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DOCUMENT DESCRIPTION: Report - Calcium Silicate Test Data

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R. M. Kinsey ✓
J. L. McAllisterDATE: February 21, 1955SUBJECT: Calcium Silicate Test Data

Attached are test data on various calcium silicates and also on Carey Super Tempchem.

The Shret A is batch 194 dried in the plant dryer. Shret B is the same formulation dried in the incenerator.

Material referred to as the oldest is judged to be Faeco production prior to 1944; the new calcium is more recently manufactured material.

The data reported is the average of two samples of 1 1/2" th. block except the Tri-Calite, which was run on 2" th. block.

Heat soak tests were run for at least 16 hours at the indicated temperatures.

Underlined values indicate a failure to meet the requirements of either military specification MIL-I-27521 for Grade III, Class 1, Type 1 or Federal Specification IN-1-5252.

Where the test results are lower than those advertised by the manufacturer, they have been circled.

A record of visual observations is included.

The test work reported here was carried out by A. Clawson.

VISUAL OBSERVATIONS

Calcilite. C.I. at 1500°F. Cracked, warped and shrank excessively at 1650°F.

Haylo. C.I. at 1000°F. Cracked on contact surface at 1200°. Excessive shrinkage, warpage and heavy cracks at 1300°.

Metrel A. C.I. at 1000°F. Surface chipped at 1200 and 1300. Softened at 1650. Warpage and shrinkage. C.I. at 1750, but very soft and friable.

Metrel B. C.I. at 1000°F. Surface chipped at 1200 and 1300. Blue green color appeared at 1500. C.I. but soft at 1650. Very soft, fragile at 1750.

Caltemp (New and Old). C.I. at 1170°F. Excessive shrinkage warpage and cracks at 1325°.

Super Insulchek. C.I. at 1575°. Excessive shrinkage and cracks plus some warpage at 1725°.

Raytherm. C.I. at 1325. Excessive shrinkage warpage and cracks at 1425.

Tri-Calite. C.I. at 1170. Warped, split, cracked and shrank at 1425.

Thermobestos. C.I. at 1650. Shrinkage at 1225 just over limit. Excessive shrinkage, warpage and cracks at 1300.