7	33.2	25.3
62.8	48.7	51.8	54.6	55.3	54.0	53.1	52.7	51.6	48.4	40.2	36.1	26.9
69.6	53.8	56.4	58.3	59.1	58.6	57.0	57.7	52.0	53.8	40.9	38.6	28.3
76.5	61.3	62.7	64.7	66.2	64.7	65.8	64.1	57.3	51.7	43.0	41.4	34.9
83.3	60.5	62.4	64.8	65.7	65.4	65.2	64.6	65.3	54.6	47.3	44.4	35.6
90.0	61.6	65.0	68.2	69.2	68.0	68.2	66.9	65.1	60.4	50.3	46.9	38.1
96.9	71.2	73.6	76.5	78.5	76.3	77.7	74.8	70.5	59.3	53.5	49.9	39.0
103.7	72.7	74.9	78.8	80.5	78.8	80.3	76.8	69.0	59.6	54.9	52.4	41.2
110.6	74.5	76.8	80.0	80.7	79.8	77.9	78.4	62.4	60.4	57.0	55.2	43.6
117.3	77.7	80.0	82.8	83.5	81.1	79.7	79.9	70.6	62.7	60.1	56.1	45.8
124.1	82.7	85.1	89.0	89.6	87.6	84.4	84.9	72.8	66.0	59.4	56.7	46.6
131.0	85.5	89.0	92.5	93.5	91.5	90.8	89.7	84.5	77.3	64.3	60.8	47.2
137.8	87.2	91.5	95.6	95.8	93.6	92.8	92.0	78.5	71.2	65.0	63.0	51.6
144.7	93.1	95.6	99.4	101.3	99.3	101.3	98.4	96.7	82.0	66.9	63.2	54.0
151.5	94.3	97.9	101.7	102.8	100.1	100.4	100.5	92.7	89.3	77.7	69.3	58.4
158.2	94.0	96.4	99.1	99.7	101.9	98.5	101.0	94.0	82.2	72.6	68.6	57.3
165.1	99.3	104.4	109.1	108.1	107.0	96.8	105.4	90.0	87.2	80.8	71.1	56.7
171.8	101.8	106.5	111.6	113.1	110.7	111.8	110.2	101.0	90.1	81.8	76.4	61.2
178.7	105.8	112.9	117.6	119.9	118.4	119.6	113.6	106.5	98.6	85.8	80.2	66.0
185.5	115.1	116.6	120.0	123.0	119.5	119.3	116.4	109.5	93.6	85.7	82.5	65.8
192.3	117.0	119.2	122.7	126.0	124.1	122.7	120.1	112.4	100.5	90.3	86.0	70.1
199.2	121.9	129.4	135.1	138.4	134.0	134.4	128.3	121.8	102.7	91.5	86.7	70.0
205.9	122.9	125.0	130.0	133.4	130.7	131.1	128.2	121.6	110.6	94.7	89.3	72.4
212.9	123.0	127.1	131.5	133.5	129.4	129.0	125.8	117.0	103.8	96.8	93.4	79.3
219.6	121.9	126.2	133.1	136.0	131.4	131.5	128.2	122.6	106.6	96.4	92.9	78.7
226.4	120.4	127.2	134.8	136.8	133.9	131.0	131.5	122.1	107.7	99.4	95.3	80.4
233.3	130.2	139.7	145.3	147.3	143.7	143.8	139.7	133.1	107.9	101.0	97.1	80.1

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	27.8	27.0	26.8	26.1	26.2	25.7	25.7	24.7	24.2	23.7	23.4	22.6
1.4	28.2	27.4	27.9	26.8	27.0	26.2	26.4	25.2	24.9	24.5	24.2	23.5
8.4	28.6	27.4	27.8	26.8	26.9	26.1	26.3	25.3	24.9	24.6	24.3	23.6
15.1	29.7	29.2	29.4	28.2	29.3	29.1	29.0	28.3	25.8	25.3	24.7	23.7
22.0	31.5	31.6	33.4	31.0	33.5	32.0	32.4	26.9	25.9	25.2	24.8	23.7
28.8	34.0	33.8	35.6	33.3	35.9	36.4	36.1	35.1	31.0	26.2	25.5	24.0
35.5	37.4	39.8	41.3	40.0	42.4	42.2	41.6	37.5	32.1	28.0	26.5	24.5
42.4	43.0	45.7	47.2	46.2	48.3	47.8	46.9	40.7	35.3	29.6	28.3	25.0
49.1	46.5	46.7	48.8	47.9	51.0	51.5	51.2	43.8	40.4	32.9	31.1	24.9
56.1	48.7	50.2	53.1	52.7	54.7	55.6	54.7	48.1	42.8	36.4	34.3	26.9
62.8	54.0	56.1	58.5	57.9	59.9	59.5	59.1	55.8	49.1	40.9	37.8	27.2
69.6	57.1	56.2	59.0	56.7	61.3	60.8	61.1	58.1	51.2	44.1	40.8	29.4
76.5	61.4	64.5	68.0	67.6	70.9	70.8	69.5	59.7	53.7	45.9	42.5	34.1
83.3	66.0	69.0	72.0	70.1	72.8	72.6	71.4	56.8	53.3	49.9	44.9	36.8
90.0	70.5	74.1	75.4	72.1	75.4	74.0	73.6	59.7	52.8	49.0	46.1	38.7
96.9	73.7	77.3	79.1	76.7	80.6	77.4	79.0	64.2	61.8	55.1	49.8	40.1
103.7	78.4	82.3	84.9	84.0	86.4	85.4	84.5	65.0	60.7	55.0	50.7	43.2
110.6	81.3	80.6	84.9	79.5	84.7	81.3	83.0	75.2	69.4	59.8	55.5	44.6
117.3	82.3	86.7	88.4	87.5	90.0	89.5	89.4	78.8	71.6	62.6	58.1	45.6
124.1	89.3	92.0	93.9	90.9	95.7	94.3	93.4	76.0	73.7	67.6	63.2	46.3
131.0	90.8	92.8	95.7	92.9	96.2	95.5	93.9	82.4	75.7	68.8	63.9	51.7
137.8	86.0	91.3	94.6	91.1	95.6	96.0	95.6	92.0	83.0	71.0	65.6	51.8
144.7	92.7	94.2	97.6	94.8	99.5	99.5	99.3	90.9	84.2	73.1	68.9	53.6

151.5	93.7	100.3	103.0	101.3	105.7	104.6	105.0	95.2	90.2	78.5	71.7	53.8
158.2	98.5	103.6	105.9	104.5	108.1	107.6	108.5	100.4	96.7	82.6	73.9	59.2
165.1	105.2	110.5	112.9	113.1	115.0	113.5	113.4	101.4	93.7	83.6	75.0	62.4
171.8	109.9	116.7	120.8	120.6	123.6	122.3	121.2	103.3	101.0	85.0	77.4	63.2
178.7	113.6	120.6	123.5	123.4	127.4	126.2	126.0	113.1	103.5	86.8	80.7	64.0
185.5	122.3	129.5	131.4	130.9	133.4	131.7	131.1	113.0	104.1	91.8	84.7	66.5
192.3	117.3	120.7	125.1	123.4	128.9	128.4	129.8	121.7	106.3	97.6	89.2	69.5
199.2	124.0	130.7	132.7	131.0	134.0	134.7	133.3	120.4	116.4	103.3	91.0	72.9
205.9	130.0	137.7	140.0	138.7	143.6	139.6	140.1	116.9	109.2	98.5	93.6	74.7
212.9	130.0	137.6	140.1	139.3	141.6	139.8	138.4	118.9	110.8	101.2	93.6	77.4
219.6	131.0	138.1	141.8	141.4	146.9	146.1	146.7	126.0	105.8	99.2	95.3	78.9
226.4	129.8	136.7	140.6	137.2	142.1	139.5	139.9	126.5	117.8	101.1	96.6	79.2
233.3	136.4	123.1	82.1	63.0	93.6	114.9	127.9	114.1	110.7	101.4	97.9	82.8

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	27.9	27.9	27.5	26.9	26.4	25.9	25.5	24.7	24.2	23.8	23.4	22.8
1.4	27.8	28.2	28.1	27.8	27.3	26.8	26.4	25.4	24.9	24.5	24.1	23.3
8.4	27.7	28.6	28.2	27.8	27.4	26.9	26.6	25.5	25.0	24.6	24.3	23.5
15.1	28.8	28.8	28.7	28.8	28.5	28.7	28.0	26.7	26.7	25.6	25.1	24.0
22.0	30.8	30.7	30.7	31.1	31.1	31.3	31.7	30.8	30.5	28.9	25.7	23.9
28.8	35.8	36.1	36.6	36.3	36.5	36.4	36.8	34.3	30.9	26.2	25.1	23.6
35.5	38.9	40.6	40.6	40.5	40.6	40.9	41.2	39.2	36.2	27.8	26.2	24.1
42.4	41.6	42.3	42.7	42.8	43.0	43.2	43.4	42.2	41.1	31.1	28.7	24.4
49.1	40.1	42.9	42.7	43.8	44.3	45.7	46.4	45.4	45.9	35.7	30.9	24.8
56.1	45.7	48.4	47.6	48.0	47.9	49.4	49.7	49.8	46.8	37.6	34.0	26.5
62.8	46.9	54.2	50.3	51.7	52.2	54.1	54.9	53.6	47.8	40.3	36.8	28.2
69.6	48.5	55.6	53.1	54.8	55.4	56.8	57.2	56.9	55.8	43.8	39.4	30.3
76.5	52.6	56.9	56.3	57.1	57.5	58.9	59.6	58.5	58.1	47.4	44.2	31.2
83.3	54.0	59.7	58.3	58.7	59.3	60.6	61.5	61.5	62.2	50.9	45.6	34.9
90.0	60.7	64.0	63.2	63.6	63.9	65.3	66.2	64.6	65.0	54.9	49.2	36.2
96.9	59.7	64.5	63.1	64.8	65.5	67.2	67.4	67.5	67.9	61.3	53.4	37.2
103.7	59.2	68.3	63.7	67.1	66.6	68.6	68.3	69.6	71.9	64.3	54.9	40.0
110.6	62.7	68.6	67.5	68.7	69.7	72.2	73.1	74.2	74.5	63.7	56.6	41.6
117.3	65.1	76.7	71.5	72.9	72.9	75.1	75.5	76.8	77.8	67.1	60.8	47.2
124.1	62.2	68.7	69.4	70.8	73.1	77.0	78.5	78.4	76.2	65.3	59.6	50.4
131.0	75.2	79.0	79.0	80.5	80.3	82.9	84.2	83.3	82.3	71.6	63.2	50.9
137.8	75.4	86.6	80.2	84.0	84.1	86.7	86.6	86.8	84.4	69.8	63.2	53.5
144.7	77.5	85.7	81.9	84.9	86.4	88.8	88.6	89.1	89.6	74.7	64.7	52.7
151.5	79.8	90.5	85.4	87.4	89.6	93.1	93.9	94.1	91.3	77.2	69.4	57.9
158.2	88.6	97.5	95.1	96.2	95.8	98.9	98.9	98.8	99.1	85.8	72.2	57.8
165.1	88.8	97.9	96.1	96.5	96.5	99.1	100.4	100.1	102.8	89.2	76.9	60.9
171.8	92.2	97.0	96.4	99.0	100.4	102.5	103.9	104.1	102.3	87.4	76.2	62.0
178.7	95.7	107.7	101.9	107.0	106.0	109.4	109.4	110.1	109.6	95.4	80.6	62.1
185.5	76.3	85.1	88.7	93.2	95.2	98.4	99.5	106.3	109.5	103.4	91.1	66.8
192.3	83.1	93.3	93.7	96.2	97.7	101.5	103.4	110.6	113.8	104.0	88.3	68.7
199.2	97.2	114.2	107.4	112.5	112.2	116.5	115.5	116.0	118.0	105.1	93.1	70.7
205.9	101.8	113.8	112.6	116.7	118.6	122.0	124.0	122.4	116.3	101.3	91.0	73.3
212.9	102.9	115.7	113.0	115.1	115.3	118.1	118.3	118.6	120.6	112.2	93.3	75.0
219.6	96.7	103.4	103.9	109.3	110.6	115.5	118.7	122.7	126.2	113.5	99.2	75.0
226.4	98.1	107.0	106.3	112.5	115.4	121.4	122.3	125.4	129.0	109.1	95.3	77.7
233.3	102.0	121.2	114.0	120.9	119.1	125.3	125.2	127.3	129.6	113.6	96.0	80.0

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	27.4	27.1	27.1	26.3	25.7	25.3	25.0	24.4	23.9	23.5	23.3	22.8
1.4	27.7	27.6	27.6	26.9	26.2	25.9	25.5	25.1	24.9	24.5	24.4	23.3
8.4	27.6	27.6	27.6	26.9	26.3	25.9	25.5	25.1	24.8	24.6	24.4	23.5
15.1	28.8	28.6	28.2	28.9	28.6	28.8	28.9	27.7	27.5	26.8	24.9	23.8
22.0	32.8	32.3	31.1	33.9	33.3	33.5	33.0	31.0	28.9	27.2	24.8	23.9
28.8	37.4	37.5	34.1	39.9	38.7	39.1	39.1	36.5	32.2	25.4	24.6	24.1
35.5	43.4	40.8	36.4	44.1	43.2	43.4	43.3	40.8	36.1	27.5	27.0	24.6
42.4	45.4	42.8	38.9	45.7	45.2	45.2	45.1	43.1	39.3	30.4	28.8	24.6
49.1	46.4	45.1	41.7	48.8	48.3	48.6	48.7	47.4	44.8	34.7	33.5	24.7
56.1	49.8	47.5	44.4	52.1	51.9	52.8	53.0	50.9	50.5	39.2	35.9	25.6

Experiment Number 30

62.8	51.3	48.5	47.5	54.9	55.4	55.9	56.3	55.0	51.4	44.6	39.3	26.6
69.6	52.6	52.4	50.7	55.6	55.0	55.7	56.7	54.2	53.7	48.0	42.0	29.0
76.5	58.5	54.4	50.7	59.6	59.0	59.4	59.6	58.2	58.6	49.1	44.1	29.3
83.3	58.5	56.1	52.5	59.8	59.8	60.5	60.9	61.0	59.1	52.8	51.7	32.2
90.0	64.4	62.7	59.9	65.8	66.0	66.5	66.6	64.7	59.4	53.4	51.3	35.1
96.9	67.4	64.4	61.2	69.8	69.4	70.1	69.8	65.7	61.1	51.8	50.3	37.3
103.7	65.7	66.4	61.5	74.2	74.2	75.2	75.4	71.1	68.9	56.6	53.8	40.6
110.6	70.1	68.1	63.5	74.4	74.0	74.5	74.1	72.9	72.4	64.2	57.7	42.1
117.3	77.6	73.2	63.4	81.4	80.2	80.1	78.5	74.2	70.3	60.9	58.8	43.2
124.1	77.8	74.2	67.8	79.5	79.2	79.8	80.3	78.6	78.2	71.6	60.9	44.9
131.0	81.7	77.9	73.6	84.2	84.2	84.9	84.3	81.6	81.1	67.2	62.6	45.7
137.8	81.2	77.2	73.0	86.1	85.6	86.9	87.8	83.2	81.5	70.8	67.8	48.5
144.7	91.0	82.0	76.1	92.1	90.9	91.9	91.8	87.5	87.7	80.1	75.2	51.2
151.5	85.4	83.9	79.8	91.1	91.0	92.4	92.5	89.9	91.6	89.4	80.4	52.6
158.2	94.5	90.5	83.6	97.1	95.6	97.6	97.7	93.7	93.9	87.4	77.9	54.3
165.1	100.8	94.7	80.8	105.7	104.3	105.8	103.9	96.8	91.1	87.2	82.5	56.0
171.8	101.4	96.3	87.3	104.0	103.7	105.1	104.9	101.6	100.5	93.1	84.5	58.1
178.7	104.2	100.0	91.6	106.0	105.4	105.8	106.5	101.3	97.2	88.6	84.0	60.4
185.5	105.2	98.0	87.0	108.6	108.3	110.3	110.5	104.1	101.1	89.2	85.6	62.8
192.3	103.4	100.9	95.0	107.0	107.2	107.2	108.5	107.5	107.9	100.2	93.8	64.5
199.2	108.9	101.9	96.0	113.6	110.2	110.3	110.2	108.5	112.2	109.9	101.6	66.1
205.9	100.4	101.4	100.2	108.3	110.1	112.5	113.8	114.3	115.5	106.2	97.6	68.5
212.9	115.6	108.7	104.1	118.0	116.5	118.7	119.0	116.5	118.1	112.6	106.9	71.0
219.6	114.1	115.4	108.9	120.3	118.8	120.9	119.6	116.2	116.6	110.1	101.3	74.4
226.4	108.3	104.6	101.7	112.9	111.2	112.7	113.2	116.5	119.0	115.5	112.8	76.2
233.3	111.7	106.8	99.5	125.2	126.2	128.6	129.7	126.1	125.8	115.7	111.7	76.6

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.4	0.1	0.0	-0.1	0.0
8.4	-0.1	-0.2	-0.1	0.0
15.1	-0.3	-0.2	-0.2	0.0
22.0	-0.3	-0.3	-0.2	-0.2
28.8	-0.3	-0.3	-0.2	-0.2
35.5	-0.1	-0.2	-0.1	-0.2
42.4	-0.3	-0.3	-0.2	-0.3
49.1	-0.3	-0.4	-0.4	-0.4
56.1	-0.5	-0.5	-0.2	-0.4
62.8	-0.4	-0.2	-0.3	-0.2
69.6	-0.5	-0.5	-0.6	-0.3
76.5	-0.6	-0.5	-0.4	-0.3
83.3	-0.4	-0.5	-0.4	-0.4
90.0	-0.4	-0.5	-0.3	-0.3
96.9	-0.3	-0.3	-0.3	-0.3
103.7	-0.5	-0.6	-0.4	-0.3
110.6	-0.4	-0.4	-0.3	-0.4
117.3	-0.7	-0.7	-0.5	-0.3
124.1	-0.6	-0.6	-0.6	-0.5
131.0	-0.5	-0.6	-0.4	-0.3
137.8	-0.4	-0.5	-0.4	-0.4
144.7	-0.4	-0.4	-0.3	-0.6
151.5	-0.5	-0.6	-0.5	-0.4
158.2	-0.4	-0.5	-0.5	-0.5
165.1	-0.4	-0.5	-0.4	-0.4
171.8	-0.7	-0.7	-0.8	-0.5
178.7	-0.7	-0.7	-0.5	-0.5
185.5	-0.4	-0.6	-0.3	-0.4
192.3	-0.6	-0.6	-0.5	-0.5
199.2	-0.7	-0.7	-0.6	-0.6
205.9	-0.6	-0.7	-0.9	-0.5
212.9	-0.5	-0.7	-0.5	-0.6
219.6	-0.7	-0.8	-0.7	-0.6
226.4	-0.5	-0.5	-0.4	-0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.4	-0.1	0.1	0.1	-0.1
8.4	0.1	0.2	0.1	-0.1
15.1	0.2	0.2	0.2	-0.1
22.0	-0.1	0.2	0.3	0.2
28.8	0.3	0.3	0.3	0.1
35.5	0.4	0.3	0.4	0.2
42.4	0.3	0.3	0.4	0.3
49.1	0.3	0.3	0.3	0.3
56.1	0.4	0.3	0.4	0.2
62.8	0.3	0.3	0.3	0.1
69.6	0.5	0.5	0.4	0.1
76.5	0.6	0.6	0.5	0.1
83.3	0.3	0.2	0.4	0.2
90.0	0.4	0.4	0.6	0.4
96.9	0.6	0.6	0.6	0.2
103.7	0.5	0.4	0.6	0.4
110.6	0.5	0.5	0.6	0.4
117.3	0.6	0.5	0.6	0.4
124.1	0.7	0.6	0.6	0.4
131.0	0.5	0.6	0.7	0.5
137.8	0.5	0.6	0.7	0.4
144.7	0.4	0.3	0.5	0.5
151.5	0.5	0.5	0.7	0.5
158.2	0.6	0.4	0.6	0.4
165.1	0.5	0.6	0.8	0.6
171.8	0.7	0.8	0.9	0.3
178.7	0.5	0.4	0.7	-0.2
185.5	0.4	0.1	0.7	0.3
192.3	0.9	0.7	0.8	0.3
199.2	0.7	0.4	0.6	0.2
205.9	0.7	0.8	1.0	0.6
212.9	0.7	0.6	0.9	0.3
219.6	0.6	0.6	0.8	0.4
226.4	0.6	0.5	0.8	0.4

