

May 21, 1938

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Where articles appear in both outside and Bureau publications, the Bureau publication is given first.

Reference numbers are assigned to facilitate the use of a subject index at the end of this Letter Circular.

<u>Ref.</u>	<u>Series</u>	<u>Price</u>	
1	S153	OP	Action of sunlight and air upon some lubricating oils. C. E. Waters. Bul. BS, <u>7</u> , 227 (1910).
2	S160	OP	Behavior of high boiling mineral oils on heating in air. C. E. Waters. Bul. BS, <u>7</u> , 365 (1910).
3			Resistance, inductance and capacity of eccentric cylinders. (Electrical measurement of oil film thickness.) M. D. Hersey. Elect. World, <u>56</u> , 434 (1910).
4	T4	OP	Effect of added fatty and other oils upon carbonization of mineral lubricating oils. C. E. Waters. Tech. Pap. BS, T4 (1911).
5	T13	OP	Evaporation test for mineral lubricating and transformer oils. C. E. Waters. Tech. Pap. BS, T13 (1911).

<u>Ref.</u>	<u>Series</u>	<u>Price</u>	
6	C45	OP	Testing of materials; lubricating oils and greases. Cir. BS, C45, 68 (1913).
7	T37	OP	Iodine number of linseed and petroleum oils. W. H. Smith and J. B. Tuttle. Tech. Pap. BS, T37 (1914).
8			Laws of lubrication of horizontal journal bearings (experimental). M. D. Hersey. Jour. Wash. Acad. Sci., <u>4</u> , 542 (1914).
9			On the laws of lubrication of journal bearings (mathematical). M. D. Hersey. Trans. Am. Soc. Mech. Engrs., <u>37</u> , 167 (1915).
10			Notes on the theory of efflux viscosimeters. E. Buckingham. Jour. Wash. Acad. Sci., <u>6</u> , 154 (1916).
11			Theory of the torsion and rolling ball viscosime- ters, and their use in determining the effect of pressure on viscosity. M. D. Hersey. J. Wash. Acad. Sci., <u>6</u> , 525 (1916).
12	T73	OP	Data on oxidation of automobile cylinder oils. C. E. Waters. Tech. Pap. BS, T73 (1916).
13	S278	OP	An investigation of the laws of plastic flow. E. C. Bingham. Bul. BS, <u>13</u> , 309 (1916).
14	T77	OP	Density and thermal expansion of American petroleum oils. H. W. Bearce and E. L. Peffer. Tech. Pap. BS, T77 (1916).
15	C59	OP	U. S. Standard Baumé hydrometer scales. Cir. BS, C59 (1916).
16	M15	OP	Some technical methods of testing miscellaneous supplies; <u>lubricating oils</u> . P. H. Walker. Misc. Pub. BS, 57 (1916).
17			Quantitative test for resistance of lubricating oils to emulsification. W. H. Herschel. Proc. Am. Soc. Test. Mat'ls, <u>16</u> (2), 248 (1916); Power, 485 (April 4, 1916).
18			Testing of lubricating oils. W. H. Herschel. Oilom, <u>6</u> , 590 (Dec. 1916).
19			The testing and standardization of lubricating oils. W. H. Herschel. Oil, Paint, and Drug Reporter, <u>91</u> , 14 (Feb. 9, 1917).

