



## Chemical cleaning of a boiler

An oil refiner recognised the need for chemical cleaning of a water side steam generation boiler as part of its maintenance programme.

After analysing the residues, CTP environnement suggested the following successive treatments for this chemical cleaning operation:



- Decoppering to remove all the copper oxides originating from air cooled condenser tubes
- Chemical cleaning to remove the layer of iron oxide (magnetite) accumulated over time
- Pre-passivation and passivation to re-create a necessary new passive layer of iron oxide (maghemite).

Clogging of the boiler proved to be uniform in terms of chemical composition but was unevenly distributed in various areas.

Whilst control of the chemistry is important in chemical cleaning, some consideration should be given to the engineering aspects of the procedure to ensure the correct exposure of residues to solutions, above all for equipment not designed to be cleaned by circulation using an external pumping unit.



**CTP environment's chemical and hydraulic expertise enabled this operation to be completed successfully, to the client's entire satisfaction on both a technical and organisational level.**