Experiment Number 30

233.3	-0.5	-0.6	-0.4	-0.6	233.3	0.6	0.5	0.8	0.3

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
1.4	1.4	1.1
8.4	1.5	0.9
15.1	1.8	1.0
22.0	1.8	1.4
28.8	1.7	1.4
35.5	2.6	1.7
42.4	2.2	1.5
49.1	2.3	1.7
56.1	2.1	1.6
62.8	2.5	1.7
69.6	2.3	1.5
76.5	2.3	1.9
83.3	2.9	1.6
90.0	2.6	1.7
96.9	2.8	1.8
103.7	3.0	1.8
110.6	2.9	2.1
117.3	3.0	1.6
124.1	2.4	1.9
131.0	2.7	2.0
137.8	2.2	2.1
144.7	3.0	1.9
151.5	3.2	2.0
158.2	3.2	1.7
165.1	2.6	1.7
171.8	2.2	2.5
178.7	2.9	2.6
185.5	2.9	2.1
192.3	2.5	2.3
199.2	3.4	2.1
205.9	3.2	2.0
212.9	3.6	1.7
219.6	3.4	2.4
226.4	2.6	2.1
233.3	3.7	2.7

Experiment Number 31

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.6	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.7	20.5
2.3	20.1	20.6	20.7	20.8	20.8	20.8	20.8	20.8	20.7	20.6	20.6	20.5
9.2	21.0	27.7	26.1	28.7	29.6	29.3	27.8	28.2	25.1	21.1	20.9	20.7
16.1	35.2	59.9	57.3	58.8	56.4	54.8	51.7	38.5	31.6	21.7	21.2	20.9
22.8	48.8	80.9	78.0	81.9	78.6	77.0	73.0	53.5	28.8	21.9	21.6	21.3
29.9	61.6	105.8	98.8	98.2	88.7	87.1	87.3	67.6	34.7	22.5	22.3	22.3
36.7	71.3	126.6	125.2	123.5	119.8	116.3	108.6	78.5	46.6	26.5	23.4	23.5

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.0	20.7	20.7	20.9	20.8	20.9	20.8	20.8	20.8	20.8	20.8	20.8
2.3	19.9	20.4	20.4	20.7	20.6	20.8	20.6	20.6	20.6	20.7	20.7	20.7
9.2	20.0	20.6	20.6	20.8	20.8	20.9	20.7	20.7	20.7	20.7	20.8	20.7
16.1	20.1	20.7	20.7	20.9	20.8	21.0	20.7	20.7	20.7	20.7	20.7	20.8
22.8	25.3	47.6	49.1	49.5	50.1	46.5	46.9	35.4	26.3	24.1	22.9	20.8
29.9	30.2	60.5	63.3	65.7	66.9	65.2	65.5	60.3	46.3	31.7	26.1	24.9
36.7	32.3	71.0	75.6	74.4	77.1	72.7	74.9	66.4	53.8	45.4	44.6	23.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.4	20.8	20.7	20.7	20.7	20.8	20.8	20.8	20.8	20.7	20.8	20.5
2.3	20.1	20.6	20.6	20.6	20.6	20.6	20.6	20.7	20.8	20.8	20.7	20.4
9.2	20.3	20.7	20.6	20.7	20.7	20.8	20.8	20.8	20.8	20.7	20.7	20.4
16.1	20.4	20.7	20.6	20.6	20.7	20.8	20.8	20.8	20.8	20.7	20.7	20.4
22.8	21.3	26.3	26.9	26.9	26.7	26.9	27.8	25.9	24.4	22.5	21.1	20.7
29.9	23.4	35.5	38.8	38.4	38.5	39.3	40.0	34.9	35.4	30.1	28.5	23.0
36.7	24.6	43.0	46.7	47.1	45.0	46.2	46.0	41.6	39.4	36.8	38.2	26.2

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.3	20.9	21.0	21.0	20.8	20.9	20.9	20.7	20.8	20.7	20.8	20.3
2.3	20.1	20.9	21.0	21.0	20.9	20.9	20.8	20.6	20.7	20.6	20.8	20.3
9.2	20.3	21.0	21.0	21.0	20.8	20.9	20.9	20.7	20.8	20.8	20.8	20.4
16.1	24.7	37.0	35.6	35.2	33.3	34.2	33.4	24.3	23.7	22.7	21.5	20.8
22.8	32.7	51.6	49.6	50.1	44.6	45.9	44.8	28.7	25.6	23.7	22.8	21.2
29.9	34.8	61.9	60.5	60.0	54.7	54.6	53.2	40.3	34.2	25.1	23.5	21.6
36.7	40.8	73.5	73.1	72.3	66.1	65.9	61.4	47.0	46.1	35.8	23.3	22.0

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.3	0.1	0.1	0.1	0.1
9.2	1.2	1.2	0.8	-0.2
16.1	1.7	1.5	1.3	0.5
22.8	1.9	1.8	1.3	0.7
29.9	2.2	2.0	1.8	0.7
36.7	2.8	2.4	1.7	0.5

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
2.3	0.0	0.0	0.0	0.0
9.2	0.0	0.0	0.0	0.0
16.1	1.0	1.0	0.9	0.7
22.8	1.0	1.0	0.9	0.7
29.9	0.8	0.9	0.9	0.7
36.7	0.7	0.7	0.7	0.6

Experiment Number 32

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.9	21.5	20.9	20.4	20.2	19.9	19.7	19.1	18.8	18.7	18.4	18.0
5.2	22.0	21.8	21.0	20.6	20.3	20.2	20.1	19.4	18.9	18.8	18.5	18.1
12.1	43.8	76.8	71.8	75.0	72.2	69.5	64.4	41.4	21.9	20.2	19.0	18.6
18.8	54.1	88.3	85.8	84.9	80.8	79.2	74.6	51.3	24.2	24.4	19.7	19.3
25.7	71.4	131.1	124.7	125.3	120.7	113.8	103.1	63.3	25.0	22.2	20.5	20.2
32.5	63.8	96.9	74.0	63.3	62.6	107.9	81.8	69.4	28.4	23.3	21.7	22.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.2	20.2	19.7	19.8	19.5	19.6	18.9	18.7	18.5	18.3	17.6
5.2	20.6	20.3	20.5	20.0	20.4	19.9	20.2	19.5	19.0	18.7	18.6	18.0
12.1	20.7	20.3	20.5	20.0	20.5	19.8	20.3	19.7	19.1	18.9	18.6	18.0
18.8	26.8	51.3	52.8	52.6	53.1	51.0	49.7	39.7	27.5	25.6	23.5	18.8
25.7	31.6	67.2	71.0	69.6	71.0	69.0	70.0	62.9	45.8	36.0	33.1	22.7
32.5	35.1	74.7	83.0	80.9	85.6	80.5	83.1	74.4	54.8	52.7	51.0	20.9

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.4	19.9	19.8	19.6	19.5	19.4	19.0	18.6	18.4	18.3	17.8
5.2	20.3	20.5	20.1	20.1	20.1	20.1	20.1	19.8	19.5	19.1	18.9	18.1
12.1	20.3	20.6	20.2	20.1	20.1	20.1	20.1	19.8	19.6	19.2	19.0	18.1
18.8	21.6	29.3	30.5	29.3	29.5	29.7	30.7	27.1	24.3	22.3	20.1	18.6
25.7	23.3	37.5	40.2	41.1	41.3	42.5	43.6	39.8	35.2	31.3	29.5	19.6
32.5	25.7	46.9	51.6	51.9	50.1	50.1	51.5	44.6	42.4	39.0	38.7	25.4

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.3	20.2	20.0	19.9	19.6	19.5	19.4	19.0	18.5	18.3	18.1	17.9
5.2	20.3	20.4	20.3	20.2	19.9	19.8	19.7	19.4	18.7	18.5	18.2	18.1
12.1	28.3	42.9	40.8	39.4	33.9	32.8	30.7	24.6	24.1	21.0	19.3	18.6
18.8	33.1	53.0	52.4	52.1	47.2	47.3	45.8	30.3	29.2	25.5	23.5	19.3
25.7	36.4	61.4	60.3	59.7	55.2	54.8	52.4	39.0	39.4	25.9	21.1	20.0
32.5	40.0	77.6	76.5	76.6	70.6	70.2	68.9	51.5	50.9	38.7	30.2	20.6

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.2	1.5	1.4	1.1	0.6
12.1	1.6	1.6	1.2	0.4
18.8	2.4	2.3	2.1	0.4
25.7	2.4	2.1	1.4	0.5
32.5	2.2	1.9	1.8	0.9

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.2	-0.1	-0.1	0.1	0.1
12.1	1.0	1.0	0.8	0.8
18.8	1.0	1.0	1.0	0.6
25.7	0.9	0.9	0.7	0.5
32.5	0.9	1.0	0.9	0.6

Experiment Number 33

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	21.6	21.0	20.7	20.3	20.1	19.8	19.3	19.0	18.7	18.6	18.2
4.2	22.0	21.9	21.2	20.7	20.6	20.3	20.3	19.6	19.2	19.1	18.9	18.5
11.1	40.3	74.0	67.0	72.4	70.8	67.8	62.7	37.1	20.0	19.6	19.4	19.0
17.8	57.5	100.9	98.2	99.0	94.1	91.7	83.5	53.6	25.9	20.7	20.2	19.8
24.8	64.8	116.2	110.8	112.8	105.4	101.8	93.9	56.9	26.3	21.7	20.7	20.7
31.5	85.9	165.2	148.7	95.5	133.2	136.0	94.1	61.2	29.6	23.9	23.0	22.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.5	20.0	20.2	19.6	19.9	19.3	19.6	18.9	18.7	18.5	18.3	18.1
4.2	20.5	20.2	20.5	20.1	20.5	19.9	20.3	19.7	19.5	19.3	18.9	18.3
11.1	20.5	20.3	20.6	20.3	20.5	20.1	20.3	19.6	19.4	19.3	19.0	18.5
17.8	25.4	51.8	54.6	55.7	56.1	53.5	51.4	42.6	23.9	23.5	22.6	18.7
24.8	29.8	60.6	66.4	65.8	68.3	65.9	68.0	63.2	47.2	35.1	34.3	25.4
31.5	33.7	74.0	80.9	80.8	83.1	80.3	82.6	72.4	63.3	53.7	50.8	21.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.1	20.3	19.7	19.5	19.3	19.2	19.1	18.8	18.7	18.6	18.6	18.3
4.2	20.3	20.4	20.1	20.1	20.0	20.0	19.9	19.6	19.2	18.7	18.6	18.5
11.1	20.3	20.5	20.2	20.1	20.1	20.1	20.1	19.9	19.6	18.8	18.6	18.5
17.8	21.7	29.6	31.6	30.6	31.4	31.3	32.7	28.3	26.3	23.1	20.9	18.6
24.8	23.6	39.3	42.0	42.1	42.0	42.7	44.1	38.7	36.8	32.3	30.8	20.8
31.5	26.2	51.5	55.1	55.4	53.4	54.2	55.9	46.1	43.2	39.4	39.6	26.7

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.1	20.0	19.9	19.8	19.6	19.5	19.4	19.0	18.7	18.5	18.4	18.3
4.2	20.4	20.6	20.5	20.5	20.2	20.2	20.2	19.6	19.1	18.7	18.5	18.4
11.1	26.6	40.2	38.8	38.1	34.3	34.6	34.1	25.4	22.9	20.6	19.3	18.7
17.8	32.0	54.4	53.4	53.4	48.9	49.1	47.0	31.5	29.6	25.9	23.7	19.4
24.8	36.0	64.5	64.5	64.0	59.7	61.2	59.8	44.4	42.4	29.9	22.2	20.1
31.5	42.4	83.2	82.4	80.3	74.8	76.0	74.6	57.3	53.5	42.7	31.5	21.0

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.2	1.6	1.3	1.0	0.2
11.1	2.0	1.7	1.5	0.4
17.8	2.1	2.2	2.0	0.4
24.8	2.3	2.2	1.0	0.2
31.5	2.1	2.1	1.6	1.3

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.2	-0.1	0.1	-0.1	0.1
11.1	1.0	1.1	1.0	0.9
17.8	0.8	0.8	0.8	0.6
24.8	0.9	0.9	0.8	0.6
31.5	0.9	0.9	0.8	0.8

Experiment Number 34

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.2	19.3	19.4	19.5	19.4	19.3	19.4	19.3	19.0	18.7	18.2	16.3
4.9	19.4	19.3	19.3	19.4	19.3	19.3	19.3	19.3	19.1	18.7	18.3	16.6
11.7	20.0	20.0	19.9	19.8	20.2	19.9	19.9	19.8	20.1	19.6	19.3	17.2
18.5	30.4	27.0	32.4	28.6	33.5	30.0	31.1	23.0	22.2	21.1	20.3	17.6
25.4	52.3	49.4	57.1	51.7	58.2	55.8	56.5	37.2	29.6	24.1	21.3	18.9
32.1	68.4	65.3	74.0	70.3	73.8	71.5	69.8	58.6	40.0	24.2	22.5	18.2
39.0	78.7	75.1	82.5	74.7	87.9	87.5	90.6	84.0	60.5	25.8	23.5	18.5
45.8	74.0	74.7	75.8	66.4	79.2	80.3	85.5	83.5	78.6	63.2	27.7	19.2
52.6	87.4	89.5	104.8	89.8	107.9	105.0	113.3	103.6	94.1	65.1	28.7	20.9
59.5	109.3	103.5	116.8	102.8	116.5	114.3	117.8	106.6	100.7	75.7	45.4	23.9
66.2	126.2	126.2	140.4	131.9	145.3	138.6	144.6	143.4	141.9	100.6	51.8	25.8
73.1	170.1	162.5	179.2	166.7	183.2	180.9	186.8	167.5	140.6	93.1	62.0	28.4

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.3	19.4	19.4	19.6	19.5	19.7	19.4	19.5	19.3	19.0	18.5	16.2
4.9	19.1	19.4	19.5	19.6	19.5	19.6	19.4	19.5	19.1	18.7	18.3	16.3
11.7	19.3	19.5	19.5	19.6	19.5	19.6	19.5	19.5	19.1	18.7	18.3	16.5
18.5	19.4	19.6	19.6	19.6	19.6	19.7	19.6	19.5	19.1	18.6	18.2	16.6
25.4	19.7	20.1	20.9	21.0	21.4	20.5	20.9	19.8	19.9	19.9	19.2	17.8
32.1	26.0	27.8	29.5	29.8	31.6	26.1	31.1	24.5	27.0	25.5	23.0	19.2
39.0	41.0	38.2	45.2	40.3	45.5	34.5	43.8	29.5	30.7	24.5	22.3	19.6
45.8	53.6	51.1	57.9	51.1	59.3	40.3	57.8	38.3	42.1	31.9	29.4	23.3
52.6	58.8	51.3	62.6	53.1	65.1	43.8	64.5	43.5	54.1	44.7	36.2	25.5
59.5	69.5	62.0	73.2	65.1	75.9	55.1	74.2	49.0	59.3	47.9	43.1	27.3
66.2	79.4	72.4	83.8	77.7	84.7	63.8	82.3	55.2	63.8	55.0	49.5	38.4
73.1	89.4	88.6	97.9	95.2	101.4	74.4	100.3	63.1	78.9	64.7	57.1	44.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	20.0	19.7	19.5	19.4	19.5	19.4	19.3	19.2	18.9	18.6	16.4
4.9	19.8	20.0	19.7	19.4	19.4	19.4	19.4	19.3	19.1	18.8	18.4	16.7
11.7	19.9	19.9	19.6	19.4	19.3	19.4	19.4	19.3	19.1	18.8	18.3	16.8
18.5	19.6	19.7	19.6	19.5	19.4	19.4	19.4	19.3	19.2	18.9	18.4	16.9
25.4	23.4	24.5	25.3	23.9	24.4	24.6	26.4	23.1	20.9	20.7	21.1	18.4
32.1	36.9	40.3	41.5	38.0	38.6	38.8	41.7	31.5	25.0	22.2	21.2	18.4
39.0	50.9	56.1	56.9	52.1	52.4	51.0	51.5	42.6	32.0	24.2	22.4	19.3
45.8	66.0	69.6	70.9	64.8	64.7	63.0	63.8	49.8	40.8	34.5	31.1	23.5
52.6	71.8	75.4	78.6	73.4	71.5	70.1	66.5	55.4	45.9	40.3	36.9	24.4
59.5	78.9	84.8	88.4	82.8	83.0	81.3	82.2	64.1	52.5	46.5	42.5	27.0
66.2	86.0	93.2	97.6	92.3	92.2	91.4	91.0	77.7	67.2	56.3	51.3	37.6
73.1	98.8	107.8	109.8	103.5	104.6	104.1	105.4	91.6	76.5	65.2	59.4	47.8

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.5	19.5	19.6	19.6	19.4	19.4	19.4	19.2	19.0	18.4	18.0	16.4
4.9	19.2	19.4	19.5	19.5	19.3	19.4	19.4	19.3	19.2	18.6	18.4	16.6
11.7	19.8	19.9	19.8	19.9	19.7	20.4	21.0	21.7	21.1	20.4	19.9	18.0
18.5	48.3	50.5	50.7	48.4	46.8	45.7	43.9	33.7	27.2	22.7	21.3	18.2
25.4	61.2	60.4	62.6	60.6	61.9	63.0	63.6	52.9	46.1	24.1	20.4	17.4
32.1	73.2	73.4	76.8	75.4	77.6	77.0	77.1	70.3	62.3	26.1	20.2	17.9
39.0	87.3	87.6	92.4	91.8	94.7	94.1	94.9	81.0	65.0	27.7	20.5	19.4
45.8	104.3	103.3	104.1	101.5	100.6	100.5	100.7	97.2	82.9	35.3	22.7	20.7
52.6	109.8	110.3	112.8	110.4	108.5	110.6	109.0	103.6	93.1	63.6	35.1	23.4
59.5	119.9	122.5	125.0	123.6	123.9	122.4	123.0	116.5	104.1	73.1	46.8	26.4
66.2	138.5	142.7	149.4	144.1	149.7	148.2	146.5	133.1	125.3	85.3	52.0	29.7
73.1	130.5	139.8	150.2	149.2	151.3	150.7	152.5	143.9	148.4	116.2	73.8	37.2