<u>Ref.</u>	<u>Series</u>	<u>Price</u>	
20	T86	OP	Resistance of an oil to emulsification. W. H. Herschel. Tech. Pap. BS, T86 (1917).
21	S298	OP	Standard substances for the calibration of viscometers. E. C. Bingham and R. F. Jackson. Bul. BS, <u>14</u> , 59 (1917).
22	T100	OP	Determination of absolute viscosity by short tube viscosimeters. W. H. Herschel. Tech. Pap. BS, T100 (1917).
23			Determination of absolute viscosity by the Saybolt Universal and Engler viscosimeters. W. H. Herschel. Proc. Am. Soc. Test. Mat'ls, <u>17</u> (2), 551 (1917).
24			The standard Saybolt Universal viscosimeter. W. H. Herschel. Proc. Am. Soc. Test. Mat'ls, <u>18</u> (2), 363 (1918).
25	T109	OP	Conservation of tin in bronzes, bearing metals and solders. G. K. Burgess and R. W. Woodward. Tech. Pap. BS, T109 (1919); Trans. Am. Inst. Min. Met. Eng. <u>60</u> , 162 (1919).
26	T112	OP	Standardization of the Saybolt Universal viscometer. W. H. Herschel. Tech. Pap. BS, T112 (1919).
27	T125	OP	Viscosity of gasoline. W. H. Herschel. Tech. Pap. BS, T125 (1919).
28			A viscosimeter for gasoline. W. H. Herschel. Proc. Am. Soc. Test. Mat'ls, <u>19</u> (2), 676 (1919).
29	T164	OP	Saybolt viscosity of blends. W. H. Herschel. Tech. Pap. BS, T164 (1920).
30	T176	5¢	Slushing oils. P. H. Walker and L. L. Steele. Tech. Pap. BS, T176 (1920).
31	T177	OP	Sulphur in petroleum oils. C. E. Waters. Tech. Pap. BS, T177 (1920).
32	C99	OP	Carbonization of lubricating oils. C. E. Waters. Cir. BS, C99 (1920).
33			The MacMichael viscosimeter. W. H. Herschel. J. Ind. and Eng. Chem., <u>12</u> , 282 (1920).
34			The Saybolt viscosity of oil blends. W. H. Herschel. Chem. & Met. Eng., <u>22</u> , 1109 (1920).

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35			Determination of sulfur in petroleum oils. C. E. Waters. Ind. and Eng. Chem., <u>12</u> , 482, 612 (1920).
36	T188	OP	Some properties of white metal bearing alloys at elevated temperatures. J. R. Freeman, jr. and R. W. Woodward. Tech. Pap. BS, T188 (1921).
37	T201	10¢	Friction and carrying capacity of ball and roller bearings. H. L. Whittimore and S. N. Petrenko. Tech. Pap. BS, T201 (1921).
38	T204	OP	Cutting fluids. E. C. Bingham. Tech. Pap. BS, T204 (1921).
39			The catalytic oxidation of petroleum oils. C. E. Waters. Ind. & Eng. Chem., <u>13</u> , 901 (1921).
40			Use of MacMichael viscosimeter in testing petroleum products. W. H. Herschel and E. W. Dean. Bur. Mines Report of Investigations, Serial No. 2201 (1921).
41			Plastic flow through capillary tubes. E. Buckingham. Proc. Am. Soc. Test. Mat'ls, 21, 1154 (1921).
42			The flow through short tubes. W. H. Herschel. Am. Soc. Civil Engrs., <u>84</u> , 527 (1921).
43			Viscosity and friction. W. H. Herschel. J. Soc. Auto. Engrs., <u>10</u> , 31, 369 (1922); Trans. Soc. Auto. Engrs., <u>17</u> (1), 282 (1922).
44	T210	OP	The Redwood viscometer. W. H. Herschel. Tech. Pap. BS, T210 (1922).
45	T223	OP	Reclamation of used petroleum lubricating oils. W. H. Herschel and A. H. Anderson. Tech. Pap. BS, T223 (1922).
46			The change in viscosity of oils with the temperature. W. H. Herschel. Ind. & Eng. Chem., <u>14</u> , 715 (1922).
47			The drainage error in the Bingham viscometer. Comparison of viscosities by the Scott viscometer and plummet method of Basseches. W. H. Herschel. J. Opt. Soc. Am. Rev. Sci. Instruments, <u>6</u> , 875 (1922).
48			Fuel oil viscosimeters. W. H. Herschel. Chem. Met. Eng., <u>26</u> , 1175 (1922).

