PLAINTIFF'S EXHIBIT
CHV-567

A. P. GREEN FIRE BRICK CO.
Mexico, Missouri

A. P. GREEN NO. 36 REFRACTORY CEMENT

NO. 36 REFRACTORY CEMENT is a wet, air-setting, high temperature cement with exceptionally high bonding strength and refractoriness.

It has a high alumina base and is recommended for laying high alumina brick, super duty brick, or high temperature insulating firebrick where service conditions are extremely severe. With its high fusion point, it may be used for temperatures as high as 3200° F. NO. 36 REFRACTORY CEMENT is recommended for all types of brick where extra high bonding strength is needed in the joints for structural stability - also as a brush coat over new or old brickwork.

In addition to its application as a mortar, NO. 36 REFRACTORY CEMENT is an excellent material for troweling and is used for filling the scallops on the back side of tangent tube boilers.

PROPERTIES



High Refractoriness: NO. 36 REFRACTORY CEMENT is an exceptionally refractory material with a pyrometric cone equivalent of Cone 36 (temperature equivalent - 3279° F.). It can be used in service up to 3200° F.

Outstanding Bonding Strength: Where joints of unusually high strength are needed - in any temperature range - NO. 36 REFRACTORY CEMENT is ideally suited. It is as strong as any high temperature mortar on the market today. Just recently, a large furnace designer and builder tested a number of refractory mortars for the sole purpose of determining bonding strength. NO. 36 REFRACTORY CEMENT had the highest strength of all mortars tested and was specified for the job of laying 720,000 firebrick in soaking pits for aluminum ingots.

No Shrinkage: Any shrinkage in a high temperature mortar tends to destroy its bond as well as open the way for attack at the joint by flame, furnace gases, slags, or molten metal. In the laboratory, shrinkage is hard to detect in a mortar applied in thin coatings (1/16" or less). In thicker coatings (up to 1/4"), however, ordinary refractory mortars, if they have any tendency to shrink, will show a considerable number of shrinkage cracks. NO. 36 REFRACTORY CEMENT shows no shrinkage or cracking in coatings up to 3/4" thick, fired at 2550° F.

Smooth Workability - Excellent Adhesiveness: NO. 36 REFRACTORY CEMENT has good workability for laying brick. For troweling applications, it will adhere tightly to the back side of tangent tube boilers and yet is not difficult to trowel.

(over)

Storage Life: A very serious problem with some mortars of this type has been short storage life. NO. 36 REFRACTORY CEMENT has been designed to store satisfactorily for one year under normal storage conditions.

Packaging: Shipped in air-tight metal drums - 200-lb., 100-lb., 50-lb., and 15-lb. sizes - suitable for domestic or export shipment.

INSTRUCTIONS FOR USING

May be used in a dipping or troweling consistency. For laying brick in a dipping consistency, add only clean water in proportions of 3/4 to 1-1/4 gallons to 100 pounds of NO. 36 REFRACTORY CEMENT. When the floating brick test is used to determine proper dipping consistency, we recommend the brick be floated with about 1-1/4" of its 2-1/2" thickness above the surface of the mortar.

A good troweling consistency for normal brick-to-brick joints can be made by thinning the mortar slightly by the addition of 1/2 gallon of water per 100 pounds of cement. When used as a thick joint for leveling courses of brick, or when troweled on the back of tangent tube boilers, NO. 36 REFRACTORY CEMENT should be used without thinning with water.

ESTIMATING

Required to lay 1,000 brick ($9 \times 4\frac{1}{2} \times 2\frac{1}{2}$), dipping consistency - - - 400-500 Lb.

Required per cubic foot when troweling on tangent tube boilers - - - 150 Lb.

Required for brush coating old or new brickwork (1/16"coating), 100 sq. ft. of wall - - - 80-100 Lb.

TYPICAL APPLICATIONS

In general:

- For extremely high temperatures where severe service conditions are encountered.
- Where extra high joint strength is needed for structural stability.
- Where the high alumina content of the mortar tends to reduce chemical attack.

Specifically: (a few typical uses)

- For laying kiln liners in rotary kilns.
- For laying high alumina or super duty brick in electric furnace roofs.
- For laying high temperature insulating firebrick (2800°, 3000°, and 3200° brick).
- For brush coating and patching ladle linings.
- For troweling on back of tangent tube boilers.

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