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.9	0.1	0.0	0.0	0.0
11.7	0.3	0.4	0.4	0.3
18.5	0.5	0.6	0.7	0.5
25.4	0.3	0.5	0.7	0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.9	0.0	0.1	0.1	0.1
11.7	0.0	0.1	0.1	0.1
18.5	0.1	-0.1	0.1	0.1
25.4	0.3	0.4	0.5	0.6

32.1	0.5	0.7	0.5	0.4	32.1	0.5	0.7	0.6	0.4
39.0	0.2	0.3	0.5	0.5	39.0	0.6	0.6	0.5	0.4
45.8	0.5	0.7	0.8	0.4	45.8	0.5	0.6	0.6	0.4
52.6	0.5	0.6	0.7	0.6	52.6	0.6	0.6	0.5	0.4
59.5	0.6	0.6	0.8	0.6	59.5	0.6	0.7	0.7	0.5
66.2	0.6	0.6	0.8	0.7	66.2	0.8	0.8	0.8	0.6
73.1	0.8	0.8	1.0	1.0	73.1	0.9	0.8	0.7	0.5

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
4.9	2.6	1.7
11.7	3.2	1.3
18.5	3.4	2.1
25.4	4.5	2.4
32.1	4.6	2.4
39.0	4.5	3.1
45.8	4.9	2.9
52.6	4.3	2.9
59.5	5.0	3.0
66.2	4.6	4.6
73.1	5.7	4.6

Experiment Number 35

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	19.9	20.0	20.0	20.0	19.9	20.0	20.0	20.0	20.0	20.0	19.9
1.1	19.9	20.0	20.1	20.0	20.1	20.0	20.1	20.1	20.0	20.0	19.9	20.0
8.0	20.2	20.3	20.3	20.2	20.3	20.2	20.3	20.2	20.2	20.2	20.2	20.2
14.8	26.4	26.2	27.3	24.8	26.9	25.0	25.5	24.1	23.2	21.0	21.0	20.7
21.5	46.7	48.1	52.2	45.0	53.5	48.4	50.0	42.1	35.9	23.0	22.4	21.3
28.5	59.6	62.0	66.7	58.0	67.6	65.9	68.6	66.1	51.9	26.3	24.6	22.2
35.2	74.3	75.7	82.8	72.2	84.1	81.9	86.7	82.2	70.8	29.2	26.7	23.0
42.1	99.0	98.7	104.7	95.6	107.3	102.9	106.3	96.6	77.8	38.7	28.4	24.2
48.9	118.0	118.5	123.5	111.7	126.2	127.4	131.6	118.6	104.9	58.3	29.5	24.7
55.6	123.2	125.7	133.3	117.7	133.4	125.6	133.2	106.7	117.0	81.9	48.0	27.8
62.5	115.7	122.8	127.9	116.6	134.5	129.9	141.1	121.2	123.9	92.8	54.5	28.0
69.3	152.7	150.2	159.8	154.0	166.5	162.0	167.5	145.6	143.4	115.8	82.4	33.6

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.8	19.9	20.0	20.1	20.1	20.3	20.1	20.2	20.1	20.1	20.1	20.1
1.1	19.7	19.8	19.9	20.0	20.0	20.1	20.0	20.3	20.0	20.0	20.1	20.0
8.0	19.9	19.9	19.8	20.0	20.0	20.6	20.1	20.0	20.1	20.0	20.0	20.1
14.8	19.8	19.9	20.0	20.1	20.1	20.1	20.1	20.3	20.1	20.1	20.1	20.1
21.5	20.2	20.2	20.2	20.2	20.2	20.5	20.2	20.1	20.2	20.3	20.2	20.2
28.5	26.6	28.6	31.2	30.7	33.3	27.3	32.2	24.4	27.4	27.1	26.5	20.3
35.2	33.9	33.2	37.7	37.3	41.2	33.8	42.1	32.9	32.0	27.0	26.4	22.6
42.1	47.8	43.4	51.2	46.2	55.0	39.4	54.7	40.8	45.3	38.5	28.3	24.8
48.9	62.1	59.0	65.5	61.6	67.9	49.7	64.6	43.6	50.0	42.1	36.3	29.5
55.6	68.6	62.2	73.6	66.0	77.1	53.9	74.2	50.2	57.1	51.5	45.3	32.4
62.5	73.7	67.6	79.0	71.0	80.9	56.5	79.9	56.4	73.3	66.2	57.1	38.6
69.3	82.8	74.7	84.8	78.8	89.5	66.6	88.4	66.4	87.0	86.0	71.8	38.8

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.0	20.2	20.1	20.2	20.2	20.2	20.2	20.1	20.1	20.0	20.1	19.9
1.1	19.9	20.0	20.0	20.1	20.1	20.2	20.2	20.1	20.0	19.9	20.0	19.9
8.0	20.1	20.2	20.1	20.1	20.1	20.1	20.2	20.2	20.1	20.0	20.0	19.9
14.8	20.0	20.1	20.0	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.0
21.5	21.9	22.7	22.7	22.2	22.3	22.6	23.2	22.2	22.2	21.0	20.7	20.1
28.5	37.0	40.7	41.8	36.8	35.9	35.9	36.4	27.1	24.7	23.4	22.3	20.3
35.2	55.9	60.0	61.6	55.0	55.3	54.0	55.6	41.7	34.1	25.5	23.4	20.5
42.1	65.4	68.8	70.2	66.1	66.2	66.1	65.9	54.6	46.9	36.7	33.6	25.7
48.9	75.0	80.1	81.9	77.0	77.2	75.9	75.8	62.4	55.7	44.0	40.3	28.1
55.6	84.4	90.2	92.1	87.8	88.3	87.2	88.3	70.4	58.9	48.6	46.2	32.9
62.5	90.3	96.1	100.1	95.6	96.6	96.6	96.8	80.7	67.9	58.8	52.8	37.3
69.3	96.0	102.1	106.3	102.8	103.4	103.6	102.6	88.9	77.6	69.2	64.9	44.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.1	20.2	20.2	20.2	20.1	20.1	20.1	20.0	20.0	19.9	20.0	19.7
1.1	20.0	20.1	20.1	20.1	20.0	20.0	20.1	20.0	20.1	19.9	19.9	19.8
8.0	20.2	20.3	20.3	20.3	20.1	20.1	20.0	20.1	20.1	20.0	20.1	20.0
14.8	36.9	38.9	40.5	38.6	38.0	41.6	37.9	28.4	30.9	29.1	26.2	22.4
21.5	58.1	60.4	63.9	61.8	60.7	66.7	67.2	46.8	31.7	22.6	21.6	21.4
28.5	78.4	79.2	84.8	81.2	81.3	87.1	88.1	67.0	48.7	25.4	21.2	21.6
35.2	89.4	93.7	98.1	96.3	96.2	102.8	102.8	85.5	68.3	26.3	21.5	22.2
42.1	107.2	109.6	115.2	111.2	109.8	111.7	109.4	99.2	82.0	34.3	21.9	22.9
48.9	112.0	115.7	118.1	117.3	117.0	122.1	123.7	111.7	106.2	70.0	47.5	25.4
55.6	131.0	132.6	136.6	130.8	129.5	131.9	129.5	121.0	105.1	69.0	45.7	28.6
62.5	139.4	143.7	148.2	144.1	141.0	147.4	144.3	129.9	124.0	92.4	61.4	32.2
69.3	156.2	151.5	50.9	121.6	146.6	167.8	166.1	139.1	143.2	110.2	69.2	38.3

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.1	0.0	0.0	-0.3	-0.4
8.0	0.3	0.2	0.2	0.2
14.8	0.5	0.5	0.5	0.5
21.5	0.4	0.5	0.5	0.4

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.1	0.1	0.1	0.0	0.1
8.0	0.1	0.1	0.0	0.1
14.8	0.1	0.1	0.0	0.1
21.5	0.6	0.5	0.6	0.5

28.5	0.4	0.5	0.6	0.7	28.5	0.4	0.5	0.6	0.6
35.2	0.5	0.4	0.7	0.6	35.2	0.4	0.6	0.6	0.5
42.1	0.5	0.4	0.5	-0.3	42.1	0.6	0.6	0.6	0.4
48.9	0.4	0.4	0.5	0.4	48.9	0.6	0.7	0.7	0.5
55.6	0.4	0.5	0.8	0.5	55.6	0.4	0.4	0.5	0.5
62.5	0.7	0.7	1.1	0.8	62.5	0.8	0.8	0.9	0.7
69.3	0.7	0.6	0.9	0.7	69.3	0.5	0.7	0.8	0.8

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
1.1	1.6	1.6
8.0	3.3	1.5
14.8	3.7	1.8
21.5	3.9	1.9
28.5	4.7	2.8
35.2	5.6	3.2
42.1	4.5	3.3
48.9	4.9	3.5
55.6	5.7	3.6
62.5	5.7	4.7
69.3	7.0	5.9

Experiment Number 36

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.3	22.2	21.7	21.4	21.2	20.9	20.8	20.0	19.7	19.3	18.9	18.0
6.5	22.3	22.3	21.7	21.5	21.4	21.3	21.1	20.5	20.2	19.9	19.4	18.3
13.5	29.2	41.1	39.8	42.0	42.7	40.8	39.1	28.6	20.8	20.3	19.7	18.5
20.3	41.8	71.4	65.2	67.9	64.7	64.4	61.5	36.6	21.7	20.0	19.5	18.7
27.1	48.2	80.8	79.6	80.0	77.7	75.7	72.2	49.1	21.1	20.2	19.4	18.9
34.0	53.2	88.1	86.2	87.1	82.7	81.0	77.8	57.6	33.1	21.3	20.0	19.6
40.8	60.6	103.6	97.3	99.8	95.0	93.0	86.4	64.6	31.3	21.9	20.9	20.1
47.7	60.9	102.8	102.0	103.9	105.2	103.4	99.0	78.5	60.2	43.0	31.2	21.1
54.5	71.9	125.8	126.1	133.1	138.3	140.6	139.3	114.7	77.9	52.4	34.9	22.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.7	20.9	20.5	20.7	20.3	20.5	19.9	19.7	19.4	19.1	18.0
6.5	20.6	21.0	21.1	21.0	21.0	20.5	20.6	19.8	19.8	19.6	19.4	18.4
13.5	20.6	21.0	21.1	21.0	21.0	20.5	20.8	20.1	20.0	19.8	19.5	18.3
20.3	22.6	35.5	37.8	36.7	36.9	33.1	32.3	28.8	28.0	27.2	23.1	19.3
27.1	25.3	47.8	50.0	50.6	50.8	49.3	48.8	41.5	24.3	22.0	20.9	18.8
34.0	27.8	52.8	56.7	56.3	57.6	55.6	56.6	53.0	36.7	31.8	29.5	22.1
40.8	29.0	63.0	64.0	64.9	64.2	61.4	60.4	54.4	47.3	42.4	40.8	21.3
47.7	31.6	67.8	72.2	72.3	73.4	69.5	70.8	63.6	52.9	49.3	39.6	22.0
54.5	34.6	79.8	82.1	83.4	84.1	83.1	83.4	77.0	61.5	55.2	48.0	24.8

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.6	20.3	20.2	20.1	20.1	20.0	19.8	19.6	19.3	19.0	18.1
6.5	20.3	20.7	20.6	20.6	20.5	20.5	20.4	20.0	19.9	19.5	19.2	18.2
13.5	20.2	20.6	20.4	20.5	20.5	20.5	20.5	20.3	19.9	19.5	19.4	18.5
20.3	20.5	23.8	24.3	24.4	24.9	25.5	26.9	24.8	23.0	20.4	20.2	19.2
27.1	21.8	28.0	32.7	31.5	32.9	33.6	33.4	30.2	27.5	25.3	22.7	19.6
34.0	22.9	32.4	36.1	36.2	36.0	36.8	37.3	34.0	31.5	29.7	29.3	21.7
40.8	24.2	38.1	43.2	43.7	43.0	44.3	45.1	39.6	36.9	35.1	34.1	23.4
47.7	25.2	41.3	47.2	47.8	46.4	47.6	47.7	44.1	42.8	40.8	40.2	23.6
54.5	25.7	47.0	53.0	54.6	52.4	54.0	55.2	51.4	47.8	46.7	46.7	24.8

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.3	20.5	20.5	20.4	20.2	20.2	20.2	19.8	19.5	19.0	18.7	18.1
6.5	20.4	20.6	20.6	20.5	20.3	20.3	20.3	19.9	19.5	19.2	18.9	18.3
13.5	23.3	33.2	32.8	32.7	30.7	32.2	31.1	27.0	25.3	20.6	19.9	18.6
20.3	26.3	40.5	40.3	40.5	37.9	38.4	36.0	26.4	22.6	21.8	20.9	18.8
27.1	27.1	42.1	41.3	41.6	40.0	39.7	38.4	30.5	29.4	24.3	20.7	18.9
34.0	29.9	52.4	51.9	51.5	48.3	48.3	46.8	36.6	36.1	26.8	20.5	19.0
40.8	30.6	57.4	56.5	55.6	53.4	53.9	53.4	44.2	43.3	36.6	27.5	19.5
47.7	36.4	67.8	68.7	68.3	65.1	65.7	65.8	56.2	48.4	45.7	39.6	22.6
54.5	41.6	81.0	79.3	78.3	73.2	72.2	69.7	56.8	56.7	49.3	40.3	22.1

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.5	0.8	0.8	0.5	0.2
13.5	1.6	1.4	1.0	0.2
20.3	1.8	1.8	0.9	0.2
27.1	1.8	1.4	0.6	0.3
34.0	1.8	1.7	1.7	0.6
40.8	1.2	1.2	0.9	0.4
47.7	1.6	1.3	1.1	0.4
54.5	2.4	2.2	1.2	-0.1

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.5	-0.1	-0.1	0.0	0.1
13.5	0.4	0.5	0.6	0.4
20.3	0.8	0.8	0.9	0.5
27.1	0.8	0.8	0.7	0.6
34.0	0.7	0.7	0.7	0.5
40.8	0.8	0.9	0.8	0.5
47.7	0.8	0.8	0.8	0.5
54.5	0.8	0.9	0.8	0.6

Experiment Number 37

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.3	21.8	21.1	20.8	20.5	20.3	20.2	19.6	19.2	18.8	18.4	17.9
5.7	22.4	22.1	21.9	21.8	21.8	21.6	21.3	20.5	20.0	19.4	18.9	17.8
12.6	30.9	46.5	42.5	44.7	42.7	41.1	37.5	25.1	21.2	20.1	19.4	18.0
19.4	41.5	71.9	67.4	68.7	66.0	63.0	60.6	43.2	23.0	19.9	19.4	18.3
26.2	48.9	80.8	78.8	79.2	74.4	71.5	64.6	45.6	23.4	20.2	19.4	18.5
33.2	50.6	82.0	83.6	84.3	84.5	83.7	81.4	67.3	38.8	25.2	21.0	19.3
40.0	54.3	87.7	84.8	86.1	83.6	84.5	81.2	61.5	29.1	21.4	20.7	20.2
46.8	68.6	115.5	113.0	110.4	104.1	103.7	99.7	79.0	50.0	32.6	25.5	21.3

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.7	20.5	20.7	20.1	20.4	19.7	20.1	19.4	19.1	18.8	18.5	17.7
5.7	20.7	20.6	20.7	20.2	20.5	20.1	20.4	20.1	19.8	19.5	19.0	18.1
12.6	20.7	20.6	20.7	20.3	20.5	20.1	20.4	20.2	19.7	19.3	19.0	18.2
19.4	22.8	33.9	36.0	36.8	37.6	37.0	37.2	32.2	28.1	26.4	25.5	18.9
26.2	25.4	47.0	48.1	49.3	49.9	50.1	50.0	44.3	27.8	21.4	20.8	18.6
33.2	27.5	51.5	54.4	54.8	56.9	55.0	56.3	49.6	41.2	33.7	33.5	23.5
40.0	29.0	53.3	57.0	58.0	59.1	57.6	58.7	56.7	47.7	44.2	42.7	21.6
46.8	30.8	61.2	64.8	64.6	65.4	63.0	63.3	59.0	52.7	49.7	45.1	23.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.4	20.0	20.0	19.9	19.8	19.7	19.4	19.0	18.8	18.6	17.8
5.7	20.3	20.6	20.1	20.2	20.1	20.2	20.1	19.9	19.6	19.2	19.0	17.9
12.6	20.3	20.7	20.2	20.2	20.1	20.1	20.1	20.1	19.7	19.4	19.1	17.9
19.4	20.5	22.2	22.8	22.7	22.8	23.4	24.5	23.8	23.2	21.8	19.8	18.3
26.2	22.0	29.4	33.2	31.3	32.9	32.9	33.0	30.3	27.3	24.2	22.6	19.1
33.2	22.4	31.7	34.9	35.7	35.2	35.8	36.2	34.6	33.8	30.0	28.4	22.1
40.0	23.4	38.9	41.8	42.8	41.2	41.7	42.0	38.9	36.7	35.1	34.7	24.2
46.8	24.5	41.8	48.0	49.3	48.0	48.9	48.8	45.2	44.2	41.5	40.4	24.0

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.3	20.4	20.2	20.1	19.9	19.9	19.8	19.5	19.1	18.7	18.4	17.8
5.7	20.3	20.7	20.5	20.4	20.2	20.2	20.3	20.0	19.3	18.9	18.5	18.0
12.6	24.3	32.8	30.7	30.1	27.8	28.1	27.9	25.0	23.2	19.6	19.3	18.4
19.4	27.2	40.9	40.6	41.0	37.6	37.4	35.2	24.4	22.6	21.0	20.2	18.9
26.2	28.0	43.1	42.5	42.3	40.5	40.8	39.4	30.0	26.9	22.7	21.6	19.3
33.2	30.1	50.2	49.4	49.6	46.6	46.9	45.8	35.1	35.5	28.4	20.6	19.3
40.0	31.7	55.7	57.2	56.5	53.6	53.4	52.2	44.8	41.3	36.6	27.1	19.3
46.8	35.8	70.9	70.0	68.2	63.8	63.0	61.7	53.3	47.1	44.6	39.4	22.4

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.7	0.9	0.8	0.5	0.0
12.6	1.6	1.4	1.0	-0.1
19.4	1.8	1.5	0.9	0.4
26.2	1.5	1.6	1.4	0.6
33.2	1.8	1.8	1.4	0.7
40.0	2.2	1.8	1.4	0.7
46.8	1.3	1.5	1.8	0.7