<u>Ref.</u>	<u>Series</u>	<u>Price</u>
49	Sulfur compounds and oxidation of petroleum oils. C. E. Waters. Ind. & Eng. Chem., <u>14</u> , 725 (1922).	
50	Note on a general method for determining properties of matter. M. D. Hersey. J. Wash. Acad. Sci., <u>12</u> , 167 (Viscosity measurement, 168) (1922).	
51	The physical properties of the ASTM tentative standard white-metal bearing alloys. J. R. Freeman, jr. Proc. Am. Soc. Test. Mat'ls, <u>22</u> (1), 207 (1922).	
52	Fluidity and plasticity. (With bibliography). E. C. Bingham. New York: McGraw-Hill (1922).	
53	Testing oiliness by friction-testing machines. W. H. Herschel. Chem. Met. Eng., <u>28</u> , 302 (1923).	
54	Friction testing of lubricating oils. W. H. Herschel. Chem. Met. Eng., <u>28</u> , 594 (1923).	
55	Testing lubricating oils for quality. W. H. Herschel. Proc. Eng. Soc. West. Penn., <u>38</u> , 503 (with bibliography), (1923).	
56	An investigation of heavy duty truck drive axles. S. Von Ammon. J. Soc. Auto. Engrs., <u>12</u> , 517 (1923).	
57	The improved MacMichael viscosimeter. W. H. Herschel. J. Opt. Soc. Am. Rev. Sci. Instruments, <u>7</u> , 335 (1923).	
58	Bath temperatures of viscosimeters of the Saybolt type. W. H. Herschel. Ind. and Eng. Chem., <u>15</u> , 945 (1923).	
59	Problems of lubrication research. M. D. Hersey. J. Am. Soc. Naval Engrs., <u>35</u> , 648 (1923).	
60	Viscosity of lubricants at high pressure and temperature. M. D. Hersey. Rep. Internat. Air Congress, London, 549 (1923).	
61	The influence of ratio of length to diameter in the compression testing of babbitt metals. J. R. Freeman, jr. and P. F. Brandt. Proc. Am. Soc. Test. Mat'ls, <u>23</u> (2), 150 (1923).	
62	Service tests of lubricants in internal combustion engines. W. S. James. Bul. Am. Pet. Inst. <u>4</u> , 132 (Dec. 31, 1923).	

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64	TNB86	OP	Miscibility of gasoline and castor oil. BS Tech. News Bul. <u>36</u> , 3 (June 1924).
65			Tests of ball bearings for rotating beam fatigue machines. L. B. Tuckerman and C. S. Aitchison. Am. Machinist, <u>61</u> , 369 (1924).
66			Heat and power research in petroleum. H. C. Dickinson. Oil & Gas Jour., <u>23</u> , 41, 110 (Aug. 7, 1924).
67			A practical test by oxidation to determine the stability of mineral oil. T. S. Sligh, jr. Power, <u>60</u> , 551 (1924).
68			An oxidation method for measuring the stability of mineral oils. T. S. Sligh, jr. Proc. Am. Soc. Test. Mat'ls, <u>24</u> (2), 964 (1924).
69			Measurement of crankcase dilution. Vacuum distilla- tion transition method. T. S. Sligh, jr. Bul. Am. Pet. Inst., <u>5</u> , 122 (1924).
70			Effect of impurities on compression strength and hardness of babbitt metals at normal and elevated temperatures. J. R. Freeman, jr. and P. F. Brandt. Proc. Am. Soc. Test. Mat'ls, <u>24</u> (1), 253 (1924).
71			Vacuum distillation transition method. T. S. Sligh, jr. Oil and Gas Jour., <u>23</u> , 126 (Jan. 8, 1925).
72			Contamination of crankcase oils in service. T. S. Sligh, jr. Oil and Gas Jour., <u>23</u> , 151 (May 14, 1925).
73			Crankcase dilution measurement. T. S. Sligh, jr. Oil and Gas Jour., <u>23</u> , 127 (May 21, 1925).
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75			Measuring the percentage of crankcase dilution. T. S. Sligh, jr. J. Soc. Auto. Engrs. <u>16</u> , 355 (1925).
76	LC-175	OP	Note on flash failures in the oxidation test (1925)

