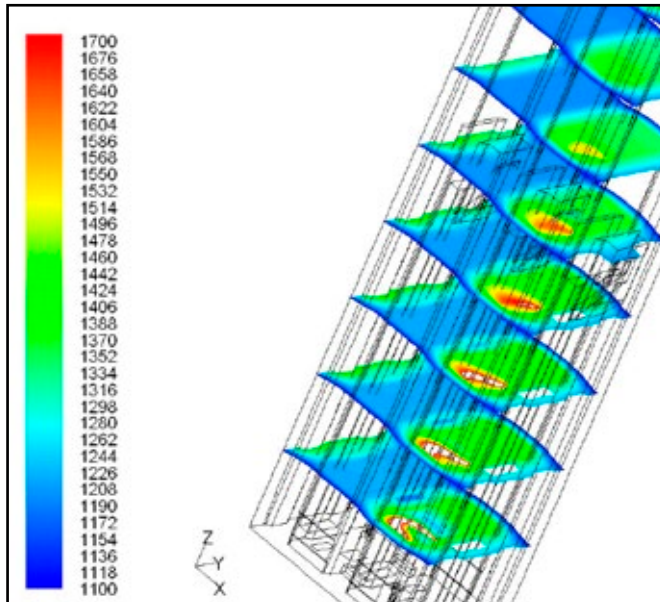


PAUL WURTH SERVICING
FLUE GAS COMBUSTION IN COKE OVEN PLANT


Heating wall: Temperature on cross sections

ANALYSIS AND OPTIMISATION

In order to minimise fuel consumption and reduce NO_x emissions from the heating walls of a coke oven battery, **Paul Wurth** offers its customers the optimisation of the flue gas combustion by means of:

- a more homogeneous thermal profile
- the limitation of thermal “hot spot”
- control of Oxygen and Carbon Monoxide distribution

Computational Fluid Dynamics models

For this purpose, **Paul Wurth** has developed Computational Fluid Dynamics models based on commercial CFD software. These simulations take into account the interactions between fluid dynamics, heat transfer and chemical phenomena.

Paul Wurth developed CFD models on the basis of the return data from an operating plant. The model was then customised to specific coke oven battery design and simulations are extensively carried out:

- during the design phase, to identify the optimal configuration of complex systems, in terms of geometry and process parameters;
- during operation, to provide a powerful tool to assess the process performance.

In particular, during commissioning or plant operation, Paul Wurth offers the possibility to collect and analyse operating process parameter, aiming at verifying actual performances and possible optimisation.

