

Coke Calcining Plant Configuration

● Application

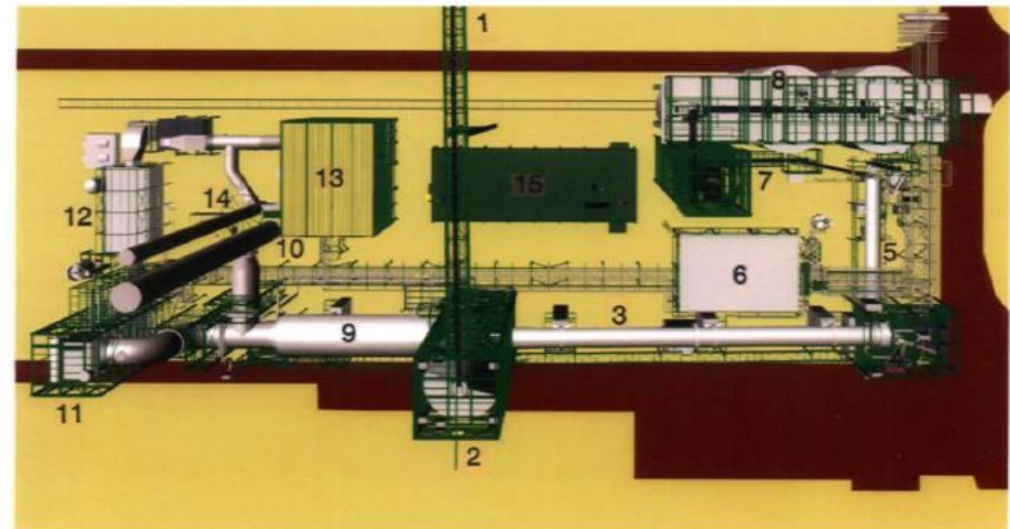
- Coke Calciner Recuperator

● Working Conditions

- Oil fumes rich in vanadates at 850°C
- Metal surface 570°C
- Low pressure (welded tube)

Current solution
TP310 (bare)

Scheme of a typical modern coke calcining plant based upon the rotary kiln technique (bird view).



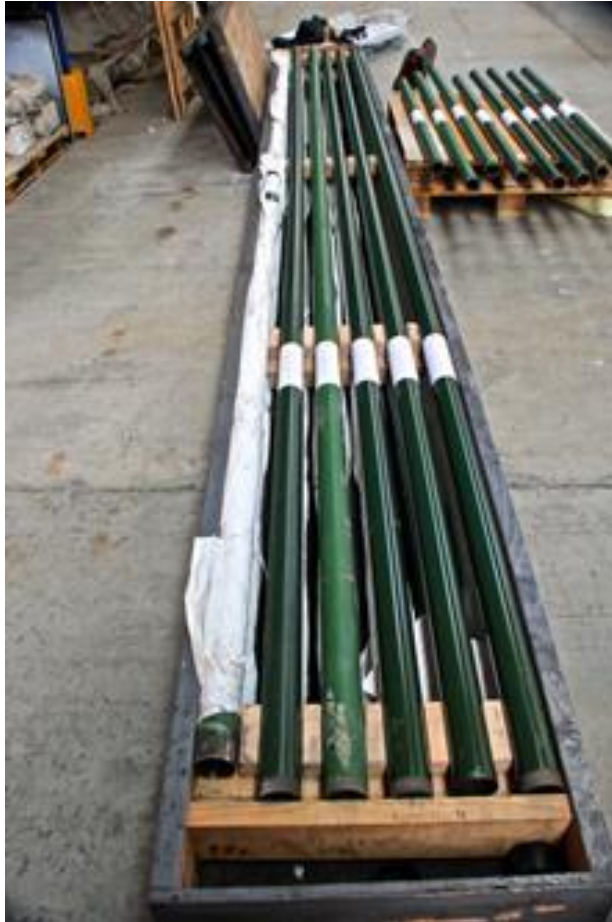
1 GREEN COKE CONVEYING BELT ¹	6 AIR COOLER	11 WASTE HEAT BOILER
2 GREEN COKE FEED BIN	7 PRODUCT CONVEYING SYSTEM	12 BAGHOUSE DUST FILTER
3 ROTARY KILN	8 PRODUCT STORAGE SILOS	13 DESULPHURISATION UNIT
4 KILN FIRING BUILDING	9 INCINERATOR	14 STACK
5 (INDIRECT) COKE COOLER	10 EMERGENCY OR BY-PASS STACK	15 CONTROL - / MCC ROOM

Source: Technip Germany. Coke Calcining Plants June 2008



Chemical corrosion

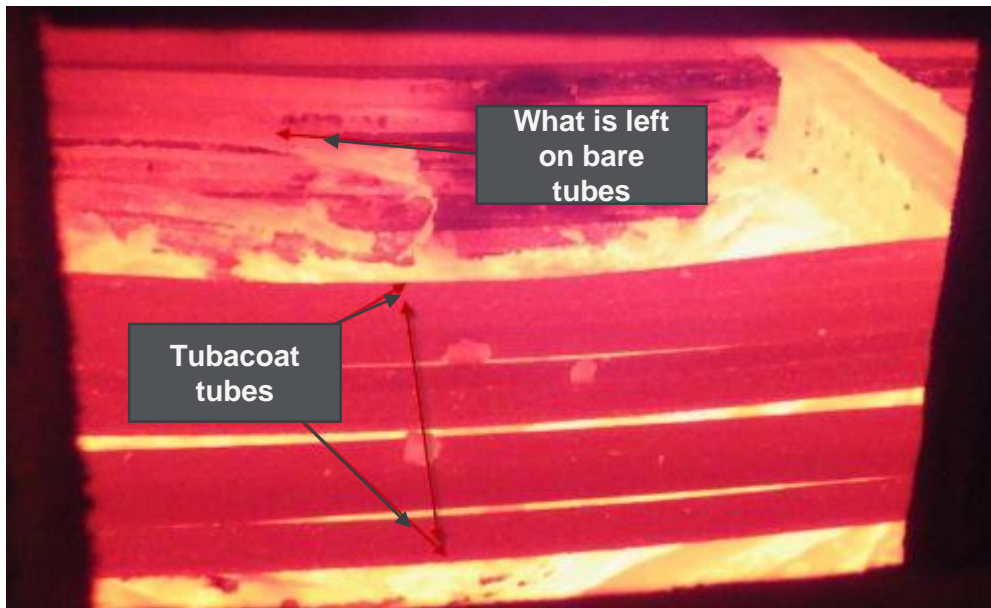
Efficiency loss



TUBACOAT SOLUTION

9 TP310 (OD63.5;WT2.41) outer coated prototypes were placed in the upper row (the hottest) of the calciner recuperator on May 2015

TUBACOAT SOLUTION



(Image @ 10 months working)

Only the **9** coated tubes were remaining in the area, even suffering overheating during last weeks of operation prior to planned plant shutdown

The rest of tubes were broken and blinded

PO
850 units
Apr'17