

Application Report No. A 02-1e

Descaling of Billets in Roller Mills

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S.Smets

The prices which a steel plant can realise for its products in the world market depend on the quality of the product. The manufacture of high quality steel for steel slabs and billets demands a fully efficient descaling process. If the descaling process is not carried out properly or is done incompletely problems will arise in the course of the milling since scale remnants are rolled into the steel.

In recent years, there is a trend towards higher pressures (above 200 bar) combined with a reduction in flow. Very often, centrifugal pumps with high flow rates and low pressures are used for this application but they have two major disadvantages:

1. The high water capacity cools down the steel too intensively.
2. High energy costs for water supply, filtration and in-plant pumping systems.

KAMAT is meanwhile recognised in some of the largest steel plants worldwide as being a competent manufacturer of pumps and valves. A good example of our competence can be seen in a large steel plant in India. Here, the entire pump installation has a power rating of 8,800 kW and comprises 16 pumps of the model K 55000, supplied as 8 double-pump units, each with two 550 kW pumps.



Photo above:

The picture shows two of the double-pump units described above (1100 kW) shortly before shipment to India

Photo on the left:

KAMAT pump station consisting of 3 pump units, each of 250 kW power rating, installed in the Bhilai Steel Plant in India. This system was supplied in 2002 by the company SMS.

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Photo above: On the billet leaving the furnace the scale is clearly visible



Photo below: This billet has been descaled with high pressure water. The dark marks which can be seen on the glowing steel are water drops only.