CASE STORY

Secondary cooling
RE ALLOYS

Re Alloys has been producing and selling ferroalloys since 2001. The mission is the efficient production of high-quality commodities using innovative and environmentally-friendly technologies. Ferroalloys (alloys of iron and other elements) are used to deoxidize steel and introduce alloy additions. Multicomponent alloys based on silicon, magnesium and calcium are used in the foundry in order to modify and modularize cast iron. Re Alloys' main products are ferrosilicon, silicon-based alloys and silica dust SILIMIC.

The cooling system at Re Alloys used to consist of circulating water with very high conductivity due to the lack of make-up water. The cooling system did not bleed and no fresh water was added. As a consequence, the circulating water turned out to contain a lot of rust and other particles from the corrosion of the pipes. The large amount of debris in the cooling system was continuously clogging the shell and tube heat exchangers and Re Alloys faced a problem with the efficiency of the cooling system. The Bernoulli filter seemed to be the ideal solution, with a continuous filtration also during the cleaning sequence and with a simple and reliable construction.

As a first step, two BSG 250 Bernoulli filters were installed with 1 mm perforated filter baskets. No additional work was needed, except small changes in the existing piping. To reduce the amount of fittings used, one filter was installed upside down. Due to sufficient system pressure in the filter inlet, it was possible to install pretty long flushing lines, without any buffer tanks and pump stations. This was another reason to choose Bernoulli filters, which require a very low flushing pressure.

Facts and figures

Customer: Re Alloys

Location: Łaziska Górne, Poland

Application: Secondary cooling

Filter model: 2 x BSG 250

Filtration: 1,0 mm

Operating flow: 2 x 600 m^3/h

Operating pressure: 6 bar g

Design pressure: 10 bar g

BERNOULLI SYSTEM

Bernoulli System AB | Skiffervägen 20 | SE-224 78 Lund, Sweden | Phone +46 46-38 55 10 | Fax +46 46-38 55 19 | www.bernoulli.se | info@bernoulli.se