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78			The Ostwald viscometer as a consistometer. W. H. Herschel & R. Bulkley. J. Phys. Chem., <u>29</u> , 1217 (1925).
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80			Government purchase of lubricants on a quality basis. H. C. Dickinson. Bul. Am. Pet. Inst. <u>7</u> , 136 (1926).
81			Chapter on <u>consistency</u> in Jerome Alexander's compilation, "Colloid Chemistry." W. H. Herschel. <u>1</u> , 727 (1926), New York: Chemical Catalog Co.
82	S520	10¢	Nonflammable liquids for cryostats (V. <u>Measurements of viscosity</u> . C. W. Kanolt. 627). BS Sci. Pap. S520, <u>20</u> , 619 (1926).
83			The effect of the addition of kerosene on the oiliness of lubricating oils. S. A. McKee. J. Soc. Auto. Engrs. <u>19</u> , 356 (1926); Trans. Soc. Auto. Engrs. <u>21</u> (2), 248 (1926).
84			Lubrication data from Cooperative Fuel Research. S. W. Sparrow and J. O. Eisinger. Ind. & Eng. Chem. <u>18</u> , 482 (1926).
85			Lubricants. M. D. Hersey. Proc. Railway Club of Pgh., <u>25</u> , 174 (1926)
86			Viscosity and temperature changes. W. H. Herschel. Oil & Gas Jour. <u>25</u> , 146, 150, 176, 178, 182, 184 (Dec. 2, 1926).
87			Measurement of consistency as applied to rubber-benzene solutions. W. H. Herschel and R. Bulkley. Proc. Am. Soc. Test. Mat'ls, <u>26</u> (2), 621 (1926). (Published in full as "Konsistenzmessungen von Gummi-Benzollosungen," Kolloid Zeit. <u>39</u> , 291 (1926).)
88			Technical outflux viscometers; interpolation and interconversion of readings. W. H. Herschel. International Critical Tables, <u>1</u> , 32. New York: McGraw-Hill (1926).

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90			Calibration of the buret consistometer. W. H. Herschel and R. Bulkley. Ind. & Eng. Chem., <u>19</u> , 134, (1927).
91			Performance characteristics of journal bearings when an abrasive is in the lubricant. S. A. McKee. J. Soc. Auto. Engrs., <u>20</u> (1), 3 (1927); Trans. Soc. Auto. Engrs., <u>22</u> (1), 73 (1927).
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98			Viscosity of lubricants under pressure. M. D. Hersey and H. Shore. Mech. Eng., <u>50</u> , 221 (1928).
99			Work of the Bureau of Standards on friction and lubrication. U. S. Daily, 11, (June 14, 1928); Mech. Eng., <u>50</u> , 594 (1928).
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103			Cooling and lubrication of cutting tools (with bibliography). M. D. Hersey (Chairman). Prog. Rep. No. 1 of Sub-Comm. on Cutting Fluids, Am. Soc. Mech. Engrs. Spec. Res. Comm. on Cutting of Metals. Trans. Am. Soc. Mech. Engrs. MSP-51-8, 47 (1929).
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108	TNBL48	OP	Fundamental research on lubrication. BS Tech. News Bul. 148, 73 (1929); J. Frank. Inst., <u>208</u> , 422 (1929).
109	TNBL51	CP	More efficient use of cutting fluids in machine-shop practice. BS Tech. News Bul. 151, 104 (1929); J. Frank. Inst., <u>208</u> , 798 (1929).
110	TNBL51	OP	The Stormer and other rotation viscometers. BS Tech. News Bul. 151, 104 (1929); J. Frank. Inst., <u>208</u> , 799 (1929).
111	TNBL52	OP	White stainless mineral oil for textile knitting machines. BS Tech. News Bul. 152, 120 (1929); J. Frank. Inst., <u>209</u> , 117 (1930).
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113			Some lubrication developments. M. D. Hersey. Trans. Am. Soc. Mech. Engrs. MSP-51-21, 159 (1929). (For abstract see Mech. Eng., <u>52</u> (2), 117, (1930).)
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Ref.   Series   Price

