SKF takes on the challenges of the metals industry

With SKF ConRo, CO_2 emissions, grease consumption and hazardous waste are significantly reduced

Environmental benefits

- Reduced CO_2 emissions
- Reduced hazardous waste (associated with disposal of lubricants)
- Reduced energy use (associated with re-lubrication)
- Grease consumption nearly eliminated in roll line units

SKF ConRo extends roll line unit service life by 25% or more and reduces total operating cost of up to 50% per roll line unit.

SKF ConRo roll line units provide customers with enhanced reliability with increased productivity in continuous casting operations.

Unlike conventional roll line units, SKF ConRo is re-lubrication free; this eliminates grease consumption, which translates to significant customer cost savings. Additionally, the robust design of SKF ConRo extends the roll line unit service life by 25% or more. Together, customers can expect total operating cost reductions of up to 50% per roll line unit.

In turn, SKF ConRo roll line units save an estimated average of 1.5 tonnes CO_2e per roll line per year. In a normal-sized continuous casting machine with 400 roll lines, this means an annual CO_2 reduction of approximately 600 tonnes.

SKF has also developed a concept for refurbishing roll line units to further increase resource efficiency. This concept reduces negative environmental impacts associated with metals manufacturing, as well as end-of-life disposal of roll line components.

SKF BeyondZero solutions can help reduce CO_2 emissions, preserve limited resources and protect the environment from the use and spread of toxic substances. For more details, including documentation of reduced environmental impact, visit www.beyondzero.com

SKF ConRo reduces roll line operating costs by up to 50%

Operational benefits

- Lower total cost
- Increased productivity
- Reduced operating costs by up to 50% per roll line
- Increased roll line service life by 25% or more
- Change rolls up to 30% faster
- No re-lubrication costs
- Less waste (e.g. grease)
- Less contamination (machine and water)

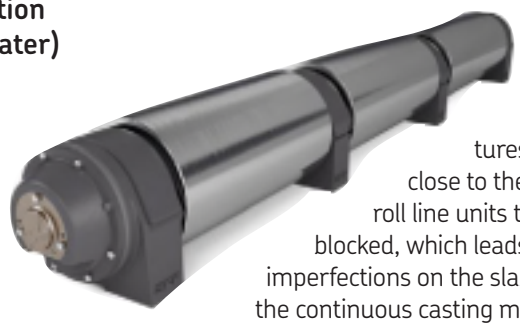
Operational features

- Sealed bearings
- Special sealing cartridge
- High performance SKF grease
- Fully cast housing
- Safe seal material
- Component recycling concept

A common problem

Typical roll line units have conventional open spherical roller bearings that are lubricated by a centralized automatic lubrication system that pumps grease through their bearings.

The continuous casting process demands large amounts of water to cool the material being cast and the machine components to avoid overheating. But even under the best operating conditions, the grease and water will mix.



When the mixture is exposed to high temperatures, it solidifies close to the rolls causing roll line units to become blocked, which leads to surface imperfections on the slabs. As a result, the continuous casting machine must be shut down for costly unplanned maintenance and productivity drops.

To help prevent these unplanned stops and the rework of lower quality slabs, frequent maintenance shutdowns are scheduled to remove roll line units for overhauling. This is an expensive cycle that increases maintenance costs while reducing productivity and, ultimately, profitability.

The SKF ConRo solution

SKF ConRo roll line units are fully sealed and virtually maintenance-free. These features deliver enhanced reliability for increased productivity and performance.

Similarly, SKF ConRo roll line units deliver significant cost savings realized from decreased grease consumption, less unplanned downtime, while simple mounting procedures reduce actual maintenance repair time.

Finally, there is also less hazardous waste generated during wash downs, so the overall environmental impact of the mill is reduced.

The environmental impact of SKF ConRo is lower for almost all categories compared to conventional open and sealed spherical roller bearings arrangements. It should be noted that there may be environmental tradeoffs not mentioned here.

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