

Customer reference case

High-temperature bearings

Steel mills

Coil box



A cool solution for a hot environment

Due to extremely high temperatures, steel sheet manufacturer, SSAB Tunnpåt AB, had to deal with the annoying chore of having to change the bearings in a coil box every other week. As a result, the company turned to SKF, which installed its high-temperature bearings to deliver a solution that increased the service life by 40 times!

SSAB Tunnpåt AB is the largest sheet steel manufacturer in Scandinavia and a European leader in the development and manufacture of high-strength steel grades. It has a turnover of 1 billion euro and has an annual production capacity of more than 2,5 million tonnes.

At the company's hot-strip rolling mill, in Borlänge, Sweden, 220 mm thick steel slabs are heated in large furnaces and then rolled down to raw strip with a thickness of a few millimetres. The resulting coils are either sold as hot-rolled strip, cut-to-length, or processed further.

In the process between the roughing mill and the mill train, a coil box has been installed. In the arm that guides the coil into the box, there are two rollers that rotate to prevent surface damage to the coil.

Previously, these rollers had a complicated cooling and lubrication system, as the bearings in the rollers were constantly exposed to a temperature of almost 1 300 °C. In order to get the bearings to last for any period of time,

they were continuously cooled with water and replenished with grease. This bearing arrangement started to seize after one week and had

a service life of around two to four weeks.

Each roller costs around 2 500 euro, and the annual cost for new rollers amounted to more than 100 000 euro. Costs for the cooling and lubrication were also high and so the company turned to SKF to provide a better solution.

The rollers are now equipped with a system that contains SKF high-temperature deep groove ball bearings, equipped with graphite separators which function as cage and contain lubrication. There is no need any longer for a complicated cooling and lubrication system and the roller arrangement has a service life of 1,5 years, instead of the previous two to four weeks. The annual cost for new rollers is now 2 500 euro instead of the previous 100 000 euro.

For more information please contact your local SKF office.



Operating conditions

Bearings:	VA228 VA208
Operating temperature:	
Coil	1 300 °C
Bearings:	high peaks up to 350 °C
Speed:	2 m/s

Customer advantages:

- ✓ Increased uptime
 - ✓ Reduced maintenance at fixed intervals
 - ✓ No complicated cooling and lubrication system
 - ✓ Environmentally friendly solution
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Financial outcome:

Reduced cost for spare parts
> EUR 97 500/year

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