PREMIER COMPONENTS, INC.

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## Attaching Weldable Ceramic Brick By Welding

Weldable ceramic brick is used for ease of installation and for high temperature applications. By using weldable brick, a wear resistant ceramic surface can be easily applied to any weldable surface. Each brick is provided with a preinstalled, force-fit steel welding insert (see figure #1) The force-fit insert will remain in place during handling regardless of the position of the brick. This feature is particularly helpful for overhead installation.

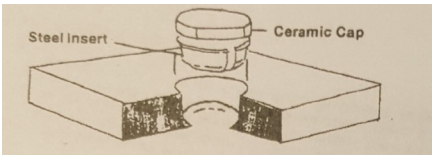


Figure #1—Weldable Ceramic Brick

**All Weldable brick are furnished with inserts in place. Caps included with all bricks.**

Weldable brick is available in numerous standard sizes and in 1/2", 3/4", 1" and 2" thickness. Brick up to 4" x 6" have a single welding hole, while longer brick have two holes with two welding inserts.

## Installation Procedure

### Optional Bedding Material:

The use of an epoxy adhesive bedding material may be advantageous when installing weldable brick. By securing the ceramic in place while welding, and increasing impact resistance. Typical adhesives are 773 "Regular Set" trowel epoxy, 63 "High Temperature Epoxy" and white or red RTV. A small amount on the brick underside and between each edge is all that is normally required. (see figure #2)

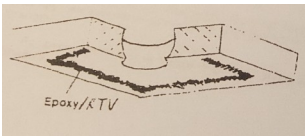


Figure #2 Weldable Brick Bedding

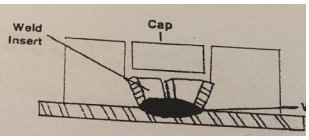


Figure #3 Weldable Cross Section

### Welding Techniques:

The normal insert is cold rolled steel which can be plug welded using conventional procedures. For corrosion resistant applications stainless steel type 304 or 316 inserts are available. Plug weld to fasten the bottom edge of the insert to the backing plate (see figure #3) Do not fill the insert more than 1/3 full or thermal shock (cracking) may result.

Do not splatter the weld as it may interfere with the fit of the protection. Verify that you have a good weld.

### Wire Welding (Mig Process)

Use a mild steel wire (typically AWS-ASTM E6053) of approximately 0.045" diameter. Set the machine at about 200 volts and 200 amps for a smooth sputtering arc. Gas flow should be low about 9-10 cubic feet per hour.

### "Stick" or Manual Welding

Use a 3/32" or smaller common steel electrode with a welder setting of 100 amps.

Be careful to strike the arc from the backing plate and not the insert.

**CAUTION:**

For weldable brick with two holes, the steel backing plate and the brick should not gap excessively. An excessive gap will put the ceramic in tension as the weld cools and reduces its strength. For brick with thickness greater than 1/2" install the provided protection cap with a suitable adhesive.

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