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.7	-0.1	-0.1	-0.1	-0.1
12.6	0.4	0.5	0.5	0.4
19.4	0.8	0.9	0.8	0.4
26.2	0.7	0.8	0.8	0.6
33.2	0.6	0.7	0.6	0.4
40.0	0.9	0.8	0.7	0.3
46.8	0.8	0.9	0.8	0.6

Experiment Number 38

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	21.3	20.6	20.3	20.0	19.9	19.7	19.3	18.7	18.4	18.1	17.8
1.8	21.8	21.4	20.8	20.4	20.2	20.0	19.7	19.3	18.9	18.8	18.6	18.1
8.6	24.7	34.1	31.0	31.7	30.3	28.9	28.9	25.9	21.2	18.9	18.6	18.2
15.5	35.7	57.7	54.9	57.1	54.2	51.2	46.1	30.5	22.9	19.2	18.8	18.4
22.3	43.6	71.4	69.6	70.3	67.8	66.2	62.0	45.0	22.4	19.6	19.0	18.8
29.1	51.6	84.5	79.9	79.7	75.4	72.4	68.0	38.4	21.9	19.6	19.2	19.1
36.1	56.9	93.4	90.4	92.3	85.2	82.4	75.2	51.1	33.4	21.9	19.9	19.8
42.8	58.1	96.4	96.7	97.5	96.1	94.6	91.2	72.9	47.9	29.1	22.7	19.8
49.7	71.7	130.7	124.8	127.5	122.9	121.4	114.1	77.5	56.0	42.0	33.2	21.5
56.5	79.3	140.6	131.3	84.0	64.3	63.2	84.5	85.3	74.7	46.2	37.7	22.5

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	19.6	19.7	19.3	19.5	19.1	19.3	18.8	18.6	18.4	18.1	17.6
1.8	20.3	20.2	20.2	19.8	20.1	19.8	19.9	19.5	19.3	19.1	18.9	17.9
8.6	20.3	20.1	20.4	19.7	20.1	19.7	20.2	19.9	19.3	19.2	19.0	17.8
15.5	20.2	20.0	20.4	19.6	20.1	19.5	20.1	19.7	19.3	19.2	19.1	17.9
22.3	22.4	38.1	40.3	40.7	41.3	39.0	38.5	27.1	23.3	22.2	21.6	18.8
29.1	25.6	49.2	53.0	51.8	52.9	50.5	50.3	43.5	26.1	21.8	21.1	18.8
36.1	27.3	55.9	58.6	57.4	58.1	55.4	56.7	52.2	41.5	36.4	33.4	21.8
42.8	28.3	56.7	58.2	57.4	58.5	55.8	57.1	53.2	47.0	44.3	37.0	21.3
49.7	31.0	67.6	71.2	72.2	73.2	71.7	71.9	63.6	56.8	52.0	47.3	23.4
56.5	36.2	88.1	91.0	93.3	93.5	92.9	92.9	85.1	65.1	57.8	50.9	31.3

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.7	19.9	19.5	19.4	19.3	19.2	19.1	18.8	18.5	18.2	18.0	17.8
1.8	19.8	20.1	19.7	19.7	19.7	19.7	19.8	19.6	19.4	19.2	18.5	18.0
8.6	19.9	20.2	19.9	19.9	19.9	19.9	19.8	19.7	19.6	19.3	18.7	18.0
15.5	19.8	20.2	19.9	20.0	20.0	20.0	20.0	19.8	19.6	19.4	19.1	18.2
22.3	20.7	25.4	27.3	26.3	27.0	27.1	27.2	23.9	22.4	20.5	19.9	18.7
29.1	22.0	29.4	33.2	32.1	33.2	33.8	34.5	31.8	27.4	24.1	22.8	19.3
36.1	22.8	33.3	37.2	37.5	38.0	38.7	39.3	35.5	34.8	32.5	31.4	23.5
42.8	23.7	39.1	43.1	44.9	42.2	43.2	43.5	39.1	38.2	36.3	36.5	23.6
49.7	24.6	45.7	50.8	51.7	49.7	50.3	50.2	45.2	43.8	41.8	41.5	24.6
56.5	26.3	53.2	58.6	58.7	57.0	58.1	58.4	52.1	49.9	46.9	47.5	26.9

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.8	19.8	19.6	19.6	19.4	19.3	19.2	18.9	18.6	18.3	18.0	17.8
1.8	19.8	20.0	20.0	19.9	19.7	19.6	19.6	19.2	18.8	18.5	18.2	17.8
8.6	20.0	20.1	20.2	20.4	20.3	20.5	20.4	19.5	18.9	18.6	18.4	18.0
15.5	23.9	35.3	33.0	32.3	29.4	29.5	28.6	22.9	22.3	20.2	19.0	18.3
22.3	27.0	42.3	41.9	41.7	38.9	38.9	37.1	26.1	26.3	25.3	23.1	18.7
29.1	28.1	44.4	43.1	42.3	39.3	39.0	38.3	31.9	32.2	26.4	20.6	19.1
36.1	28.2	49.6	48.6	48.2	44.5	45.1	43.8	35.5	34.6	24.6	19.9	19.3
42.8	29.4	58.9	58.1	56.9	53.6	53.5	52.8	44.1	42.9	38.3	37.2	20.0
49.7	33.3	64.7	65.5	64.7	61.9	63.2	62.1	51.9	49.5	45.5	42.1	21.8
56.5	37.1	75.6	74.5	74.1	71.1	72.5	70.9	55.7	55.0	49.7	42.4	21.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.8	0.5	0.6	0.6	0.3
8.6	1.3	1.0	0.7	-0.2
15.5	1.5	1.4	1.4	0.1
22.3	2.0	1.8	1.6	0.6
29.1	1.6	1.5	1.3	0.6
36.1	1.8	1.7	1.4	0.4
42.8	1.5	1.6	0.7	0.1
49.7	2.2	2.1	1.8	0.4
56.5	2.0	2.0	1.6	0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
1.8	-0.1	-0.1	-0.1	-0.1
8.6	-0.1	-0.1	-0.1	-0.1
15.5	0.7	0.8	0.8	0.6
22.3	0.9	0.9	0.8	0.6
29.1	0.8	0.8	0.8	0.5
36.1	0.7	0.7	0.7	0.4
42.8	0.6	0.6	0.6	0.4
49.7	1.0	1.0	0.9	0.5
56.5	1.0	1.1	1.0	0.5

Experiment Number 39

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.0	19.6	19.8	19.5	19.8	19.3	19.3	18.5	18.1	17.6	17.2	15.4
6.8	20.1	19.6	19.4	18.6	19.1	19.6	20.2	19.5	18.5	17.4	17.0	15.0
14.1	21.3	21.3	22.2	20.6	20.6	19.5	20.3	19.5	20.2	19.9	18.5	15.5
21.0	22.8	22.2	23.6	24.0	27.2	27.2	27.4	22.3	19.5	18.6	19.3	16.6
27.8	37.2	31.5	38.3	31.9	39.6	36.2	39.0	27.8	24.3	20.6	19.1	17.0
34.9	45.5	42.4	47.6	45.2	49.2	46.6	46.0	37.9	23.9	22.8	21.0	17.2
41.8	52.5	50.6	56.3	49.0	55.8	53.3	55.4	45.7	30.5	22.5	19.2	15.3
48.8	58.5	54.4	60.0	51.8	62.0	58.7	59.3	49.1	39.3	25.1	21.3	17.0
55.7	60.2	56.8	66.5	55.5	66.9	61.9	66.1	60.5	47.2	29.0	23.6	17.3
62.6	65.9	63.7	73.2	62.8	75.4	71.6	76.7	68.4	54.4	33.9	25.3	18.9
69.7	80.8	77.7	85.4	75.4	85.0	83.7	85.5	79.3	64.2	43.1	26.5	19.2
76.5	76.9	73.0	84.0	72.7	83.1	81.7	86.2	85.6	67.3	48.5	33.7	21.8
83.6	93.3	91.3	97.9	88.3	98.6	93.5	98.1	90.7	82.7	48.5	38.0	23.1
90.5	101.4	94.5	105.7	90.2	103.4	97.3	104.9	103.3	90.8	60.0	42.7	26.2
97.4	103.7	99.1	107.2	99.5	109.0	108.2	111.7	99.4	87.3	63.6	47.0	31.0
104.3	102.8	101.7	110.0	103.3	112.2	110.5	115.1	106.7	96.3	76.1	54.0	33.8
111.1	93.5	95.9	103.1	103.0	112.6	115.0	118.1	108.1	105.7	84.6	60.2	37.4
118.2	115.7	114.9	125.9	120.9	131.3	131.9	134.9	122.8	113.5	81.5	62.8	40.6
125.0	126.6	125.3	136.4	129.8	143.9	134.9	141.4	118.9	114.4	92.9	62.4	45.0
131.8	148.5	148.0	157.8	146.7	157.4	156.9	162.2	146.2	143.0	93.8	74.0	46.8

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.1	19.2	19.3	19.2	19.4	19.0	19.3	18.8	18.6	17.9	17.3	15.3
6.8	19.1	19.1	19.3	19.1	19.2	18.8	18.9	18.6	17.4	17.1	16.9	15.4
14.1	19.0	19.0	19.2	19.1	19.2	18.7	19.0	18.5	17.4	17.0	16.7	15.2
21.0	19.2	19.2	19.2	19.1	19.3	19.2	19.2	18.6	17.7	17.1	16.8	15.3
27.8	19.3	19.3	19.6	19.3	19.6	19.1	19.7	18.9	18.7	18.4	17.8	16.0
34.9	21.1	21.1	21.9	20.9	22.2	20.3	22.3	20.3	22.3	21.1	20.4	17.3
41.8	24.0	23.2	26.3	24.4	27.9	22.9	27.6	23.1	25.3	23.0	21.4	18.3
48.8	31.8	30.0	35.2	31.5	37.3	28.6	36.0	24.0	26.2	23.9	23.1	19.1
55.7	39.5	34.7	40.8	35.8	41.2	30.3	40.0	28.7	30.2	27.5	25.0	20.4
62.6	42.3	40.7	46.0	42.0	47.8	36.1	45.4	32.4	35.6	31.7	28.0	23.3
69.7	52.2	47.9	55.7	48.7	56.6	39.5	54.3	37.0	41.1	34.9	31.8	27.3
76.5	52.1	47.4	54.9	49.4	57.6	42.2	56.7	40.3	48.8	43.0	37.9	31.6
83.6	54.5	49.7	56.7	50.8	62.1	45.9	61.9	45.6	56.3	47.1	42.2	30.1
90.5	63.1	59.4	67.3	62.5	68.3	51.3	65.5	45.1	55.4	48.6	45.0	35.7
97.4	71.2	63.0	73.2	66.8	74.6	55.8	73.0	52.1	59.5	50.1	49.5	40.6
104.3	76.4	65.1	78.1	67.8	80.0	57.3	78.6	54.3	61.9	56.0	55.3	45.2
111.1	74.2	68.8	78.3	71.0	80.0	58.8	80.5	55.2	68.9	62.2	57.9	46.6
118.2	79.9	75.0	83.0	77.4	84.2	63.7	82.6	59.3	72.0	64.0	61.7	45.6
125.0	82.1	77.4	86.8	82.0	90.7	66.6	89.7	62.6	77.8	72.2	66.6	55.4
131.8	93.0	87.6	96.1	89.4	96.4	72.3	94.9	66.1	83.4	77.8	70.0	61.2

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.3	19.3	19.1	19.2	19.1	19.2	18.9	18.8	18.2	17.8	17.3	15.6
6.8	19.2	20.5	20.2	19.0	19.2	19.0	19.0	18.3	19.5	17.6	17.2	15.8
14.1	18.9	18.5	18.6	18.8	18.7	18.7	19.3	18.6	16.9	17.2	16.5	15.4
21.0	18.9	19.3	19.0	19.0	19.0	19.1	18.7	18.6	18.1	18.2	17.7	16.1
27.8	20.7	22.2	22.3	21.2	21.4	21.6	21.3	20.4	20.8	20.3	19.1	16.9
34.9	28.4	29.8	30.8	29.1	28.0	28.0	27.4	23.3	20.2	20.3	18.8	16.8
41.8	37.9	40.4	41.7	37.6	37.4	35.9	34.7	28.1	25.8	21.5	20.0	17.7
48.8	42.5	44.9	45.2	43.0	42.4	41.6	42.4	33.6	25.0	24.7	22.5	20.0
55.7	44.9	46.4	48.3	46.0	45.8	44.9	45.0	36.8	28.6	25.5	24.9	20.2
62.6	51.6	56.9	59.1	53.8	54.2	53.3	51.8	38.9	34.7	29.4	28.4	21.6
69.7	57.6	62.1	63.8	59.0	59.2	58.0	58.4	47.6	40.0	33.4	33.2	23.5
76.5	62.1	65.8	69.5	65.0	65.4	63.3	63.0	52.4	44.1	37.2	35.4	25.0
83.6	70.5	76.8	78.4	71.9	72.0	69.9	69.7	58.4	49.9	43.5	41.5	30.6
90.5	71.5	77.5	81.9	77.9	77.4	76.6	77.8	64.4	50.7	47.9	43.7	33.8
97.4	78.0	84.6	85.8	82.7	83.0	83.0	82.8	70.2	59.7	54.6	49.1	39.5
104.3	77.1	83.1	87.7	84.7	85.4	85.9	87.9	76.0	63.2	56.5	53.2	39.4
111.1	78.4	84.6	87.1	86.4	86.5	87.4	87.8	78.1	65.8	60.1	55.6	41.7

118.2	86.8	91.4	94.5	90.7	90.3	90.2	88.7	75.9	67.4	66.3	58.8	43.1
125.0	93.8	95.1	100.9	96.3	96.2	96.3	96.7	83.8	71.9	69.0	65.5	50.1
131.8	97.4	102.9	106.1	101.7	101.9	100.3	99.1	85.9	77.0	71.9	68.7	54.7

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.7	19.7	19.7	20.0	19.6	19.6	19.6	19.1	18.3	17.4	#########	15.2
6.8	19.7	19.9	19.9	20.1	19.6	19.6	19.4	19.0	18.6	17.7	-16.6	16.1
14.1	20.4	21.1	21.4	21.8	21.1	21.4	21.8	22.3	22.0	20.6	-232785.7	16.9
21.0	36.3	37.7	38.7	39.3	34.7	33.0	31.1	26.8	23.0	21.1	#########	16.4
27.8	44.1	44.2	46.1	47.6	45.5	45.3	45.3	39.1	30.7	19.6	227.4	15.8
34.9	52.9	53.3	55.0	56.0	53.8	53.5	53.4	45.1	28.9	20.4	-8309233.1	16.3
41.8	57.4	58.4	61.3	63.4	62.3	62.1	60.9	53.3	36.4	20.3	-2317474.4	16.8
48.8	66.8	67.8	70.3	71.7	70.3	69.4	68.8	58.7	43.1	22.3	#########	17.3
55.7	73.0	73.6	76.3	77.6	75.7	75.4	75.0	67.0	53.6	30.2	#########	18.7
62.6	78.7	79.3	81.3	83.9	83.4	82.1	82.2	73.9	54.9	34.6	#########	20.1
69.7	85.5	86.4	89.9	92.1	92.1	91.8	92.0	78.2	64.9	38.5	-16763.9	21.2
76.5	95.2	97.2	99.1	99.5	97.9	97.5	98.7	89.5	74.6	39.8	#########	23.5
83.6	104.4	103.6	104.0	104.6	104.5	103.3	103.3	97.1	81.3	52.7	#########	26.1
90.5	104.0	105.6	109.4	112.3	112.8	113.1	114.5	102.4	92.8	63.0	#########	29.2
97.4	111.1	112.9	116.1	119.1	117.2	116.8	116.8	108.1	89.6	67.3	47.4	32.1
104.3	114.7	115.8	118.9	119.8	118.5	117.4	119.6	110.7	98.4	73.1	#########	36.0
111.1	118.7	119.2	122.2	121.9	120.2	119.2	118.7	115.0	101.6	71.4	58.6	40.0
118.2	122.6	125.5	129.8	132.4	131.0	129.1	129.6	119.0	108.9	85.4	#########	42.1
125.0	132.8	136.4	139.1	138.7	137.6	135.8	134.8	124.7	123.0	104.9	-241170.2	43.8
131.8	141.4	143.8	147.5	148.0	147.7	147.6	148.8	139.2	135.3	111.3	-37228.1	48.7

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.8	0.2	0.1	0.1	0.0
14.1	0.3	0.3	0.3	-0.3
21.0	0.4	0.3	0.3	0.4
27.8	0.5	0.5	0.6	0.3
34.9	0.4	0.5	0.5	0.3
41.8	0.3	0.4	0.6	0.4
48.8	0.5	0.5	0.4	0.3
55.7	0.4	0.4	0.5	0.3
62.6	0.6	0.6	0.7	0.5
69.7	0.2	0.1	0.5	0.6
76.5	0.5	0.4	0.5	0.3
83.6	0.6	0.6	0.6	0.4
90.5	0.5	0.6	0.7	0.3
97.4	0.3	0.3	0.7	0.5
104.3	0.3	0.3	0.7	0.6
111.1	0.5	0.7	1.0	0.7
118.2	0.3	0.1	0.5	0.5
125.0	0.7	1.0	0.9	0.7
131.8	0.6	0.5	0.8	0.7

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.8	0.0	0.1	0.1	0.0
14.1	0.0	-0.1	0.1	0.0
21.0	0.1	0.1	0.1	0.1
27.8	0.4	0.4	0.4	0.3
34.9	0.3	0.4	0.4	0.3
41.8	0.5	0.5	0.5	0.2
48.8	0.4	0.3	0.3	0.2
55.7	0.6	0.5	0.5	0.4
62.6	0.5	0.5	0.5	0.3
69.7	0.4	0.4	0.5	0.4
76.5	0.5	0.6	0.6	0.5
83.6	0.5	0.5	0.5	0.4
90.5	0.5	0.6	0.7	0.4
97.4	0.6	0.6	0.6	0.4
104.3	0.6	0.6	0.6	0.6
111.1	0.6	0.5	0.6	0.4
118.2	0.6	0.4	0.6	0.5
125.0	0.7	0.6	0.7	0.5
131.8	0.7	0.7	0.8	0.7

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
6.8	1.9	1.0
14.1	2.7	1.2
21.0	3.0	1.2
27.8	2.8	1.8
34.9	3.2	2.2
41.8	3.1	2.2
48.8	3.3	1.8
55.7	3.2	1.9
62.6	3.6	2.2
69.7	3.7	2.3
76.5	4.4	2.9
83.6	4.1	3.0
90.5	3.5	2.8

97.4	4.4	2.8
104.3	3.9	2.5
111.1	4.5	2.7
118.2	4.0	3.3
125.0	4.9	3.0
131.8	5.5	3.3

