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Applicability	Group
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Guidance on Industry Standard for Miscellaneous Refractory Construction Details

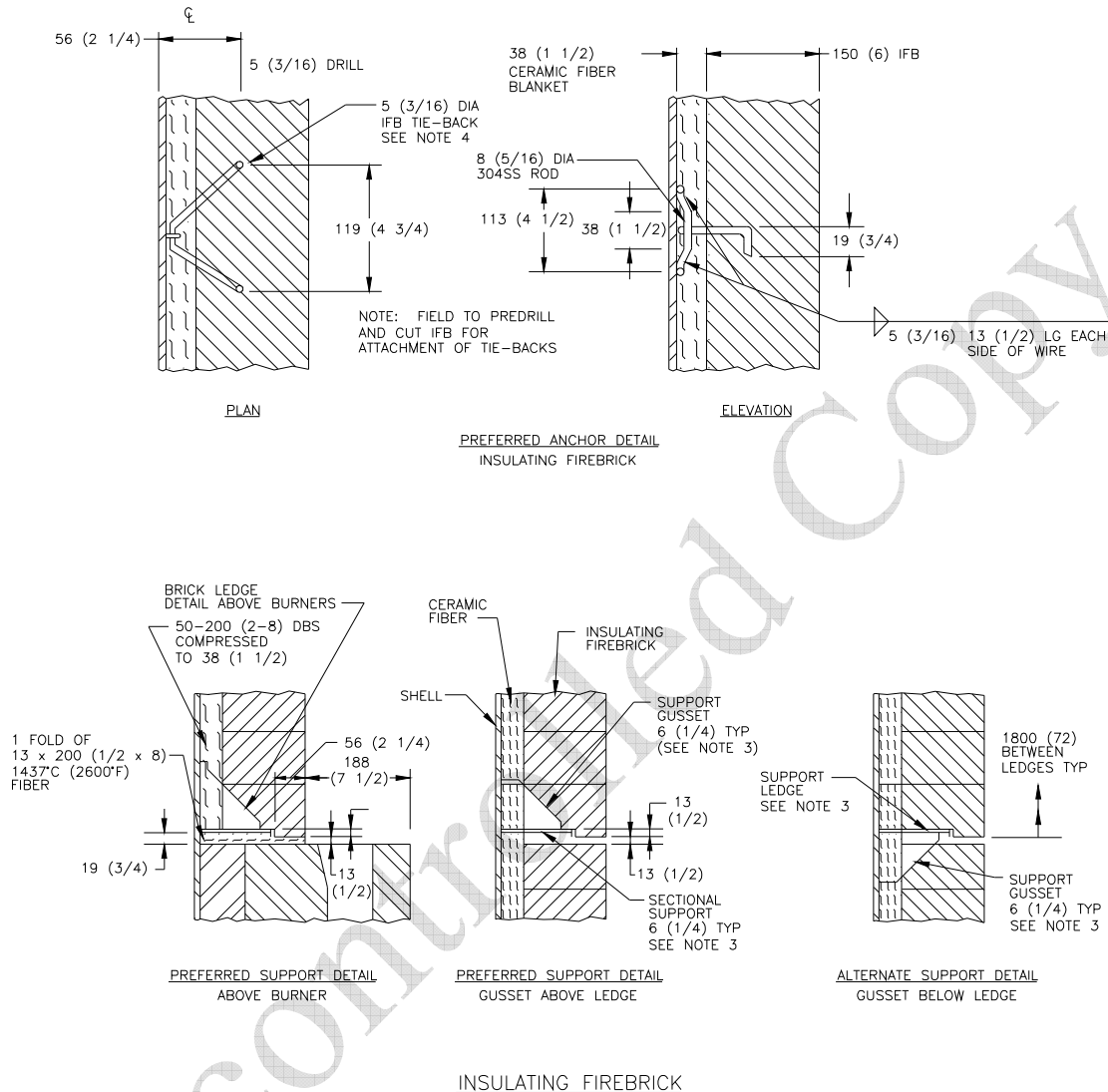
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BP GROUP
ENGINEERING TECHNICAL PRACTICES

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Figure 1 Insulating Firebrick Anchorage & Support Details

