PLAINTIFF'S EXHIBIT
PLI-117

PLIBRICO SPECIFICATION C-4
FOR
PLICAST SILICON CARBIDE
ABRASION RESISTANT REFRACTORY CEMENT

Plicast Silicon Carbide is a factory mixed dense refractory cement of trowelling, gunning or pouring consistency having hydraulic setting properties and hardening to a smooth abrasion resistant surface.

Plicast Silicon Carbide is shipped in a dry mixed form and is ready to apply after it has been mixed with clear water at the job site. 125 lbs. of dry material are required to place 1 cubic foot of Plicast Silicon Carbide.

Plicast Silicon Carbide is recommended for use in all high velocity catalyst transfer lines, regenerator plenum chambers, reactor cone sections, feed inlet piping, flue gas stacks, conductor pipes, and all other steel vessel or pipe surfaces requiring high abrasion resistant linings. Where this abrasion resistant lining is required to stand severe acid conditions, we recommend the use of our A-R Cement or Petroment covered in Plibrico Specifications C-1 and C-2.

In keeping with our technical services, we take pleasure in outlining general specifications for installing Plicast Silicon Carbide.

PLICAST SILICON CARBIDE
FOR
ABRASION RESISTANT CATALYST PIPING LININGS

A. Details (General)

1. Refractory lining will be Plicast Silicon Carbide refractory cement reinforced with a protective grid armor of 3/4" - 14 gauge armor grating or 5/8" - 16 gauge Floor-steel grating. Total lining thickness to suit operating conditions, but not less than 1 inch thick.

2. Armor grating will be supported by 1/4" or 3/8" thick x 2" long x 1" wide steel bar washers fastened to the inside shell by 3/8" thick studs of suitable length to space the surface of the steel grating at the inside face of the Plicast Silicon Carbide.

3. The steel bar supporting members will be spaced on 12" centers. Armor grating sections are to be welded direct to the steel bars.

B. Application Procedure

1. Clean interior of pipe by sandblasting or clean with accepted and approved solvents.

2. Weld steel bars and studs in place on 12" centers. Bars and studs to be hammer tested to assure quality weld.

3. Install armor grating sections. Grating sections to be rolled so that they fit snug against the steel bar washers. Weld each strand of adjoining grating section together. One - 1/4" long filet weld shall be used at each bar washer.

4. Mix Plicast Silicon Carbide with pure clean water following mixing instructions received with the material. Do not mix more cement than can be applied within 30 minutes.

5. Apply Plicast Silicon Carbide cement into the grating grid, working from the center to the sides, making sure that all voids are eliminated beneath the grating.

6. Plicast Silicon Carbide must be allowed to set 24 hours at temperatures above 40 degrees F., before being subjected to heat and placed in service. Plicast Silicon Carbide must not be allowed to freeze during this 24 hour period. The exposed surface of the Plicast Silicon Carbide should be kept moistened the first 12 hours of the curing period.

NOTE -- For additional specifications covering abrasion resistant linings, please see Plibrico Specifications C-1, C-2, C-3 and C-5.

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