Experiment Number 40

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.3	22.1	22.5	21.6	22.4	21.8	22.3	21.5	21.4	21.2	21.1	20.3
6.9	22.4	22.4	22.5	21.8	22.5	22.0	22.5	21.6	21.6	21.4	21.4	20.7
13.7	27.0	26.6	27.9	25.6	27.8	26.4	27.4	24.8	24.5	23.4	21.8	20.9
20.4	36.6	36.0	38.0	32.1	38.0	34.6	36.8	28.4	24.0	22.5	22.1	21.1
27.3	39.8	40.7	43.6	37.0	43.3	44.1	46.4	40.7	32.0	26.4	24.3	21.3
34.1	52.4	51.3	55.6	48.6	56.1	53.5	55.3	49.2	34.6	25.3	23.2	21.4
41.0	55.1	56.7	61.9	51.7	63.0	59.4	62.6	60.0	43.0	24.2	23.6	21.7
47.7	60.4	62.2	66.0	55.4	65.0	62.4	67.3	64.3	45.6	26.6	24.2	21.7
54.5	63.4	66.4	69.8	59.6	69.9	66.9	70.4	66.1	49.8	30.2	24.9	22.4
61.4	63.2	67.1	69.8	62.9	71.7	70.9	76.9	74.4	68.2	44.4	31.2	24.0
68.1	83.3	86.2	91.4	74.8	92.9	82.9	93.0	86.7	72.7	47.8	35.9	24.9
75.1	89.1	91.1	95.3	85.8	99.2	97.1	102.0	95.0	82.4	57.3	41.0	25.2
81.8	79.9	85.9	87.4	83.1	92.0	94.8	101.2	102.5	101.9	85.3	47.1	27.5
88.6	92.5	101.5	106.3	91.7	106.3	101.5	108.2	103.9	101.4	73.3	47.7	30.5
95.5	85.2	90.0	93.4	86.9	99.6	102.5	108.2	113.0	110.8	85.8	51.2	34.8
102.3	114.4	116.7	122.2	105.3	123.5	115.1	126.5	106.0	102.3	78.8	55.8	36.7
109.2	109.1	109.5	115.1	104.8	117.9	112.9	119.8	112.7	110.7	98.2	65.4	40.8
115.9	120.0	123.5	127.4	121.3	131.2	128.4	134.3	124.2	122.7	95.0	65.3	44.7

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.1	21.0	21.1	20.9	21.1	20.5	21.0	20.3	21.2	21.1	21.1	20.1
6.9	21.2	21.2	21.3	21.1	21.3	20.7	21.3	20.4	21.3	21.2	20.9	20.2
13.7	21.3	21.2	21.4	21.1	21.4	20.7	21.3	20.4	21.3	21.3	21.1	20.3
20.4	21.3	21.2	21.3	21.0	21.2	20.7	21.2	20.4	21.3	21.3	21.2	20.5
27.3	24.7	25.2	25.8	25.1	25.8	23.0	25.0	22.2	23.5	23.4	22.7	21.0
34.1	29.1	28.3	29.5	28.4	30.5	26.1	29.9	25.0	26.8	25.6	24.5	21.4
41.0	31.3	30.5	33.4	32.5	36.2	30.2	34.9	27.2	29.1	25.5	24.4	21.4
47.7	40.0	37.9	42.8	39.1	43.7	33.1	42.6	31.6	32.8	27.9	27.2	23.1
54.5	42.1	39.8	45.6	41.9	47.9	37.0	47.5	34.8	37.7	30.7	28.5	24.4
61.4	46.9	43.3	49.7	45.2	50.5	38.8	49.9	36.5	39.5	35.6	32.4	26.1
68.1	56.8	48.9	58.9	52.5	59.5	45.4	57.9	41.8	45.6	39.3	36.5	29.7
75.1	59.7	56.1	62.4	59.1	62.8	48.2	59.9	42.8	49.7	43.9	41.1	31.9
81.8	66.3	58.2	69.4	62.5	71.5	53.5	68.5	48.7	58.1	48.8	44.4	33.1
88.6	69.5	63.3	71.6	66.6	72.5	57.2	72.5	53.5	60.6	52.9	48.9	36.3
95.5	75.0	70.5	78.0	71.7	78.9	58.7	77.7	55.6	68.6	59.0	56.4	42.3
102.3	73.1	69.7	77.0	68.8	79.5	58.4	80.0	58.2	73.6	64.3	60.0	43.6
109.2	77.6	74.2	81.7	75.6	83.1	62.3	82.3	57.0	71.9	65.9	60.8	45.3
115.9	76.7	78.0	82.3	75.0	85.2	63.2	85.5	62.4	76.0	70.0	62.8	53.7

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	21.7	21.6	21.4	21.4	21.4	21.3	21.2	21.1	21.0	20.9	20.2
6.9	21.6	21.6	21.6	21.5	21.5	21.5	21.4	21.1	21.1	21.1	21.0	20.3
13.7	21.7	21.6	21.5	21.4	21.4	21.4	21.4	21.2	21.1	21.0	21.0	20.3
20.4	21.6	22.0	22.1	21.9	22.4	22.6	23.2	22.3	21.5	21.3	21.2	20.7
27.3	25.5	26.6	26.4	26.3	26.6	27.2	27.9	25.5	23.9	22.4	22.1	21.0
34.1	36.2	38.1	39.7	37.1	37.2	36.7	37.4	29.5	24.8	23.1	21.7	21.0
41.0	44.8	47.2	47.2	44.8	44.9	44.5	43.7	35.1	28.1	24.9	23.2	21.8
47.7	50.8	53.6	53.9	49.9	49.7	48.7	47.9	39.0	33.6	30.0	28.3	24.8
54.5	57.1	60.3	60.5	55.9	55.1	53.4	52.2	41.7	35.5	31.3	29.2	24.9
61.4	59.7	63.3	65.8	61.8	60.9	59.6	58.7	44.6	39.0	35.6	33.9	26.2
68.1	64.2	68.5	70.5	67.0	66.8	65.7	65.9	52.9	44.2	39.8	36.9	27.2
75.1	66.0	70.2	73.4	71.0	71.1	71.0	71.3	57.0	49.4	43.9	41.2	32.0
81.8	78.0	82.7	83.2	78.0	77.5	76.7	75.6	65.1	54.5	50.1	46.9	34.7
88.6	80.8	85.7	88.4	84.7	84.3	83.4	82.7	69.3	58.7	54.5	50.8	39.4
95.5	82.9	88.0	91.4	89.0	88.3	87.9	86.1	72.8	64.4	59.1	55.1	42.4
102.3	90.4	94.7	97.3	93.4	92.2	91.3	89.6	75.0	68.6	63.5	59.0	43.9
109.2	95.7	100.5	100.5	95.7	94.9	93.5	91.8	77.6	71.2	66.3	61.3	44.1
115.9	92.5	98.9	103.0	98.9	98.9	98.8	99.9	85.4	72.2	68.8	64.5	48.7

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.7	22.8	22.3	22.5	22.2	22.1	22.1	21.5	21.3	21.0	20.9	20.1

Experiment Number 40

6.9	22.8	22.9	22.5	22.7	22.2	22.3	22.3	21.9	21.5	21.1	21.0	20.6
13.7	30.9	32.6	34.0	35.5	33.4	31.9	33.4	27.5	29.8	29.3	28.1	22.8
20.4	47.9	48.0	49.7	48.1	46.4	42.6	46.1	34.4	26.0	22.9	22.1	21.4
27.3	54.8	56.0	57.7	56.6	55.4	54.0	56.7	44.2	31.9	22.4	21.4	21.1
34.1	60.8	61.5	64.4	64.3	65.3	62.7	65.6	53.1	40.2	23.4	21.5	21.1
41.0	71.5	72.2	74.9	73.2	71.9	69.4	72.8	61.3	39.3	22.7	21.7	21.3
47.7	79.6	81.6	82.4	81.5	81.5	78.3	82.0	67.8	48.3	24.0	21.9	21.9
54.5	85.7	86.7	90.6	88.7	88.4	87.0	91.9	77.1	56.9	30.8	28.4	22.8
61.4	88.9	89.1	91.7	91.9	93.8	91.3	95.6	84.4	73.1	37.1	32.7	24.9
68.1	100.0	99.0	100.3	98.8	100.3	99.1	100.9	90.6	75.3	45.0	33.3	26.0
75.1	108.4	109.8	113.0	113.7	113.0	110.0	113.3	98.3	76.0	45.1	38.0	27.4
81.8	111.2	113.6	117.6	116.2	117.6	114.7	119.4	105.4	86.3	51.6	44.7	31.3
88.6	124.0	124.2	127.2	124.1	124.5	120.5	124.2	109.9	89.6	57.0	47.3	33.7
95.5	125.0	126.7	130.7	130.1	131.2	128.4	134.0	115.2	98.0	64.2	53.4	37.9
102.3	130.9	131.1	133.1	132.2	132.3	130.3	133.9	118.5	104.5	67.0	56.2	40.5
109.2	132.6	130.9	134.0	133.9	134.5	131.7	134.4	122.4	107.5	75.4	60.0	40.9
115.9	125.6	128.0	44.9	116.9	125.9	129.9	136.9	125.0	119.0	81.0	63.9	44.8

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.9	0.2	0.3	0.3	0.3
13.7	0.4	0.4	0.4	0.1
20.4	0.4	0.3	0.4	0.3
27.3	0.4	0.4	0.4	0.2
34.1	0.4	0.5	0.6	0.6
41.0	0.4	0.4	0.4	-0.2
47.7	0.3	0.4	0.5	0.1
54.5	-0.2	0.2	0.5	0.4
61.4	0.5	0.4	0.5	0.5
68.1	0.1	0.3	0.6	0.3
75.1	0.1	0.0	0.4	0.4
81.8	0.3	0.3	0.5	0.6
88.6	-0.3	-0.2	0.4	0.6
95.5	0.4	0.4	0.6	0.5
102.3	0.5	0.5	0.7	0.7
109.2	0.4	0.5	0.7	0.6
115.9	-0.4	-0.1	0.4	0.6

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
6.9	0.1	0.1	-0.1	0.0
13.7	0.1	0.1	0.1	0.0
20.4	0.1	0.2	0.2	0.1
27.3	0.4	0.5	0.5	0.5
34.1	0.4	0.5	0.5	0.5
41.0	0.5	0.4	0.5	0.4
47.7	0.4	0.4	0.5	0.4
54.5	0.5	0.4	0.5	0.5
61.4	0.5	0.5	0.5	0.4
68.1	0.7	0.7	0.6	0.5
75.1	0.6	0.6	0.7	0.6
81.8	0.6	0.6	0.6	0.5
88.6	0.4	0.3	0.4	0.5
95.5	0.5	0.5	0.6	0.5
102.3	0.5	0.4	0.5	0.3
109.2	0.5	0.5	0.6	0.2
115.9	0.5	0.5	0.6	0.4

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
6.9	2.2	1.2
13.7	2.8	1.7
20.4	2.9	1.3
27.3	3.7	1.7
34.1	3.1	1.7
41.0	3.9	2.0
47.7	3.9	1.8
54.5	3.9	2.1
61.4	4.1	2.4
68.1	4.4	2.3
75.1	3.6	2.9
81.8	4.6	1.9
88.6	3.6	2.9
95.5	4.4	2.6
102.3	3.8	2.7
109.2	5.2	3.1
115.9	5.1	3.2

Experiment Number 41

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.6	21.3	20.9	20.6	20.5	20.3	20.2	19.6	19.0	18.6	18.3	17.9
4.2	21.5	21.4	21.0	20.7	20.5	20.5	20.4	19.9	19.5	19.1	18.7	18.2
11.2	24.4	33.3	30.4	33.5	33.3	32.2	31.5	26.3	21.1	19.6	19.0	18.3
17.9	31.3	51.4	48.8	50.4	50.7	48.1	45.7	30.2	22.4	19.6	19.0	18.5
24.9	36.1	56.3	55.4	56.0	53.5	53.1	51.3	35.4	23.8	19.7	19.1	18.7
31.7	40.0	64.8	62.3	62.6	60.1	58.2	54.8	40.4	22.3	19.7	19.2	18.6
38.5	43.3	72.1	71.4	72.3	68.3	65.8	62.9	44.6	26.1	20.3	19.5	19.0
45.4	44.0	69.5	68.6	67.1	66.1	65.1	61.8	47.5	29.9	20.7	20.0	19.4
52.2	50.6	79.5	79.2	77.6	74.6	72.8	70.0	57.8	36.6	23.6	22.2	20.0
59.1	55.2	90.1	89.4	92.8	90.6	89.9	88.5	75.1	50.8	33.7	27.1	20.6
65.9	60.4	101.9	100.0	103.5	100.9	97.5	93.4	74.0	51.2	33.5	31.4	21.2
72.7	61.5	101.0	98.6	97.5	93.4	89.7	85.9	75.9	60.2	37.2	29.2	22.6
79.6	64.4	108.7	107.7	109.7	106.5	103.4	99.3	82.4	60.1	49.0	41.4	23.4
86.4	66.6	108.2	107.8	108.1	105.1	105.1	101.1	84.1	70.0	48.8	40.1	25.0
93.2	69.8	110.6	111.6	111.5	111.3	111.4	109.0	98.6	69.7	51.2	41.6	27.5
100.1	72.7	119.3	117.4	117.8	116.2	114.3	115.2	99.2	89.1	74.7	46.9	29.3

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.0	20.2	19.7	19.9	19.4	19.7	19.1	18.8	18.6	18.5	17.8
4.2	20.1	20.1	20.5	20.0	20.5	19.9	20.0	20.0	19.6	19.4	19.2	18.1
11.2	20.3	20.2	20.5	19.9	20.5	19.9	20.1	20.1	19.5	19.3	19.2	18.2
17.9	20.3	20.2	20.5	19.9	20.5	19.7	20.2	19.9	19.6	19.4	19.3	18.4
24.9	22.6	35.8	37.3	36.5	36.0	32.9	32.2	24.6	23.3	22.6	21.5	18.8
31.7	23.1	37.8	39.9	40.3	41.2	39.7	39.8	32.1	23.3	22.5	21.9	19.2
38.5	24.6	43.5	45.6	45.9	46.9	45.6	46.7	43.6	34.1	28.5	27.7	22.5
45.4	25.7	48.7	50.3	50.2	50.4	49.5	49.5	46.9	36.8	34.6	33.7	21.2
52.2	26.8	48.1	50.8	50.2	52.5	49.8	52.7	51.3	41.8	38.5	34.8	22.1
59.1	27.7	54.1	56.4	57.5	57.4	55.9	57.0	56.2	48.4	43.9	39.6	22.2
65.9	30.7	65.1	66.7	67.6	68.9	68.8	69.8	66.1	50.0	46.5	39.6	23.3
72.7	32.6	68.3	71.4	73.4	74.8	73.2	73.8	69.8	56.4	54.1	44.7	23.2
79.6	32.4	66.9	69.3	70.0	71.4	70.1	71.7	68.1	62.2	59.3	49.9	27.1
86.4	35.1	76.0	80.6	82.1	83.1	81.1	82.7	74.8	66.3	60.7	49.7	29.9
93.2	35.0	77.2	78.3	79.4	80.3	78.4	80.5	77.1	68.2	65.0	59.9	37.1
100.1	36.6	79.5	83.9	85.4	86.6	84.5	86.1	83.4	77.1	70.5	65.7	37.0

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.7	20.0	19.6	19.6	19.5	19.5	19.4	19.2	18.9	18.7	18.5	17.9
4.2	19.6	20.1	19.9	19.9	19.9	20.0	20.0	20.0	19.7	19.4	19.2	18.0
11.2	20.0	20.3	19.9	19.9	19.9	20.0	20.0	20.0	19.8	19.4	19.2	18.0
17.9	19.9	20.3	19.9	20.0	20.0	20.1	20.0	20.0	19.9	19.5	19.2	18.3
24.9	20.6	24.3	25.1	24.8	24.7	24.7	24.8	22.9	22.0	20.7	20.0	19.1
31.7	21.2	25.9	29.5	28.5	29.4	29.4	29.1	26.2	25.1	22.8	22.5	19.4
38.5	22.0	29.7	32.2	32.3	31.7	31.6	31.3	28.6	28.2	26.8	25.9	20.3
45.4	22.3	30.6	33.8	34.0	33.5	33.7	34.2	32.1	31.9	30.6	30.1	21.9
52.2	22.9	35.4	38.8	40.0	38.1	38.9	38.8	34.9	33.8	33.1	32.7	21.8
59.1	23.1	35.4	39.9	40.8	39.7	40.5	40.4	38.1	38.2	35.9	36.2	22.2
65.9	23.7	37.6	42.6	44.2	42.8	44.1	44.3	42.0	41.4	39.7	39.7	23.4
72.7	24.0	39.4	45.7	48.1	46.7	48.1	47.9	47.0	46.0	44.0	44.6	27.7
79.6	25.9	44.3	51.4	52.3	51.9	53.5	54.5	51.4	50.6	48.1	47.8	26.6
86.4	26.4	49.7	57.9	59.5	57.1	58.0	58.2	55.5	55.3	52.6	52.3	31.6
93.2	28.1	50.8	61.4	62.3	61.2	62.3	62.3	58.3	56.5	55.6	55.9	37.0
100.1	29.3	53.0	63.4	63.8	64.1	65.3	66.3	62.9	60.9	59.3	59.1	39.2

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	20.0	19.9	19.9	19.6	19.6	19.5	19.1	18.9	18.5	18.2	17.9
4.2	19.7	20.1	20.1	20.1	20.0	20.0	20.0	19.5	19.1	18.8	18.5	18.2
11.2	20.1	20.5	20.5	20.5	20.3	20.2	20.1	19.7	19.4	19.1	18.9	18.5
17.9	22.0	31.3	30.1	29.8	27.8	26.9	24.8	22.0	21.8	20.5	19.5	18.6
24.9	23.5	34.9	34.8	34.7	32.6	32.6	31.9	23.5	23.8	21.2	20.1	18.7
31.7	24.4	36.0	36.5	36.3	34.9	35.1	34.6	28.6	25.2	22.1	20.3	18.9
38.5	26.8	41.8	40.4	39.5	37.0	36.5	35.1	31.1	30.6	25.2	19.8	18.8

Experiment Number 41

45.4	27.8	45.0	45.1	44.5	42.1	42.3	41.7	34.6	32.8	25.5	19.7	18.9
52.2	27.2	47.9	47.4	46.8	45.3	45.2	44.0	38.4	37.1	34.2	32.5	20.0
59.1	29.1	53.5	54.2	54.4	51.9	52.6	52.3	44.0	41.8	37.9	35.4	21.0
65.9	29.5	56.5	58.7	58.6	56.1	56.3	55.8	48.0	43.4	39.9	34.6	20.8
72.7	31.4	64.4	64.4	63.6	61.1	62.1	60.5	50.1	48.6	45.8	39.5	23.1
79.6	32.7	66.5	67.9	67.6	65.0	66.0	65.2	53.8	52.9	49.5	43.6	27.5
86.4	37.5	75.4	72.9	71.2	68.0	67.7	67.7	59.0	58.3	54.5	45.9	27.1
93.2	38.4	80.4	80.3	79.0	75.2	75.4	73.5	62.5	62.8	60.5	54.2	27.5
100.1	38.9	82.5	85.4	84.4	80.8	82.4	80.4	67.6	66.2	64.9	56.5	30.4

