DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS

WASHINGTON

ADDRESS REPLY TO
BUREAU OF STANDARDS

MSVD:MEF

IN YOUR REPLY
REFER TO FILE NO.

III-4/LC282
5-22-30

Subject: Thermal Insulation

Acknowledgment is made of your recent inquiry regarding certain phases of the above subject.

The Bureau cannot recommend the use of any particular material or method of application, or answer such questions as "Which is best?," not only as a matter of policy, but also because of the fact that such questions are usually impossible to answer on account of the uncertain nature of the factors involved in each particular case. We are also not in position at present to give specific numerical data on proprietary insulating materials. The great expenditure of time required for continual tests on materials of this kind hardly appears to be justified at present, since the variations in the insulating values of materials within a number of fairly well defined groups are rather small.

General information concerning insulation and insulating materials will be found in Bureau of Standards Circular 376, entitled "Thermal Insulation of Buildings." We regret that this circular is not available for free distribution, but it may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents per copy (stamps not accepted). This circular contains the insulating values of a number of fairly well defined classes or groups of materials used for house and cold storage insulation, the difference between various materials within each group being so small as to be of little practical importance.

The standard methods of application of insulating materials are briefly mentioned in the circular, but no detailed information regarding special methods is available. Manufacturers or their agents usually have printed information regarding methods of application.

The Bureau has no available data on the thermal conductivity of insulators at high temperatures. The following references contain some data on this subject:

R. H. Heilman, "Insulation of Superheated Steam Surfaces, Trans. Amer. Inst. Chem. Eng.; Vol. 16, Part 2, p. 79; 1924.

L. B. McMillan, "Heat Insulating Properties of Commercial Steam Pipe Coverings," Jour. Amer. Soc. Mech. Eng.; Vol. 38, p. 8; 1916.

Respectfully,

George K. Burgess

George K. Burgess, Director.

E.F.M.