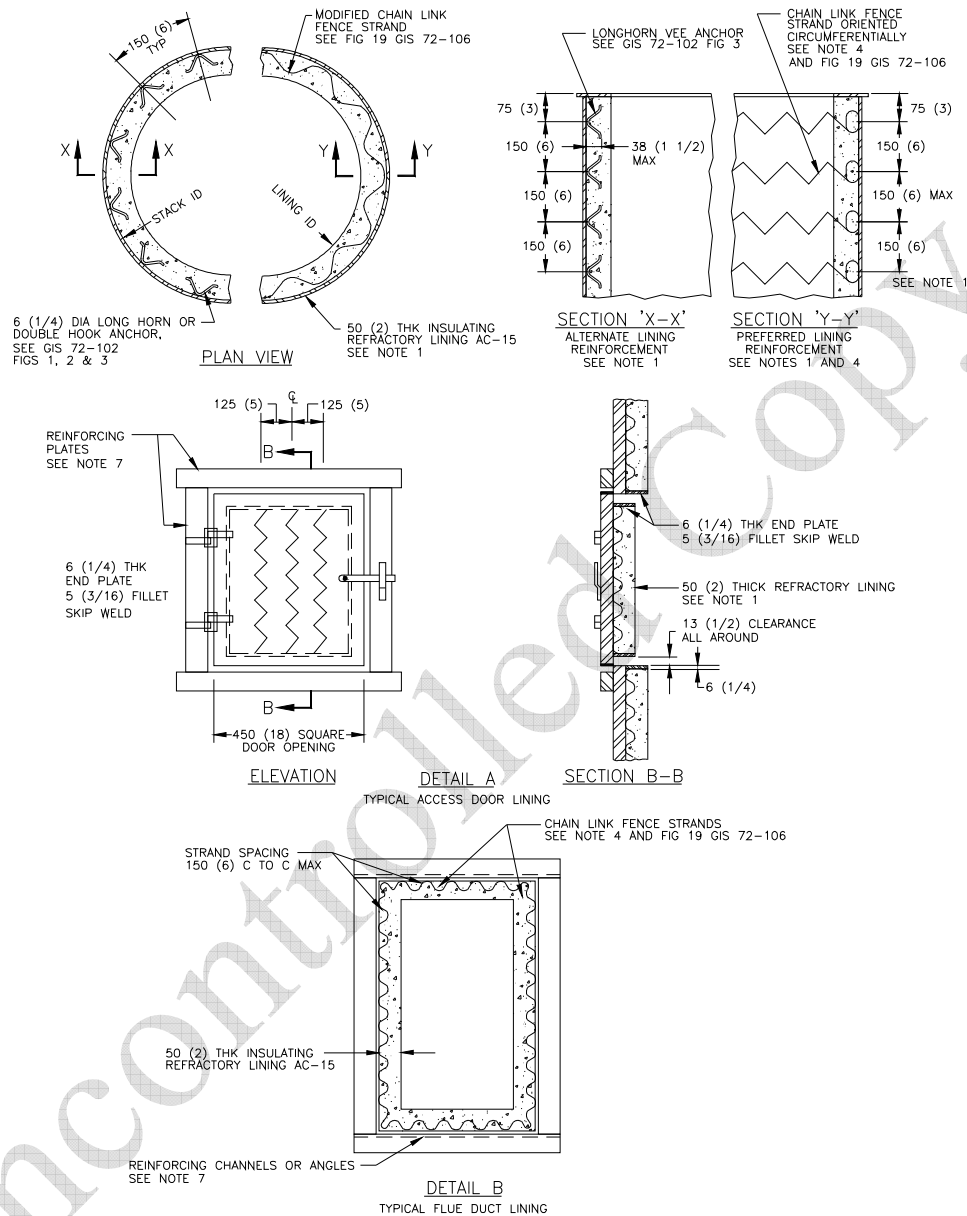
ALL DIMENSIONS ARE mm (inches)

Notes:

1. Brick linings at intersections between equal diameter pipes shall be laced construction
2. Drill holes from outside of vessel.
3. Support ledges and gussets shall be fabricated from type 304 stainless steel, unless otherwise directed in the drawing or job specification.
4. Insulating firebrick tie-backs shall be fabricated from type 310 stainless steel unless otherwise directed in the drawings or job specification.



Figure 2 Refractory Details for Breechings



ALL DIMENSIONS ARE mm (inches)

Notes:

1. A cast or one shot insulating refractory lining with 3% or 4% weight concentration, respectively, stainless steel fibre shall be applied to a minimum of 50 mm (2 in) thickness on the inside of the entire stack and flue duct.
2. Flue gas temperature shall be obtained from BP. The 50 mm (2 in) lining is acceptable for flue gas temperatures up to 650°C (1 200°F). For higher temperatures, the total thickness shall be increased, to keep shall temperature below 290°C (550°F)
3. For flue gas temperatures over 480°C (900°F), use 100 mm (4 in) spacing for 50 mm (2 in) thick refractory linings.
4. Section of woven chain link fencing welded on 150 mm (6 in) spacing is acceptable for flue gas temperature below 430°C (800°F).
5. Expansion joints shall be protected during gunning.
6. Lining material shall be proprietary mixes for above 430°C (800°F) flue gas temperature. Field mixes may be used for 430°C (800°F) or lower.
7. Openings shall be reinforced sufficiently to maintain the stack moment of inertia.