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.2	0.4	0.8	0.9	0.3
11.2	1.3	1.2	0.7	0.0
17.9	1.3	1.1	0.9	-0.1
24.9	1.2	1.3	0.7	0.3
31.7	1.6	1.7	1.3	0.3
38.5	1.8	1.6	1.3	0.6
45.4	1.9	1.6	1.1	0.4
52.2	1.5	1.2	0.7	0.5
59.1	1.5	1.2	1.3	0.4
65.9	1.8	2.0	1.6	0.9
72.7	1.6	1.6	1.2	0.7
79.6	1.8	1.7	1.3	0.4
86.4	1.7	1.7	0.7	-0.2
93.2	1.5	1.6	1.2	0.7
100.1	1.7	1.8	1.5	1.2

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
4.2	0.0	0.0	0.1	0.1
11.2	0.0	0.0	0.1	0.1
17.9	0.8	0.8	0.7	0.5
24.9	0.7	0.7	0.7	0.5
31.7	0.6	0.7	0.7	0.5
38.5	0.5	0.5	0.4	0.3
45.4	0.6	0.6	0.5	0.4
52.2	0.6	0.7	0.7	0.5
59.1	0.8	0.8	0.8	0.5
65.9	0.8	0.8	0.7	0.5
72.7	0.5	0.5	0.5	0.2
79.6	0.8	0.8	0.8	0.6
86.4	0.6	0.6	0.6	0.5
93.2	0.7	0.7	0.7	0.4
100.1	0.9	0.9	0.9	0.5

Experiment Number 42

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	22.4	21.9	21.5	21.2	21.1	20.9	20.8	20.3	19.9	19.4	18.9	18.3
2.4	22.3	21.9	21.8	21.6	21.5	21.3	21.3	20.8	20.4	20.0	19.6	18.7
9.2	24.0	31.5	28.7	30.0	29.0	28.3	27.5	23.8	21.8	20.5	20.0	18.9
16.2	29.6	43.2	40.9	41.6	38.4	37.1	35.5	28.7	21.0	20.4	19.9	18.9
23.0	35.6	54.0	52.6	52.7	50.4	49.7	46.4	37.4	23.0	20.5	19.9	19.0
29.9	38.8	58.2	57.9	57.4	56.0	53.6	51.3	34.1	23.7	20.2	19.7	19.2
36.7	43.2	70.4	68.1	69.3	66.0	63.0	58.2	46.3	25.9	20.6	20.0	19.4
43.5	45.3	71.2	70.1	68.7	66.5	65.0	61.4	44.7	23.5	21.4	20.9	19.6
50.4	47.9	75.5	76.7	78.0	79.5	76.8	71.0	55.4	35.3	23.9	22.9	20.2
57.2	54.5	91.0	88.8	89.9	88.7	88.0	83.0	60.8	42.7	34.8	26.3	20.8
64.2	61.2	106.3	103.1	104.6	103.0	98.2	92.6	75.2	50.0	33.7	29.3	21.1
70.9	59.8	97.8	95.2	96.4	95.4	95.5	94.8	85.4	65.3	39.0	31.5	22.5
77.7	62.1	99.5	100.2	102.9	102.0	100.5	97.5	75.4	62.5	45.7	37.7	23.9
84.6	70.3	113.9	112.4	113.6	108.8	107.6	103.3	90.2	60.1	49.9	39.9	24.1

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.7	20.5	20.9	20.4	20.8	20.2	20.5	19.8	19.6	19.3	19.1	18.1
2.4	20.7	21.1	21.3	20.9	21.3	20.5	21.1	20.5	20.4	20.1	19.7	18.3
9.2	20.8	21.1	21.3	20.9	21.2	20.3	21.0	20.6	20.5	20.2	19.8	18.3
16.2	20.7	21.2	21.4	21.1	21.3	20.7	21.2	20.6	20.5	20.3	20.1	18.5
23.0	22.1	30.8	31.9	32.0	32.5	31.5	30.8	26.7	24.9	22.7	22.3	19.7
29.9	23.6	38.7	41.0	40.8	41.1	40.4	40.4	36.6	24.5	21.0	20.8	19.0
36.7	25.0	45.0	46.4	45.7	46.9	43.8	45.3	40.7	31.1	27.5	27.9	22.2
43.5	26.0	47.0	48.0	48.2	48.8	46.8	47.8	40.3	35.4	34.4	32.5	20.8
50.4	26.3	46.9	49.0	47.7	49.8	47.4	49.5	45.4	40.3	39.2	35.5	21.6
57.2	27.3	55.1	56.9	54.3	56.3	51.7	52.4	49.2	44.0	39.9	34.9	22.7
64.2	30.7	63.0	66.5	68.0	67.9	65.8	65.5	57.5	48.0	43.9	37.9	23.8
70.9	32.3	68.1	70.8	72.5	73.8	72.2	72.9	70.1	54.8	51.9	48.1	25.2
77.7	32.3	65.1	69.5	69.4	72.0	69.5	71.1	68.5	61.1	58.3	47.3	24.1
84.6	32.8	72.6	75.1	75.9	77.5	74.7	76.9	75.3	68.7	64.0	51.1	31.5

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.5	20.4	20.4	20.3	20.4	20.3	20.1	19.8	19.5	19.2	18.2
2.4	20.2	20.6	20.4	20.4	20.5	20.6	20.6	20.6	20.3	19.8	19.7	18.4
9.2	20.3	20.7	20.6	20.6	20.5	20.6	20.6	20.6	20.5	20.0	19.9	18.5
16.2	20.2	20.7	20.5	20.5	20.5	20.7	20.7	20.6	20.6	20.0	19.8	18.7
23.0	20.8	24.3	24.7	24.6	24.6	24.5	24.8	22.6	21.8	20.5	20.4	19.0
29.9	21.3	25.1	28.3	27.7	28.4	28.1	27.8	25.7	25.1	24.1	23.3	19.9
36.7	22.0	28.3	31.5	31.6	31.8	32.0	32.2	29.0	27.7	25.3	23.9	20.6
43.5	22.3	29.3	32.9	33.4	33.1	33.3	33.1	30.4	30.7	29.3	28.9	22.6
50.4	22.6	34.0	37.5	38.2	36.3	36.8	36.7	34.9	34.5	32.1	32.0	22.1
57.2	23.2	35.3	39.5	40.3	39.7	40.4	40.4	37.9	36.6	35.1	34.7	22.4
64.2	24.1	38.1	42.1	43.2	42.7	43.9	44.4	42.6	39.4	38.7	38.3	23.7
70.9	25.4	40.2	46.5	47.5	46.6	47.9	47.7	45.2	43.7	41.3	42.3	25.0
77.7	25.5	42.7	49.6	50.2	50.0	51.3	52.6	50.3	47.6	45.1	46.3	25.2
84.6	26.3	48.2	55.1	57.0	55.3	56.6	57.9	54.8	52.2	50.1	49.8	30.7

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.6	20.6	20.5	20.3	20.2	20.1	19.8	19.4	19.1	18.7	18.3
2.4	20.2	20.9	20.9	20.9	20.7	20.7	20.6	20.3	20.2	19.9	19.5	18.5
9.2	20.4	21.1	21.1	21.2	21.1	21.2	21.2	20.5	20.1	19.9	19.5	18.6
16.2	22.6	31.0	30.0	29.6	26.5	25.2	23.6	22.7	22.4	20.8	20.1	18.9
23.0	24.9	36.1	35.4	34.7	32.3	31.6	29.8	24.1	21.5	20.9	20.4	19.1
29.9	24.8	36.2	36.2	36.0	34.3	34.0	33.1	28.6	26.6	22.7	20.9	19.2
36.7	24.4	38.7	39.0	38.8	36.9	37.4	36.7	32.2	29.6	25.5	20.4	19.0
43.5	27.0	44.2	44.4	43.6	40.5	39.6	38.6	34.0	31.6	26.8	20.3	19.1
50.4	26.5	48.8	48.8	47.7	45.5	45.7	44.7	37.4	35.9	34.2	33.0	20.3
57.2	28.3	53.4	52.9	52.7	50.4	51.5	51.0	43.2	40.6	37.0	34.5	21.3
64.2	30.5	55.6	56.9	56.6	54.8	54.9	53.7	43.1	43.1	38.9	34.2	21.1
70.9	29.9	56.9	57.8	57.5	55.7	56.1	55.5	48.7	48.3	44.5	40.5	24.4
77.7	33.4	67.1	67.0	66.6	64.2	65.2	64.4	50.1	51.2	48.0	42.0	27.2

Experiment Number 42

84.6	35.0	70.4	71.8	71.1	68.9	70.2	68.8	56.9	55.9	52.3	42.8	25.6

Velocity probes at sprinkler number 1					Velocity probes at sprinkler number 2				
Time	25 mm	75 mm	125 mm	250 mm	Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.4	0.3	0.5	0.6	0.1	2.4	-0.1	0.0	0.0	0.1
9.2	0.9	0.7	0.8	-0.1	9.2	-0.1	0.0	0.0	0.1
16.2	1.1	1.1	0.8	0.1	16.2	0.5	0.6	0.6	0.6
23.0	1.8	1.5	1.3	0.7	23.0	0.7	0.8	0.7	0.5
29.9	2.0	1.8	1.3	0.3	29.9	0.6	0.6	0.6	0.4
36.7	1.3	1.5	1.1	0.3	36.7	0.6	0.7	0.6	0.4
43.5	1.4	1.1	0.6	-0.2	43.5	0.5	0.6	0.6	0.4
50.4	1.7	1.3	0.9	0.2	50.4	0.8	0.7	0.6	0.4
57.2	1.2	1.5	1.5	0.4	57.2	0.8	0.8	0.8	0.4
64.2	2.0	2.1	1.8	0.4	64.2	0.8	0.8	0.7	0.5
70.9	1.7	1.6	1.1	0.2	70.9	0.6	0.7	0.6	0.4
77.7	1.9	1.6	1.4	0.8	77.7	0.5	0.6	0.6	0.5
84.6	1.5	1.5	1.1	-0.3	84.6	0.7	0.7	0.7	0.5

Experiment Number 43

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.6	21.1	20.8	20.7	20.6	20.4	20.3	20.0	19.6	19.2	18.9	18.2
3.4	21.6	21.4	21.2	21.0	20.5	20.8	20.8	20.5	20.2	19.9	19.4	18.6
10.2	22.9	27.4	26.1	27.6	27.9	25.5	24.9	25.3	23.6	21.3	19.7	18.5
17.2	28.8	44.2	42.4	43.4	43.0	40.8	39.0	27.0	21.1	20.2	19.5	18.4
23.9	34.3	53.5	52.1	53.1	53.5	51.4	48.4	39.7	27.4	20.3	19.6	18.7
30.9	39.4	61.8	60.0	58.5	55.6	52.7	48.3	35.2	23.9	20.2	19.6	18.5
37.6	42.4	69.9	67.4	68.7	66.6	63.5	58.5	43.8	25.6	20.4	19.9	19.0
44.4	45.4	72.7	71.3	71.6	66.3	62.5	60.7	47.1	22.1	21.1	20.5	19.7
51.3	47.2	74.4	73.6	74.7	74.4	71.7	70.0	55.8	33.5	24.3	23.0	20.2
58.1	53.8	87.8	87.0	88.4	86.0	83.4	79.9	65.8	41.8	32.0	26.9	20.8
65.1	57.4	96.7	96.1	98.3	95.0	94.6	94.3	75.5	52.6	33.8	29.8	21.4
71.9	61.4	101.2	98.9	102.4	100.6	100.7	98.5	78.8	53.5	38.3	34.6	22.1
78.7	60.5	102.1	100.7	102.9	100.4	98.9	97.4	88.4	65.1	47.7	38.4	23.0
85.6	67.7	111.3	110.4	112.3	112.4	110.5	107.6	89.7	71.1	51.4	42.2	23.8

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.2	20.1	20.3	20.0	20.2	19.8	20.1	19.7	19.4	19.1	19.0	18.0
3.4	20.2	20.3	20.6	20.3	20.6	20.1	20.4	20.0	19.8	19.6	19.4	18.4
10.2	20.2	20.4	20.6	20.4	20.6	20.2	20.4	20.1	19.8	19.6	19.4	18.4
17.2	20.2	20.4	20.7	20.5	20.7	20.2	20.5	20.1	20.0	19.8	19.6	18.4
23.9	21.3	31.1	32.6	32.2	33.4	31.4	30.9	25.4	22.6	23.0	21.8	19.4
30.9	23.1	36.9	39.6	39.4	40.6	39.2	39.5	33.0	21.7	21.0	20.4	19.1
37.6	23.7	40.1	43.3	43.5	44.7	42.9	43.7	40.7	30.5	26.7	27.2	22.8
44.4	25.2	45.7	47.3	47.6	48.4	47.2	48.1	43.4	37.1	33.8	31.2	20.5
51.3	26.1	48.0	51.2	50.6	52.0	50.9	51.3	48.2	41.5	38.0	32.9	21.6
58.1	26.8	50.3	52.1	51.9	52.9	51.2	52.6	49.5	44.6	41.9	36.8	22.4
65.1	29.0	61.5	64.7	64.3	65.4	62.3	64.0	59.2	49.4	45.1	40.1	24.8
71.9	31.5	66.3	68.9	70.3	71.2	68.8	69.7	64.6	55.6	50.8	46.4	24.1
78.7	31.8	68.6	72.1	71.5	73.8	69.9	72.3	65.4	58.4	57.7	47.7	24.9
85.6	31.9	65.6	68.5	68.6	70.8	69.9	70.6	68.5	63.6	58.2	46.3	26.9

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	20.2	19.9	19.9	19.9	19.9	19.8	19.7	19.6	19.4	19.1	18.1
3.4	20.0	20.3	20.0	20.1	20.1	20.2	20.2	20.1	20.0	19.8	19.6	18.3
10.2	20.0	20.5	20.2	20.1	20.1	20.2	20.2	20.2	20.2	20.0	19.8	18.3
17.2	19.9	20.4	20.1	20.2	20.2	20.2	20.2	20.1	20.1	20.0	19.8	18.4
23.9	20.3	23.7	24.0	23.8	23.2	23.2	23.6	23.0	22.3	20.3	20.1	19.0
30.9	21.0	25.5	27.7	26.9	27.8	28.1	28.7	25.4	24.8	23.0	22.6	19.6
37.6	21.4	27.5	29.7	29.6	29.7	30.1	30.4	28.8	27.2	25.3	24.2	20.1
44.4	22.0	30.0	32.6	32.8	32.1	32.9	32.5	30.6	30.0	28.7	28.8	22.0
51.3	22.6	33.8	37.0	37.1	35.7	36.3	36.4	34.2	32.4	31.3	31.2	21.9
58.1	22.6	35.0	39.3	40.2	38.7	39.1	38.8	36.5	35.2	34.0	32.7	22.3
65.1	22.9	33.8	40.9	42.1	41.1	42.5	41.8	40.8	39.3	38.2	38.1	22.0
71.9	24.0	38.3	44.8	45.9	44.7	45.6	45.0	43.9	42.9	41.5	42.4	27.7
78.7	25.0	43.7	50.6	52.0	51.1	52.4	52.6	49.5	47.0	44.6	44.7	26.4
85.6	25.6	47.3	55.1	57.5	54.5	56.1	56.4	54.5	50.6	48.7	48.4	29.6

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.0	20.3	20.2	20.2	20.0	20.0	20.0	19.7	19.4	19.1	18.9	18.1
3.4	20.1	20.4	20.4	20.3	20.1	20.1	20.2	20.0	19.9	19.6	19.4	18.4
10.2	20.1	20.6	20.6	20.5	20.3	20.2	20.1	20.0	20.0	19.8	19.6	18.6
17.2	21.1	28.7	27.7	27.1	26.0	26.1	25.7	23.2	22.3	20.2	20.0	18.8
23.9	23.9	34.3	33.8	33.7	31.5	31.0	29.8	21.4	20.6	20.2	20.0	19.0
30.9	24.3	37.4	37.4	36.5	34.5	34.8	34.6	27.1	25.0	22.1	21.0	19.1
37.6	25.6	40.8	40.7	40.5	37.8	37.4	35.9	29.2	28.2	24.8	20.2	18.8
44.4	25.7	42.5	42.3	41.9	39.8	39.7	38.2	31.6	31.1	23.5	19.9	18.7
51.3	25.2	42.1	45.6	44.9	43.6	43.7	43.4	38.4	38.0	34.0	32.8	19.7
58.1	27.6	54.1	54.1	53.4	50.8	52.1	51.4	43.9	39.1	36.3	34.0	20.8
65.1	31.6	55.8	56.8	56.5	54.8	55.0	53.7	42.6	42.5	40.0	34.8	20.9
71.9	29.9	61.1	62.2	62.1	60.5	61.2	60.3	49.7	47.8	46.1	36.1	21.7
78.7	32.5	66.3	66.8	66.6	65.2	66.2	65.3	55.6	52.5	48.3	41.0	26.0

Experiment Number 43

85.6	34.6	68.8	70.6	70.1	68.3	69.6	69.2	58.3	56.0	53.6	46.1	26.1

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
3.4	0.1	0.1	0.2	0.1
10.2	0.9	0.9	0.3	-0.2
17.2	1.1	1.2	1.0	0.2
23.9	1.3	1.0	0.9	0.1
30.9	1.4	1.4	1.0	0.4
37.6	1.4	1.3	0.7	0.1
44.4	1.7	1.8	1.4	0.2
51.3	1.5	1.6	1.1	0.3
58.1	1.1	1.1	0.9	0.6
65.1	1.5	1.5	1.7	0.6
71.9	1.9	1.8	1.1	0.5
78.7	1.7	1.7	1.2	-0.3
85.6	1.5	1.5	1.5	1.0

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
3.4	-0.1	0.0	0.1	0.0
10.2	-0.1	0.0	0.1	0.0
17.2	0.5	0.5	0.5	0.5
23.9	0.7	0.7	0.7	0.4
30.9	0.6	0.6	0.6	0.4
37.6	0.7	0.7	0.7	0.5
44.4	0.5	0.5	0.5	0.4
51.3	0.5	0.6	0.7	0.4
58.1	0.7	0.8	0.8	0.3
65.1	0.7	0.7	0.7	0.3
71.9	0.7	0.7	0.7	0.4
78.7	0.6	0.6	0.6	0.6
85.6	0.6	0.6	0.7	0.6

