

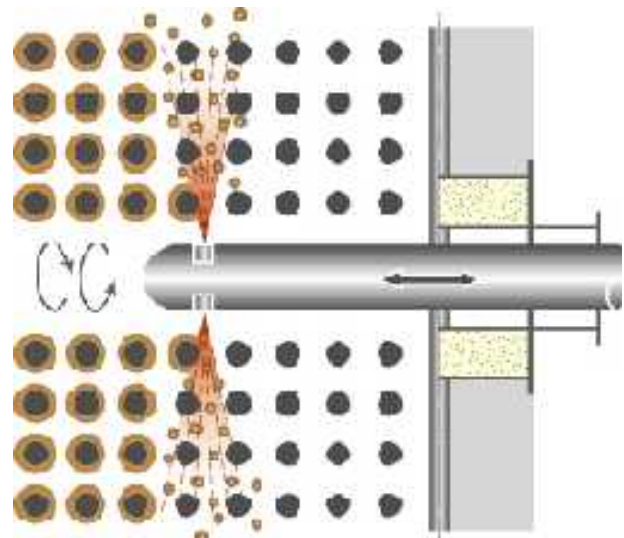
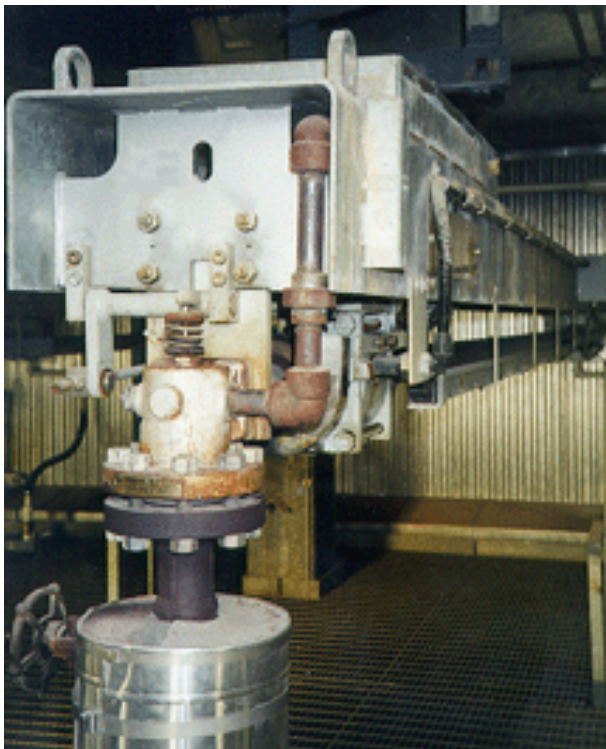


SOOTBLOWER UPGRADE PROJECT

POWER UTILITY – NORTH CAROLINA

As part of a design build effort, PENTA provided complete engineering and design for a Sootblower Upgrade project for a major utility provider. The scope of this project involved adding 38 mechanically new/ modified and 54 electrically new/ modified sootblowers to each of two boilers. This consisted of 20 new wall blowers, two new retract blowers, two new hybrid blowers, replacement of 14 existing wall blowers, rewiring two preheater blowers, and rewiring 14 retractable blowers per boiler.

One of the first tasks PENTA performed as part of this project was to study our clients proposed locations and compare this with the sootblower vendor data. We then prepared a detailed list of interferences and proposed solutions. This was presented to our client to evaluate against their boiler internals. PENTA facilitated resolution of these potential conflicts with our construction partner, the sootblower vendor, and our client.



PENTA's engineering activities included:

- Adding steam, air and condensate piping to support the new sootblowers.
- Replacing TWO existing PRV stations, including control valve, instrumentation and relief valve.
- Specifying a significant number of process components. This effort required extensive field evaluation.
- Performing comprehensive stress analyses to evaluate tie-ins to existing pipe that was not previously analyzed.
- Adding maintenance access platforms.
- Electrical design involving coordination of the vendor's proposed design with the DCS vendor, along with resolution of problematic wiring situations.