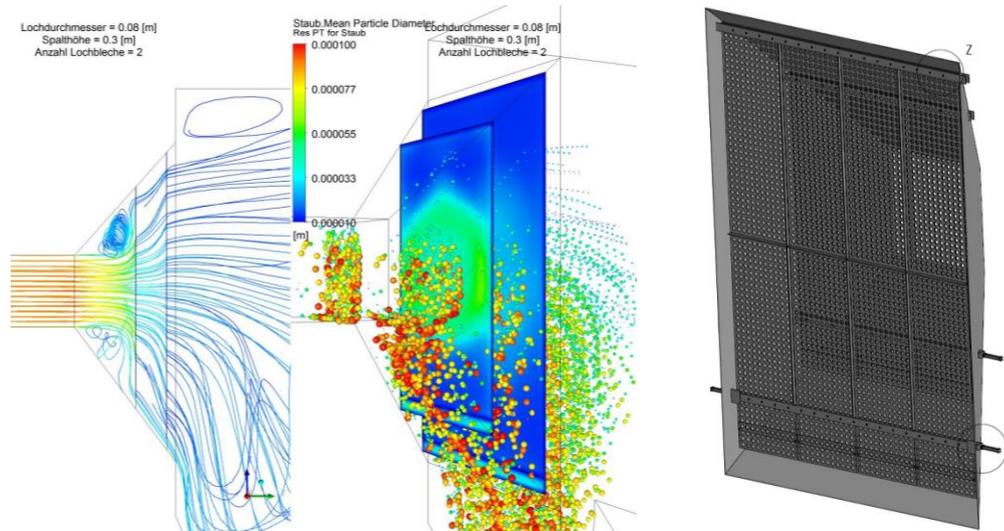


Client: AVG Hamburg
Project: Optimization of inlet hood on the ESP
Services: Feasibility study, preliminary planning, construction assistance



General

The AVG incineration plant in Hamburg experienced an increase in soiling through the impact of waste. This meant that the perforated sheets in the inlet hood of the electrostatic precipitator were becoming coated with fly ash to a greater extent. This in turn led to rise in pressure losses in the flue gas through the inlet hood at short intervals. Therefore, in order maintain operation, blast cleaning had to be performed regularly.

The aim of the proposed measure was to optimize the flow of flue gas into the inlet area to reduce this soiling tendency as far as possible. In addition, by improving cleaning of the perforated sheets, the build-up of the dust layer is slowed down considerably.

Planning work

A baseline study was made which was used to modify the design of the perforated sheets and the flow baffles. This was all illustrated in a 3D model. On this basis, flow calculations were made by CFD simulation.

The design was optimized based on the findings, reducing the number of perforated plates from 3 to 2 and increasing the hole diameter.

In addition to the baseline study and concept development, the scope of services provided by T&N also included the 3D graphic display, supervision of the flow analyses, development and illustration of optimized alternatives for implementation, as well as a static concept.

The enquiry was prepared on the basis of arrangement drawings and descriptions.

The documents prepared by the supplying company including the shop drawings were checked and harmonized by T&N.

Implementation

The measure was implemented on one line in August 2017, with the assistance of T&N, as was the commissioning and adjustment of the cleaning devices.