Experiment Number 44

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.7	20.7	21.4	19.8	20.6	19.6	19.9	18.9	18.5	18.0	17.6	15.3
2.0	21.7	20.6	21.3	20.2	20.8	19.9	19.9	18.8	18.7	18.5	18.4	16.4
9.0	22.1	20.8	21.4	19.9	20.8	20.2	20.2	19.3	18.9	18.2	18.1	16.2
15.8	23.4	22.7	24.0	22.3	23.4	22.4	23.0	20.4	19.9	19.5	18.7	16.2
22.9	27.0	25.3	27.9	24.1	27.4	25.4	27.0	21.8	20.2	19.6	18.9	16.1
29.7	31.7	27.9	32.9	27.0	32.6	27.9	31.0	23.3	23.2	20.7	19.8	17.1
36.4	36.3	32.4	37.5	32.5	35.5	33.6	33.3	25.6	24.1	22.3	19.9	16.2
43.3	38.8	35.5	42.6	37.3	43.2	40.3	41.0	35.3	28.1	21.1	19.7	16.9
50.1	42.1	38.2	44.9	36.3	44.4	43.5	44.9	41.6	29.9	21.9	19.6	16.5
57.1	44.2	39.7	47.8	37.8	48.0	43.9	47.8	43.6	30.5	22.9	21.1	16.6
63.9	47.1	42.3	51.4	40.9	52.6	46.4	51.9	47.6	36.6	23.7	22.1	18.1
70.7	52.5	46.5	56.2	44.7	55.6	51.8	55.0	51.7	41.1	25.4	22.1	18.3
77.7	52.1	47.8	57.2	46.6	57.4	54.4	57.2	54.3	40.5	27.8	23.6	18.9
84.5	60.3	53.4	64.5	54.1	65.2	63.0	64.2	61.0	39.7	30.3	26.0	20.7
91.3	59.6	54.7	65.7	51.5	65.4	60.6	67.1	63.8	45.0	32.9	28.7	20.5
98.3	65.7	63.0	70.0	61.1	71.7	67.6	71.0	67.4	54.2	38.5	32.4	22.8
105.3	66.9	64.7	72.9	63.5	71.9	69.2	72.4	69.9	56.5	42.1	34.6	22.6
112.3	68.7	65.1	73.4	62.1	75.9	71.2	77.6	71.4	61.3	48.0	37.1	24.8
119.3	70.4	69.4	77.2	69.0	81.0	76.4	79.6	77.1	72.8	48.9	39.6	27.9
126.2	75.4	74.2	81.9	72.8	84.3	80.8	85.3	74.6	70.7	54.4	42.4	29.7
133.2	73.3	75.6	77.8	67.1	77.7	75.3	82.2	75.3	75.7	63.8	45.3	31.0
139.9	89.5	84.0	94.2	82.9	94.9	91.4	96.6	83.5	75.9	62.3	46.4	33.2
147.0	78.9	82.5	85.9	83.0	88.4	87.5	93.3	92.2	83.5	65.7	48.4	35.3
154.0	76.9	78.7	84.1	77.2	85.7	86.3	90.2	89.4	92.6	84.6	51.8	36.2
160.8	94.3	90.6	103.4	85.4	105.7	99.5	109.1	95.5	87.5	67.9	53.8	39.9
167.7	107.7	101.8	110.5	101.9	109.4	106.9	109.6	104.0	95.0	78.0	61.7	41.0
174.4	99.3	92.7	105.5	90.2	107.6	101.6	108.3	105.3	99.3	83.5	62.9	44.7
181.4	102.0	97.3	112.4	98.9	114.8	110.6	115.3	109.0	103.7	79.3	62.3	46.4
188.4	110.6	106.5	118.7	105.7	120.0	117.7	125.0	114.5	106.4	84.4	66.8	46.9

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.8	19.6	19.5	19.6	19.8	18.7	19.5	17.4	18.5	17.8	17.2	15.1
2.0	19.7	19.3	21.6	16.2	19.7	18.8	18.9	18.6	15.2	18.2	17.7	15.8
9.0	21.4	26.5	19.7	19.7	20.2	18.7	19.7	18.6	24.6	18.8	18.7	16.0
15.8	18.9	15.6	18.5	22.8	20.0	19.4	19.9	17.4	17.3	18.0	17.8	15.7
22.9	19.1	16.6	18.5	22.9	20.0	19.4	20.0	17.4	18.3	18.3	18.0	16.1
29.7	21.2	23.6	22.1	16.7	20.8	19.1	20.3	19.2	19.0	19.2	18.4	16.9
36.4	20.6	17.8	20.5	24.6	22.4	20.6	22.7	18.5	20.2	20.4	19.6	17.6
43.3	23.1	24.3	25.7	19.0	24.1	20.6	23.1	20.1	19.9	21.4	20.4	18.4
50.1	24.3	26.7	23.4	25.7	25.9	21.7	26.1	21.1	27.6	23.3	22.2	19.1
57.1	28.4	27.1	27.5	30.9	30.6	24.9	30.4	22.6	27.3	24.5	23.7	19.5
63.9	33.9	37.6	33.9	30.5	34.7	26.9	33.8	25.8	33.1	26.8	23.7	19.2
70.7	35.4	35.8	34.4	37.1	37.0	29.8	37.0	26.0	33.2	27.8	25.0	22.5
77.7	36.3	33.2	37.2	38.6	39.3	31.7	40.4	28.3	35.1	29.4	27.0	24.3
84.5	41.6	41.8	43.0	33.9	42.7	32.6	41.3	32.6	36.8	30.7	29.8	25.6
91.3	40.1	37.4	39.5	41.5	44.0	36.2	45.4	33.6	41.0	34.3	31.4	26.2
98.3	42.1	41.5	46.9	37.1	47.7	35.7	47.6	34.8	39.3	35.4	34.5	28.2
105.3	44.4	37.7	49.0	47.1	51.6	40.6	52.1	36.4	39.4	36.5	34.6	28.6
112.3	51.7	54.7	52.1	46.7	53.4	39.9	51.8	37.8	47.1	39.8	37.8	32.6
119.3	51.1	43.5	55.3	47.7	56.3	43.7	56.4	41.9	43.7	40.5	40.8	32.6
126.2	54.9	55.3	56.2	56.1	59.5	44.3	59.7	41.6	51.9	45.1	41.7	34.1
133.2	53.2	48.2	57.9	57.9	61.2	48.0	63.4	44.8	53.6	48.2	44.1	37.3
139.9	62.0	58.6	63.8	60.9	66.5	48.6	66.3	46.1	57.3	52.6	47.2	40.6
147.0	64.0	64.3	64.8	60.5	67.5	48.8	66.9	46.7	62.2	56.4	50.5	41.0
154.0	65.7	67.7	68.6	64.7	70.4	53.7	69.0	49.6	63.4	57.3	51.1	44.5
160.8	65.4	67.0	67.5	64.9	72.6	55.0	72.6	52.6	68.0	62.2	53.5	46.9
167.7	66.6	58.2	70.6	67.5	74.4	56.7	73.4	53.6	62.3	58.1	53.8	45.4
174.4	69.9	64.6	74.9	71.0	78.7	57.4	77.9	55.4	72.0	66.4	57.6	48.7
181.4	72.0	67.1	78.3	67.3	79.5	61.5	78.6	57.7	67.2	63.6	61.7	50.8
188.4	66.3	62.7	69.8	68.5	72.9	59.9	73.6	59.5	74.0	68.9	61.2	52.1

Thermocouples located at sprinkler number 3

Experiment Number 44

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.9	20.0	19.8	19.7	19.6	19.6	19.4	18.7	18.4	17.9	17.2	15.4
2.0	19.8	20.4	20.2	19.9	19.4	19.4	19.6	19.0	18.4	18.4	17.8	16.0
9.0	20.3	20.0	20.1	20.0	20.1	19.8	19.8	19.0	18.4	18.2	17.8	16.3
15.8	20.0	20.0	19.7	19.8	19.9	20.1	19.7	19.2	18.6	18.3	17.8	16.1
22.9	20.1	20.1	19.8	19.9	20.1	20.2	19.8	19.3	18.9	18.5	18.0	16.6
29.7	21.4	22.2	22.2	21.8	21.6	21.5	21.9	21.2	21.0	19.9	19.2	17.3
36.4	24.5	25.5	26.2	25.3	25.5	25.5	25.4	21.8	20.5	19.5	18.6	17.1
43.3	29.5	31.7	32.1	30.2	29.3	28.9	28.1	24.2	22.2	20.7	19.8	17.7
50.1	34.1	35.6	36.0	34.1	34.4	33.7	33.1	26.6	23.2	21.6	20.6	19.2
57.1	35.8	37.1	38.3	36.3	36.3	35.5	34.7	28.8	24.2	22.8	22.1	19.7
63.9	37.3	38.7	40.7	38.9	38.7	37.5	36.6	29.6	25.8	23.9	23.5	20.0
70.7	41.4	43.7	45.4	43.0	43.3	42.6	41.7	32.3	28.4	26.4	25.3	20.8
77.7	44.6	46.6	47.7	45.9	45.9	45.3	44.2	36.5	31.5	28.9	27.9	21.6
84.5	47.1	48.6	50.7	48.3	47.4	46.4	45.9	38.9	34.3	30.9	30.3	22.7
91.3	51.0	52.4	53.4	51.1	50.9	50.0	48.6	41.2	36.2	33.5	32.2	24.5
98.3	51.4	54.0	56.5	54.2	53.3	52.5	50.8	42.0	38.3	35.7	34.6	26.5
105.3	56.7	59.3	61.0	58.3	57.7	57.1	55.3	46.2	40.7	37.2	35.9	29.1
112.3	58.1	60.1	63.1	60.9	60.6	59.8	59.6	48.6	43.9	40.4	37.9	29.7
119.3	58.0	63.0	64.5	62.8	61.4	61.0	59.0	50.3	45.6	43.3	40.3	31.8
126.2	63.0	66.1	68.8	66.6	66.1	65.6	63.8	52.4	47.6	45.0	43.2	32.3
133.2	66.1	69.9	71.8	69.2	69.6	69.7	69.2	58.4	52.0	48.0	45.3	34.9
139.9	69.9	72.3	73.6	70.8	70.4	69.6	67.8	59.5	54.7	49.5	47.6	38.2
147.0	71.6	74.9	78.1	75.2	75.5	74.8	74.6	61.3	54.9	52.2	49.2	39.1
154.0	73.3	77.5	80.9	78.1	77.9	77.2	76.1	64.7	58.7	54.8	52.4	40.7
160.8	78.7	82.2	85.0	81.2	81.4	80.5	80.0	65.1	59.7	57.1	55.0	45.0
167.7	83.7	87.2	87.6	83.6	82.8	81.9	81.3	70.2	63.0	58.5	56.3	44.0
174.4	84.4	86.1	87.6	84.3	84.2	83.9	82.8	71.2	63.6	60.8	57.3	43.3
181.4	87.8	92.3	95.6	90.7	89.7	88.9	88.4	75.7	65.8	63.4	61.0	48.6
188.4	92.8	97.0	99.2	95.0	94.5	93.5	91.2	78.2	69.6	64.6	61.8	50.4

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	21.3	#########	21.0	21.3	20.6	20.5	20.0	19.1	18.1	17.6	16.9	15.7
2.0	21.1	-1748284.9	21.2	21.4	20.8	20.6	20.1	19.3	18.4	17.3	17.5	16.1
9.0	21.6	-2565136.5	21.5	21.8	21.0	21.0	20.4	19.6	18.7	18.6	17.8	16.4
15.8	23.6	-458.9	23.8	24.0	23.2	23.3	23.2	22.6	22.4	22.7	20.9	17.0
22.9	32.3	-111507.7	33.4	33.9	33.1	32.3	32.2	26.4	24.9	21.3	19.0	16.5
29.7	36.7	-5816883.3	39.3	40.7	39.4	39.4	38.9	30.5	25.3	18.6	17.7	16.4
36.4	42.2	-382.5	44.3	45.5	43.7	44.0	44.3	34.9	24.3	19.1	17.8	16.3
43.3	47.0	-4497669.5	48.5	50.2	49.9	49.4	49.3	38.5	29.2	19.5	18.7	17.0
50.1	51.2	-72507.1	52.3	52.6	51.8	51.9	51.0	42.8	30.4	20.3	19.0	16.9
57.1	53.9	-66535.5	56.1	58.4	56.6	57.0	57.2	46.9	32.4	23.0	20.5	18.2
63.9	58.3	-1452358.2	60.0	61.4	59.6	60.0	58.9	48.9	36.6	25.0	22.3	18.8
70.7	62.6	-2326.1	63.6	64.5	63.9	64.0	63.4	54.5	39.0	24.4	22.2	19.3
77.7	66.4	54.8	68.5	69.4	67.9	67.8	67.2	59.2	42.7	26.9	24.0	19.9
84.5	69.6	-2952788.8	73.2	74.7	74.0	73.2	72.7	62.8	49.8	30.9	27.2	21.0
91.3	71.2	-31985.4	73.8	76.7	75.8	76.1	76.1	65.8	50.4	34.0	29.5	22.3
98.3	80.5	-2984767.6	81.6	81.9	81.5	81.1	81.3	70.4	52.1	37.2	31.7	24.0
105.3	79.2	-723.8	80.9	82.0	81.7	82.2	81.8	71.5	58.2	38.6	33.7	25.5
112.3	84.4	-1349416.9	86.8	88.3	87.8	88.1	88.3	75.9	64.8	43.9	36.1	27.5
119.3	88.3	-420478.3	91.9	92.8	92.4	91.9	91.9	79.8	64.9	46.0	39.7	29.3
126.2	87.2	-15405.9	89.9	93.2	93.1	93.4	93.1	84.4	69.8	49.2	42.5	31.5
133.2	94.2	-67.6	97.5	98.9	99.0	98.1	97.2	86.1	74.2	53.0	44.4	33.5
139.9	98.3	-52475.0	101.4	102.6	102.0	101.8	100.0	90.9	75.3	54.7	47.2	35.3
147.0	102.0	-167261.0	107.2	108.4	106.4	105.7	104.4	94.1	83.2	59.8	51.6	37.4
154.0	102.6	-294496.3	105.9	107.7	108.5	108.9	109.0	97.6	86.9	60.3	51.6	38.3
160.8	109.3	-115853.7	113.1	113.9	112.5	112.2	111.4	98.8	88.5	62.4	52.9	40.8
167.7	116.8	-565.5	120.9	122.3	120.9	119.4	119.8	105.0	95.0	66.6	57.3	42.3
174.4	119.4	-838.8	121.4	122.4	124.7	124.5	126.8	111.6	96.9	68.8	57.9	41.9
181.4	125.0	-697638.2	128.5	128.4	126.4	126.2	125.5	116.1	104.7	80.8	59.9	44.6
188.4	130.6	-529.0	131.2	131.0	129.2	128.3	129.0	117.7	104.7	77.5	60.7	47.6

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.0	0.0	0.1	0.0	0.0	2.0	0.0	0.0	0.1	0.1
9.0	0.2	0.2	0.3	0.1	9.0	0.0	0.0	-0.1	0.1
15.8	0.2	0.3	0.3	0.1	15.8	0.0	0.0	-0.1	0.1
22.9	0.4	0.4	0.4	0.3	22.9	0.1	0.1	0.2	0.1
29.7	0.4	0.3	0.3	0.1	29.7	0.3	0.4	0.3	0.3
36.4	0.3	0.3	0.3	0.2	36.4	0.2	0.2	0.1	0.2
43.3	0.3	0.2	0.4	0.3	43.3	0.2	0.3	0.3	0.2
50.1	0.1	0.2	0.3	0.2	50.1	0.3	0.3	0.3	0.3
57.1	0.2	0.4	0.4	0.3	57.1	0.3	0.3	0.3	0.2
63.9	0.4	0.4	0.4	0.3	63.9	0.4	0.4	0.4	0.3
70.7	0.3	0.3	0.4	0.2	70.7	0.5	0.4	0.5	0.4
77.7	0.3	0.4	0.5	0.4	77.7	0.3	0.3	0.4	0.4
84.5	0.2	0.2	0.4	0.4	84.5	0.4	0.5	0.5	0.4
91.3	0.4	0.4	0.5	0.4	91.3	0.4	0.4	0.5	0.4
98.3	0.3	0.3	0.5	0.3	98.3	0.5	0.4	0.5	0.4
105.3	0.4	0.5	0.5	0.5	105.3	0.5	0.4	0.4	0.4
112.3	0.3	0.3	0.4	0.4	112.3	0.5	0.5	0.6	0.5
119.3	0.2	0.2	0.4	0.4	119.3	0.5	0.4	0.4	0.4
126.2	0.0	0.1	0.4	0.5	126.2	0.4	0.4	0.5	0.4
133.2	0.4	0.4	0.6	0.4	133.2	0.5	0.4	0.5	0.4
139.9	0.4	0.5	0.5	0.7	139.9	0.5	0.5	0.6	0.4
147.0	0.3	0.4	0.6	0.6	147.0	0.5	0.5	0.6	0.5
154.0	0.3	0.5	0.7	0.6	154.0	0.5	0.5	0.6	0.3
160.8	0.5	0.5	0.8	0.6	160.8	0.6	0.5	0.5	0.4
167.7	0.0	-0.1	0.4	0.4	167.7	0.6	0.5	0.6	0.4
174.4	0.3	0.4	0.6	0.5	174.4	0.4	0.3	0.5	0.4
181.4	0.5	0.4	0.7	0.5	181.4	0.5	0.5	0.6	0.5
188.4	0.5	0.4	0.6	0.5	188.4	0.6	0.6	0.6	0.5

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
2.0	1.7	1.1
9.0	2.0	1.1
15.8	1.9	0.9
22.9	2.0	1.0
29.7	2.1	1.0
36.4	2.4	1.2
43.3	2.7	1.3
50.1	2.5	1.5
57.1	2.7	1.3
63.9	2.6	1.4
70.7	2.9	1.6
77.7	3.7	1.5
84.5	3.2	1.9
91.3	3.1	2.1
98.3	4.2	1.6
105.3	3.2	1.7
112.3	3.8	1.6
119.3	3.7	2.0
126.2	4.0	1.4
133.2	4.2	1.8
139.9	3.8	2.4
147.0	3.9	2.3
154.0	4.1	2.2
160.8	3.4	2.8
167.7	3.9	2.1
174.4	4.0	2.1
181.4	4.1	2.8
188.4	4.0	2.6

