35' ROTARY FURNACE REPAIR

(Above: Furnace with discharge door closed / Right: Inside with completed repairs)

Problem: Three rotary furnaces located at a forging facility in Houston, Texas were in desperate need of repairs. Unscheduled shutdowns from furnace failure resulted in disruption to the production schedule. If required repairs were not made to the furnaces they would continue to self-destruct and become a source of constant liability to the company.

Solution: The PTS approach was to provide support by means of scope development, bid specifications, material procurement, scheduling/planning, and construction management. This approached ensured contractors had a clear understanding of scope of work and duration of time given to make such repairs.

The PTS goal was to develop a scope of work that met the owner's repair requirements, improved furnace reliability, and could be completed within the scheduled shutdown period. The initial scope consisted of replacing: inside and outside water troughs, knife blades, retaining rings, hearth centering bearings, entire roof refractory, door sills & plate, furnace doors, door columns & beam door support, and substantial refractory repairs.

"With 24/7 Project Management and Engineering support, PTS managed 15,000 total man hours over a 16 day outage."

As the furnaces cooled down and PTS could finally complete inspections, it was clear more internal repairs would be required to achieve the level of reliability the owner needed.

Additional scope consisted of: rebuilding flues, chipping scale from floor, 100% new refractory sidewalls, wall burner replacement, wall burner repair, repair to structural roof, shoring & reinstalling new inner buckstay supports, and a new hearth floor.

Within 16 days the PTS team of construction leaders successfully managed the completion of the initial repairs in addition to the scope identified during the furnace cool down. The effort required immense communication and planning between various trades, contractors, plant personnel and management. In summary, the project required a workforce supplied by five different contractors working around the clock approximately 15,000 man hours. As a result of PTS' pre-construction planning, scheduling and construction management, the project was successfully completed on time.

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PTS PROJECT TECHNOLOGIES & SERVICES

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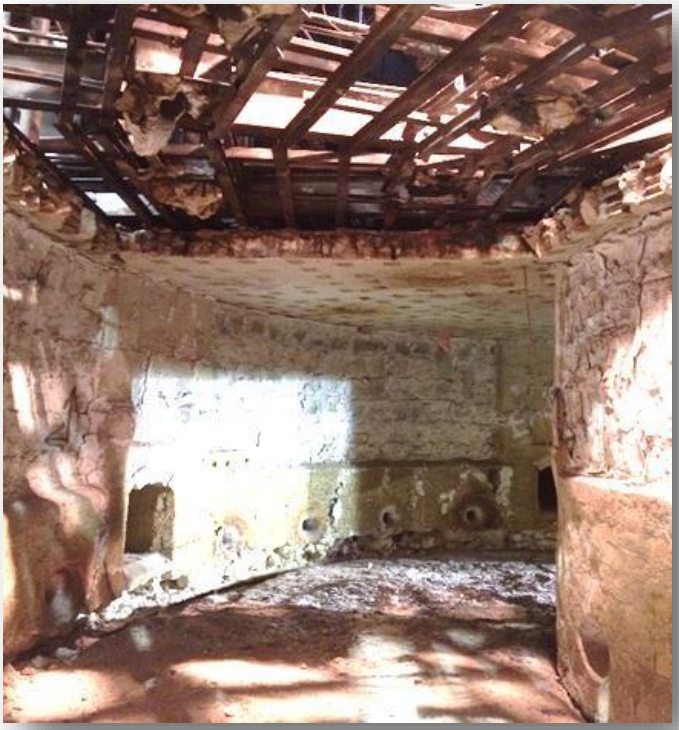

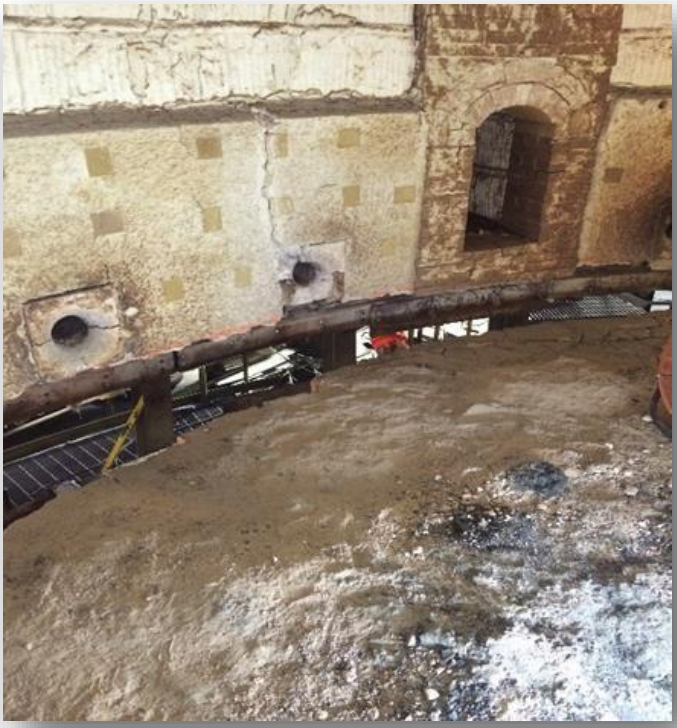

Left: Inside furnace highlighting damages to hearth floor, flues, sidewalls and roof.
Right: Shown with wall castings, water troughs, retaining ring and water seal blades removed.

Left: Repairs to hearth and lower wall after installation of new wall castings and water troughs.
Right: New flue, perimeter sidewall and hearth floor.

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