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- 117      M97              10¢      Thermal properties of petroleum products.  
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- 119      RP-137      OP      Effect of small changes in temperature on the proper-  
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- 122                      Significance of the pour point of oils. R. Bulkley.  
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- 123                      Laboratory testing of oil stability. R. C. Hardy.  
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127			Re-refining crankcase oil. W. H. Herschel. J. Soc. Auto. Engrs., <u>27</u> , 671 (1930).
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129			On the rate of shear in capillary tubes. W. H. Herschel. J. Rheology, <u>1</u> , 505 (1930).
130			Measuring consistency of plastic materials. W. H. Herschel. Comm. Stds. Monthly, 115 (Oct. 1930).
131			Tentative specification developed for stainless lubricant. Comm. Stds. Monthly, 158 (Nov. 1930).
132			Progress report on efficiency tests of electric street car trucks. S. A. McKee. Proc. Am. Elect. Ry. Engr. Assoc., 121 (1930). (Appendix A of Report of Research Sub-Com. No. 3, Car Design.)
133			Lubrication research activities (with bibliography). Fifth Report of Am. Soc. Mech. Engrs. Special Research Comm. on Lubrication. Trans. ASME, PM-53-4 (1931).
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- 141                      Pressure distribution in oil films of journal bear-  
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- 142                      Journal bearing friction in the region of thin-film  
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- 144                      The effect of viscosity on friction in the region of  
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- 145      RP-512      5¢      The white metal bearing alloys; mechanical properties  
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- 146      LC-360      Free      Rerefining used crankcase oil. (1933)
- 147      LC-368      Free      Routine testing of lubricants and liquid fuels. (1933)
- 148      RP-551      5¢      "Tin Free" leaded bearing bronze. H. K. Herschman.  
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Subject Index

Automotive lubrication: 62, 63, 72, 84, 92, 124, 140, 150, 157,  
158, 162, 165, 169

Ball and roller bearings: 37, 65

Bearing alloys: 25, 36, 51, 61, 70, 100, 101, 104, 121, 137,  
138, 139, 145, 148

Carbonization and evaporation of oils: 4, 5, 32

Consistency: See "Plasticity."

Consistometers: 52, 78, 81, 87, 90, 116, 120

Cutting fluids: 38, 103, 109, 115

Density and expansivity: 14, 15, 79, 117, 134, 163, 164

Dilution: 63, 69, 71, 73, 75, 76

Dimensional analysis of lubrication: 8, 9, 59, 83, 85, 91, 95,  
102, 119, 142, 167

Effect of pressure on viscosity: 11, 60, 98, 107, 151

Effect of temperature on viscosity: 46, 60, 86, 151

Emulsification of oils: 17, 20

Extreme pressure lubrication: 143, 149, 153, 155

Friction: 37, 43, 53, 54, 83, 91, 92, 95, 102, 142, 144, 167

Gear lubrication: 56, 114, 132, 136, 143, 149, 153, 155

Journal bearings: 3, 8, 9, 83, 91, 95, 102, 105, 106, 119, 140,  
141, 142, 166, 167

Load carrying capacity: 37, 143, 149, 153, 155, 166

Low temperature tests: 79, 82, 101, 117, 120, 122

Mathematical theory: 3, 8, 9, 11, 50, 113, 119, 140, 166

Miscellaneous and general: 30, 64, 66, 80, 85, 94, 97, 99, 108,  
111, 113, 118, 125, 128, 131, 133,  
154, 160, 161, 168

Oiliness: 43, 53, 77, 83, 126, 142, 144, 159

Oxidation of oils: 1, 2, 12, 39, 49, 67, 68, 74, 76, 123, 165

Plasticity: 13, 41, 52, 78, 81, 87, 90, 116, 120, 130

Rerefining (reclamation) of used oils: 45, 112, 127, 146

Standardization of viscometers: 21, 24, 26, 88, 110

Sulphur in oils: 31, 35, 49, 96

Testing lubricants: 6, 7, 16, 18, 19, 55, 147

Viscometers: 10, 11, 22, 23, 24, 26, 28, 33, 40, 42, 44, 47, 48,  
57, 58, 88, 93, 110

Viscosity: 22, 23, 27, 29, 34, 43, 50, 82, 89, 129, 135, 152

Wear: 100, 101, 156