Experiment Number 45

Thermocouples located at sprinkler number 1

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.6	20.0	20.4	18.8	20.3	19.3	20.1	19.1	18.5	18.1	18.0	17.3
5.8	21.4	21.0	21.2	19.8	21.2	20.3	21.2	20.3	19.4	19.0	19.0	18.0
12.6	21.5	21.0	21.2	19.8	21.5	20.2	21.5	20.2	19.6	19.2	19.1	18.0
19.6	22.8	22.9	23.0	21.0	23.3	21.9	23.2	21.1	20.6	19.3	19.1	18.2
26.3	28.2	28.6	30.2	24.7	30.5	27.1	28.9	24.4	21.7	19.7	19.3	18.3
33.2	33.0	33.2	35.7	28.5	35.3	32.4	34.8	28.3	26.1	23.1	20.3	18.5
39.9	38.2	37.9	40.3	32.2	38.8	36.4	37.1	30.1	25.8	21.9	20.1	18.5
46.7	40.6	42.2	45.0	37.7	44.8	42.2	44.5	40.7	27.8	20.7	19.9	18.4
53.6	40.4	41.3	43.2	36.0	44.8	42.9	46.4	45.1	29.9	20.8	20.2	18.7
60.4	43.4	44.0	47.3	41.3	49.3	46.6	50.0	48.8	39.9	22.2	21.3	18.7
67.4	45.6	46.8	49.2	41.4	52.6	48.7	54.1	47.3	43.4	24.1	22.4	19.4
74.1	51.1	51.1	55.2	44.9	56.3	52.2	56.4	51.2	46.5	27.6	23.9	20.4
80.9	53.2	55.3	60.2	46.2	62.0	56.0	61.8	57.9	48.1	31.3	25.6	20.7
87.8	58.6	61.2	65.4	52.9	65.3	59.7	65.6	56.0	49.4	34.1	28.0	21.0
94.6	60.4	62.1	66.7	53.3	67.0	63.0	66.2	61.8	53.0	39.8	31.9	22.9
101.3	60.0	60.4	65.8	52.3	66.7	59.7	65.6	61.7	57.4	41.1	32.5	23.7
108.3	63.9	66.1	71.0	55.9	72.9	66.6	72.5	67.4	56.4	39.7	34.8	24.7
115.0	72.2	74.5	79.7	64.6	80.8	72.7	78.9	73.3	61.3	44.1	36.1	26.7
121.9	69.0	70.1	73.4	62.7	76.6	72.7	78.8	76.6	67.9	49.2	38.1	27.9
128.7	79.0	82.1	85.9	72.2	87.4	81.5	86.7	78.4	66.4	51.2	40.6	29.5
135.4	79.4	81.0	85.5	71.4	86.0	81.9	87.3	81.4	72.9	58.1	43.8	31.7
142.3	74.8	78.8	82.2	71.6	85.2	80.2	87.8	79.4	79.8	63.0	45.8	33.9
149.1	72.7	75.7	77.1	72.7	81.2	83.7	87.4	90.2	89.8	70.0	46.6	36.1
156.0	82.0	82.1	90.7	78.6	94.8	91.7	97.1	89.9	86.3	69.5	49.3	37.7
162.8	87.6	87.9	95.4	86.0	97.3	93.9	98.5	93.6	92.0	73.6	54.1	39.7
169.5	97.3	100.3	103.6	88.8	104.4	100.2	105.8	96.2	89.2	75.5	58.6	40.1
176.4	97.3	104.2	107.7	90.1	112.5	104.5	112.7	97.8	92.1	74.2	59.3	41.8
183.2	102.4	104.0	111.1	90.8	113.7	108.5	114.5	101.4	92.4	77.1	60.0	43.0
190.1	106.5	109.6	117.3	104.4	120.5	116.2	123.2	110.6	102.1	80.6	63.8	44.3
196.9	114.1	119.8	124.8	109.4	125.6	120.4	125.7	114.4	104.1	81.3	64.6	47.8

Thermocouples located at sprinkler number 2

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.5	19.2	19.3	18.8	19.2	18.3	19.0	17.8	18.4	18.1	17.8	17.1
5.8	20.1	19.7	20.2	19.6	20.3	19.0	20.1	18.4	19.3	19.1	18.7	17.6
12.6	20.2	19.8	20.2	19.5	20.3	19.0	20.2	18.5	19.4	19.2	18.9	17.5
19.6	20.2	19.9	20.2	19.5	20.3	19.0	20.1	18.5	19.4	19.2	19.0	17.7
26.3	20.3	20.0	20.2	19.6	20.2	19.1	20.1	18.6	19.4	19.3	19.0	18.0
33.2	20.4	20.1	20.6	20.0	20.7	19.3	20.8	19.1	20.7	20.6	19.9	18.7
39.9	23.8	23.4	24.7	23.3	25.1	21.6	24.6	20.1	22.2	21.5	21.2	19.4
46.7	24.8	24.1	26.2	24.4	26.6	22.6	26.5	21.3	24.5	23.8	22.3	19.5
53.6	29.7	27.8	30.8	28.0	31.2	25.2	30.4	21.5	24.4	22.7	21.5	19.8
60.4	30.6	28.7	32.0	29.8	32.9	27.4	32.6	25.4	27.6	25.0	22.8	20.9
67.4	35.7	32.9	36.7	33.0	36.9	29.2	36.4	27.0	28.0	25.2	24.4	21.1
74.1	38.6	35.2	39.9	35.3	40.6	30.9	39.5	29.2	30.4	26.3	25.7	23.5
80.9	38.5	37.7	40.8	38.4	42.0	32.9	41.2	29.7	31.2	28.4	28.0	25.5
87.8	38.4	37.2	41.3	38.2	42.2	33.2	42.4	31.3	36.7	31.8	32.4	27.1
94.6	45.4	41.8	46.9	42.4	47.6	35.4	46.4	32.6	37.9	33.8	32.4	27.5
101.3	45.6	42.9	47.6	45.3	50.0	38.9	48.6	35.3	40.1	36.4	34.6	26.8
108.3	46.1	44.3	49.9	45.5	51.0	38.6	50.5	37.1	43.7	38.9	37.2	28.5
115.0	50.3	48.3	52.9	49.4	53.0	42.1	51.7	37.7	43.3	39.7	38.9	32.2
121.9	50.3	49.5	54.2	49.0	55.6	41.7	55.6	38.7	44.9	41.4	41.1	32.7
128.7	54.7	52.8	57.4	51.2	58.4	43.8	56.8	39.4	46.6	42.9	42.2	33.7
135.4	57.4	54.9	58.5	55.3	59.0	46.7	58.7	43.1	51.1	46.0	43.7	35.5
142.3	56.4	55.3	59.7	55.8	61.0	47.4	60.8	44.7	54.8	50.0	46.2	37.7
149.1	61.7	60.2	64.0	62.6	65.7	52.3	65.5	48.3	57.2	50.2	47.6	38.0
156.0	66.2	62.3	68.5	62.1	69.0	52.1	67.1	50.6	61.0	55.0	50.6	41.9
162.8	66.1	62.5	69.0	61.0	69.6	51.5	68.6	51.2	64.1	58.4	52.3	44.7
169.5	67.1	64.4	70.0	65.3	71.2	53.7	70.9	51.0	65.7	60.3	55.6	41.5
176.4	71.3	67.4	73.3	68.8	74.3	57.4	73.3	55.5	67.7	62.8	56.1	46.3
183.2	73.0	69.6	77.2	71.4	80.2	61.0	80.2	58.2	68.6	63.9	58.7	48.6
190.1	75.1	72.4	78.5	71.4	79.6	61.9	80.9	59.3	71.0	65.2	59.5	49.9

196.9	79.4	77.7	84.5	79.2	85.2	64.9	83.6	63.2	75.2	67.1	61.0	52.1

Thermocouples located at sprinkler number 3

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	19.7	19.8	19.3	19.3	19.3	19.2	19.1	18.8	18.4	18.2	18.0	17.2
5.8	20.5	20.6	20.3	20.2	20.2	20.2	20.1	19.7	19.2	18.9	18.8	17.8
12.6	20.4	20.7	20.4	20.3	20.3	20.2	20.2	19.9	19.5	19.0	18.9	17.7
19.6	20.5	20.7	20.4	20.3	20.3	20.3	20.2	19.9	19.6	19.0	18.9	17.8
26.3	21.0	21.6	22.0	21.5	21.7	21.8	22.2	21.4	21.1	20.5	20.3	18.6
33.2	23.8	25.0	26.1	24.5	24.0	23.3	23.0	21.8	21.0	20.3	19.9	18.6
39.9	28.3	30.7	32.3	29.5	29.5	28.9	28.2	23.9	21.5	20.6	19.9	18.7
46.7	31.8	33.7	36.1	33.7	33.3	32.3	31.8	26.7	23.4	21.7	20.7	19.4
53.6	34.1	36.4	38.1	35.8	35.0	34.0	32.9	28.5	25.7	24.1	22.9	20.6
60.4	36.0	38.1	40.9	38.6	38.4	37.7	37.0	29.8	26.5	24.9	24.4	21.1
67.4	38.2	40.6	44.0	40.8	40.1	38.6	37.6	30.9	27.4	25.8	25.5	22.0
74.1	40.8	43.9	47.9	44.3	43.6	42.1	40.4	32.8	29.7	27.7	26.3	22.1
80.9	43.9	47.2	50.5	47.0	46.1	44.9	43.3	36.4	32.8	30.6	29.0	23.2
87.8	47.1	50.6	53.8	50.0	49.6	48.4	47.2	39.7	35.6	33.7	32.2	23.6
94.6	49.4	51.4	57.6	53.8	53.4	52.6	51.1	43.4	37.8	35.6	33.9	24.6
101.3	52.5	56.2	59.8	56.4	55.6	54.6	53.4	44.3	39.8	37.1	35.5	27.2
108.3	56.0	60.0	63.9	59.7	59.1	58.1	57.2	46.4	41.7	38.9	36.6	30.0
115.0	57.4	60.7	66.5	62.2	61.5	60.5	59.3	50.0	43.7	42.7	39.2	30.2
121.9	60.8	64.9	68.8	64.5	63.9	63.1	61.7	52.6	46.4	43.7	40.5	31.7
128.7	62.5	66.1	71.7	67.3	66.4	65.0	62.7	53.5	48.1	44.4	42.4	34.6
135.4	64.5	67.8	75.1	70.4	69.7	68.5	66.5	54.3	50.0	47.6	45.0	36.3
142.3	67.2	71.2	76.8	72.2	71.2	69.9	67.1	55.9	52.0	49.4	47.1	35.6
149.1	68.7	72.5	80.3	75.3	74.7	74.1	73.3	61.2	53.7	51.4	49.2	37.3
156.0	69.5	72.2	80.6	76.8	76.3	76.2	75.1	63.9	57.4	53.4	51.4	39.4
162.8	75.8	81.6	86.3	80.7	79.8	79.0	77.4	66.0	58.7	55.6	53.4	42.1
169.5	76.1	81.3	87.2	82.4	81.7	81.1	79.8	67.9	62.0	57.8	55.4	44.1
176.4	80.6	86.2	92.0	85.7	84.6	83.2	82.4	71.1	64.6	59.6	58.7	46.1
183.2	79.0	81.1	90.7	86.4	85.9	85.4	83.8	71.3	64.8	61.6	60.3	48.1
190.1	82.8	86.7	95.4	90.4	89.2	89.2	86.3	72.3	67.0	65.1	61.2	50.1
196.9	89.1	95.0	101.1	94.6	93.6	92.4	90.5	76.2	68.5	65.3	62.6	50.4

Thermocouples located at sprinkler number 4

Time	0 mm	25 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm	350 mm	450 mm	550 mm	900 mm
0.0	20.9	20.8	20.6	20.5	20.1	20.0	19.7	18.9	18.3	18.1	17.8	17.5
5.8	21.6	21.4	21.1	21.0	20.6	20.4	20.2	19.3	19.0	18.8	18.4	17.9
12.6	22.3	22.4	22.5	22.2	22.2	22.3	22.0	22.8	22.0	20.9	20.0	18.3
19.6	30.5	28.9	32.9	30.8	30.5	29.0	29.9	25.0	24.4	22.8	20.8	18.4
26.3	38.1	35.7	39.8	38.1	37.4	35.9	37.8	30.6	21.4	20.1	19.1	18.0
33.2	42.2	41.3	44.3	42.9	42.1	41.7	43.8	33.5	22.6	19.6	18.9	18.1
39.9	45.6	45.1	47.5	46.4	46.3	45.9	48.5	38.6	26.9	19.7	19.1	18.6
46.7	49.2	48.7	51.6	50.3	50.1	49.7	52.5	42.1	29.1	21.3	19.6	18.8
53.6	53.4	52.7	55.9	54.8	54.3	54.1	56.2	46.1	31.7	21.2	19.9	18.9
60.4	56.6	54.8	58.4	56.4	56.3	55.6	56.6	47.5	36.2	23.8	20.4	19.2
67.4	59.4	58.9	62.8	60.7	60.3	59.6	61.1	50.2	38.8	27.1	24.4	20.3
74.1	63.5	62.8	67.5	66.0	65.7	64.4	66.2	55.0	44.1	30.0	24.5	20.9
80.9	67.8	67.0	71.0	69.2	68.5	68.2	70.0	60.4	48.4	31.8	26.6	21.5
87.8	71.9	71.1	75.0	73.3	72.7	72.1	74.5	65.0	48.7	32.0	28.1	22.3
94.6	77.0	75.8	80.8	78.2	77.8	76.9	79.1	68.0	50.4	35.2	31.8	23.2
101.3	78.7	78.2	84.1	82.4	82.1	81.0	83.0	71.4	52.2	36.9	33.5	24.7
108.3	86.1	84.9	90.8	88.2	87.0	85.3	87.3	73.9	52.7	38.3	34.1	27.0
115.0	87.4	86.9	93.1	90.7	90.2	88.2	90.9	77.4	53.6	40.3	36.7	29.1
121.9	91.3	90.2	94.2	91.8	91.8	90.0	91.4	78.8	61.5	42.1	38.6	30.4
128.7	91.2	91.4	96.1	94.4	94.7	94.2	96.5	83.7	68.4	47.6	40.2	32.0
135.4	95.9	96.3	102.4	99.7	99.5	98.3	100.4	89.4	71.4	49.7	44.5	33.3
142.3	97.4	100.3	107.2	103.7	104.8	102.5	104.8	93.7	73.4	50.9	47.3	35.0
149.1	100.7	101.6	105.3	103.3	103.7	102.7	105.2	95.9	78.1	52.7	46.9	36.4
156.0	103.9	104.9	110.5	108.5	108.1	107.8	110.6	98.8	80.3	54.3	50.0	38.1
162.8	108.9	107.7	114.5	111.3	111.8	110.0	113.9	99.6	85.2	61.1	50.9	39.1
169.5	113.5	114.1	120.7	116.8	117.2	115.3	117.6	102.4	87.6	62.1	53.1	41.4
176.4	113.4	117.7	123.6	120.2	122.8	119.5	122.3	107.3	93.6	67.3	56.7	41.6
183.2	124.9	123.2	131.9	129.5	129.8	127.6	131.6	115.5	96.3	65.4	55.5	44.0

Experiment Number 45

190.1	123.7	124.7	129.5	126.9	129.5	127.9	131.2	119.9	105.7	71.4	59.5	46.3
196.9	121.6	48.5	48.9	123.5	127.2	126.4	129.4	120.4	108.5	63.1	56.9	47.1

Velocity probes at sprinkler number 1

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.8	0.1	0.1	0.1	-0.4
12.6	0.2	0.2	0.3	0.1
19.6	0.4	0.3	0.4	0.1
26.3	0.2	0.4	0.4	0.3
33.2	0.3	0.3	0.4	0.1
39.9	0.3	0.3	0.4	0.3
46.7	0.2	0.3	0.4	0.4
53.6	0.2	0.3	0.5	0.4
60.4	0.1	0.3	0.4	0.3
67.4	0.4	0.4	0.4	0.3
74.1	0.2	0.3	0.4	0.4
80.9	0.5	0.5	0.4	0.3
87.8	0.2	0.2	0.5	0.3
94.6	0.3	0.2	0.2	0.3
101.3	0.3	0.3	0.6	0.4
108.3	0.5	0.4	0.5	0.4
115.0	0.4	0.5	0.7	0.5
121.9	0.5	0.4	0.5	0.4
128.7	0.4	0.3	0.4	0.3
135.4	0.2	0.2	0.5	0.5
142.3	0.3	0.3	0.6	0.4
149.1	0.5	0.5	0.6	0.4
156.0	0.4	0.2	0.4	-0.2
162.8	0.3	0.3	0.5	0.4
169.5	0.4	0.3	0.6	0.6
176.4	0.4	0.3	0.5	0.4
183.2	0.7	0.6	0.8	0.4
190.1	0.5	0.4	0.7	0.5
196.9	0.3	0.4	0.8	0.5

Velocity probes at sprinkler number 2

Time	25 mm	75 mm	125 mm	250 mm
0.0	0.0	0.0	0.0	0.0
5.8	0.0	0.1	0.1	0.1
12.6	0.0	0.1	0.1	0.0
19.6	0.0	0.1	0.1	0.1
26.3	0.1	0.2	0.1	0.1
33.2	0.3	0.4	0.3	0.3
39.9	0.2	0.2	0.3	0.3
46.7	0.4	0.4	0.3	0.2
53.6	0.3	0.4	0.4	0.4
60.4	0.4	0.4	0.3	0.3
67.4	0.3	0.2	0.4	0.3
74.1	0.5	0.5	0.5	0.3
80.9	0.4	0.4	0.4	0.2
87.8	0.4	0.4	0.4	0.3
94.6	0.4	0.5	0.5	0.3
101.3	0.5	0.5	0.5	0.3
108.3	0.4	0.2	0.4	0.3
115.0	0.5	0.4	0.4	0.3
121.9	0.4	0.4	0.4	0.3
128.7	0.6	0.6	0.5	0.3
135.4	0.4	0.3	0.5	0.3
142.3	0.6	0.5	0.6	0.4
149.1	0.5	0.5	0.6	0.4
156.0	0.4	0.4	0.5	0.4
162.8	0.5	0.5	0.5	0.4
169.5	0.6	0.5	0.6	0.5
176.4	0.6	0.5	0.6	0.4
183.2	0.6	0.4	0.6	0.5
190.1	0.6	0.5	0.6	0.5
196.9	0.6	0.6	0.6	0.5

Velocity probes in channels above burner

Time	Channel 1	Channel 2
0.0	0.0	0.0
5.8	1.9	0.8
12.6	1.8	0.9
19.6	2.6	1.3
26.3	2.7	1.0
33.2	2.9	1.4
39.9	3.4	1.2
46.7	2.8	1.2
53.6	2.6	1.0
60.4	3.3	1.8
67.4	3.4	1.7
74.1	3.5	1.4
80.9	3.5	1.8
87.8	3.0	1.7
94.6	3.2	1.6
101.3	3.5	1.8
108.3	3.2	2.2
115.0	3.4	1.9
121.9	3.7	2.1
128.7	4.1	1.6
135.4	4.0	2.5
142.3	4.0	2.2
149.1	4.2	2.3
156.0	4.2	2.6
162.8	4.1	2.3
169.5	4.3	2.1
176.4	3.9	2.5

183.2	4.5	2.4
190.1	5.2	2.9
196.9	3.7	2.8

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A series of 45 experiments were conducted to compare the effects of two different ceiling configurations on the activation times of a quick response residential pendent sprinkler. The two ceiling configurations consisted of a smooth horizontal unobstructed ceiling and a horizontal ceiling obstructed by parallel beams measuring 0.038 m (1.5 in) wide by 0.24 m (9.5 in) deep and spaced 0.41 m (16 in) on center. For each of the two ceiling configurations, the fire source, a computer controlled methane gas burner, was placed in three different locations within the fire compartment and 2.1 m (7 ft) below the ceiling. Additionally, for each burner location, the flow of methane gas to the burner was supplied in such a way as to give three different fire growth scenarios. For the smooth horizontal unobstructed ceiling three experiments were performed for every burner position and fire growth rate. For the horizontal obstructed/beamed ceiling there were two experiments for every burner position and fire growth rate. Measurements taken include the time to sprinkler activation, temperature and velocity of the ceiling jet at the sprinkler of activation, and temperatures and ceiling jet velocities at various other locations and elevations within the fire compartment. The horizontal obstructed/beamed ceiling increased sprinkler activation time by 57% to 137% depending on the experimental setup.

KEY WORDS (MAXIMUM OF 9; 28 CHARACTERS AND SPACES EACH; SEPARATE WITH SEMICOLONS; ALPHABETIC ORDER; CAPITALIZE ONLY PROPER NAMES)
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