

## **Frustum Hood and FTP at Ovako**

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### **INTRODUCTION**

Ovako is a leading European producer of engineering steel for customers in the bearing, transportation and manufacturing industries. Ovako conducts environmental activities with a focus on continually improving steel quality and providing more environmentally friendly solutions. Reducing greenhouse gas emissions and energy consumption are a priority since these represent the most significant environmental aspects of Ovako's business. For the new investment in Smedjebacken the target of the emission was to maintain all the task foreseen by the BAT in terms of emissions and for this job SMS Concast was selected as it already revamped the Water Cooled Duct and Combustion Chamber during summer 2012.

SMS Concast is historically well known as the leader in Continuous Casting Machines and for near two decades it has also been a strong supplier of complete Meltshops and process technology for the production of Long Products. Since the Fume Treatment Plant (FTP) is a key component in global meltshop efficiency and environmental issues, the company has developed over the years its own know how and expertise to treat the fumes produced both by EAFs and by secondary metallurgy.

The good cooperation between Manufacturer and End User allowed to have the right conditions to work in a safety manner and to obtain at the same time a level of performances that exceeded the expectations.

Over recent years, market demand has been more sensitive towards the reduction of electricity consumption and towards the optimizing of the suction performance during the different melting phases. Thanks to the rapidly evolving technology of the inverters (VVVF), the great majority of FTPs have been equipped with the main fan motors.

To follow market demand for a further reduction in the cost of electric energy, Ovako Smedjebacken has installed some pioneer solutions of new arrangements on Canopy Hood, Ducting, Quenching Tower and Filter-Stack group that allows the FTP to work with Total Pressure values below 3000 Pa (12" wg). This is very close to the physical lower limit achievable for an industrial plant without having significative increase of maintenance cost due to frequent dust removal from the ducts.