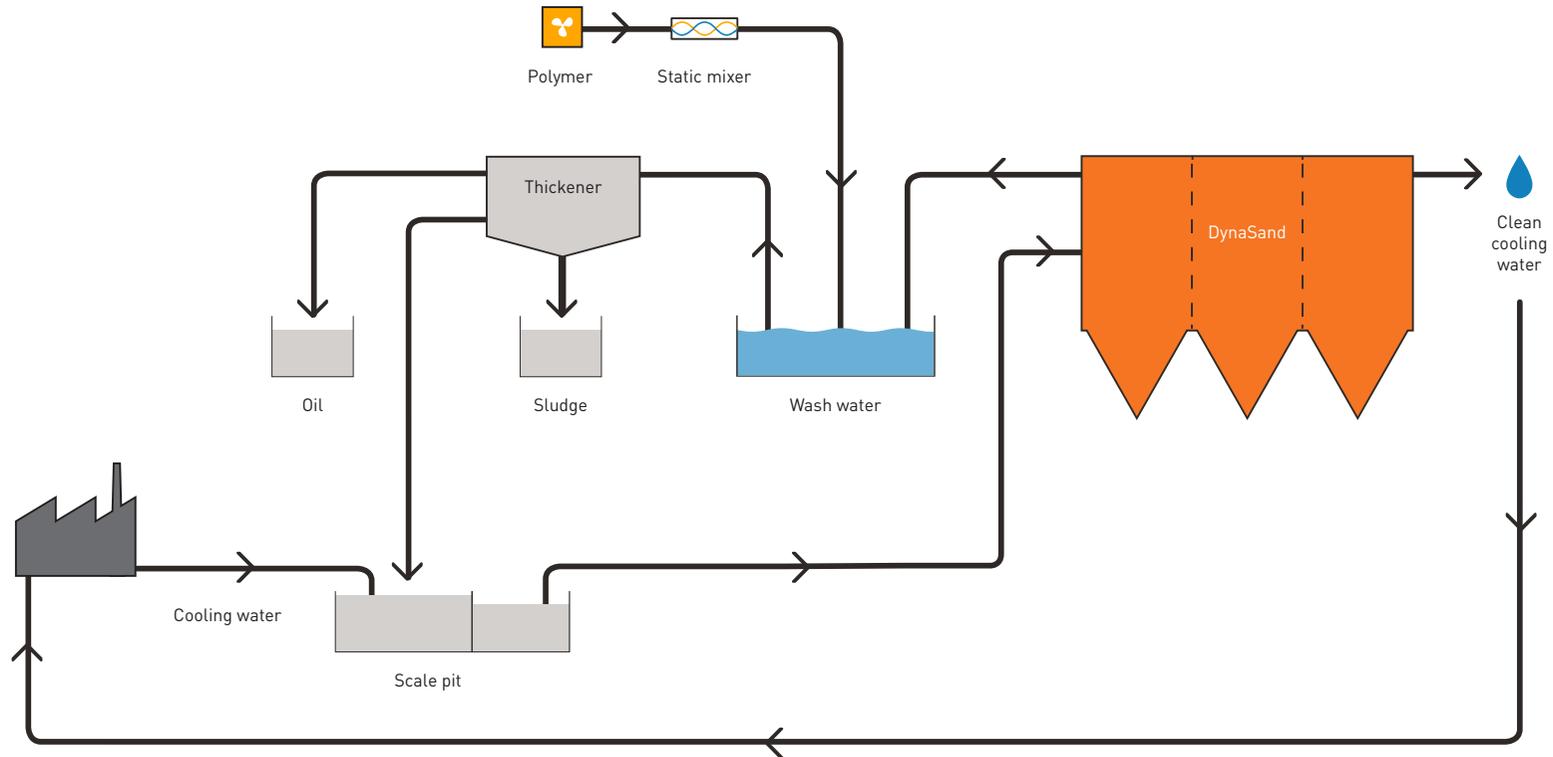


MILL SCALE SEPARATION

FEWER FILTERS AND LOWER COSTS



Mill scale forms during steel production. It is a thin oxide coating that is created when steel is hot-rolled. When the steel is cooled down with water during the rolling process, the mill scale breaks off. The cooling water is re-used over and over again, which means that mill scale and oil residue particles need to be separated off. Mill scale often also contains valuable alloying elements such as tungsten, vanadium and molybdenum, which provides a strong incentive to recover the separated material.

Fewer filters and lower costs

When it comes to separating a hard material like mill scale, the continuous movement of sand in the DynaSand system truly comes into its own, partly because it clears away very high amounts of accumulated mill scale and partly because it enables you to achieve excellent separation results with very high flow rates. This means fewer filters are required and the investment and operating costs are low. In these types of application, the flow rates for DynaSand filters are usually in the range of 20-30 m/h. The mill scale

contents processed often amount to a full 400 mg/l. This process is also relatively insensitive to oil emulsions and has proved to be very effective at separating them too. A lamella can be used to take care of the wash water from the DynaSand system, or a Sala thickener with a rate of 2 m/h. Polymers are added to the thickener. Our tried-and-tested process solution for mill scale has been installed in more than 150 steelworks over the past 20 years.

Input values:
 SS: < 400 mg/l
 Oil: < 50 mg/l

Output values:
 < 10 mg/l
 < 5 mg/l

Example: Oxelösund steelworks, Sweden
 Production approx 10,000 tonnes of steel
 Cold water flow rate: 1,120 m³/h
 Filters: 20 pcs, total filter area of 100 m².
 Temperature: 25-30°C.

Input values:
 SS: 30-100 mg/l
 Oil: 5-15 mg/l

Output values:
 < 10 mg/l
 < 2 mg/l