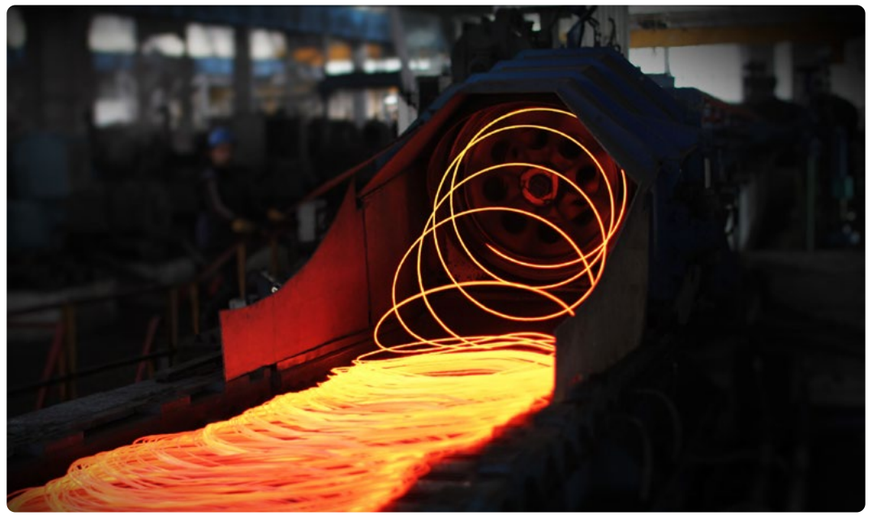
SKF

ADVANCED SEALING SOLUTIONS FOR METALS INDUSTRY

Engineered for higher performance and reliability



60%

of production costs in a steelmaking operation are influenced by the efficiency and effectiveness of the operation and maintenance activities

Seals forged to endure

Achieving a high Overall Equipment Effectiveness (OEE) is significantly challenging, specially under very harsh conditions , due to:

- Very high temperatures
- High speeds and torque
- Heavily contaminated environment

Unplanned maintenance stops could reach 3 to 5 times the cost of planned maintenance.

A non-functioning seal is, in many cases, the root cause of frequent unplanned stops

According to our bearing investigation data, circa 20% of bearing failures can be attributed to sealing issues, allowing loss of lubrication or contamination ingress.

Our seals make the difference for steel industry since decades, and now, thanks to Tenute know-how, we are heading to innovate the metal industry, here's how:

- Partners rather than customers
- Outstanding seal quality
- Our knowledge is knowing-why
- The right design for every application
- Proprietary skills
- Life span aligned with maintenance cycle

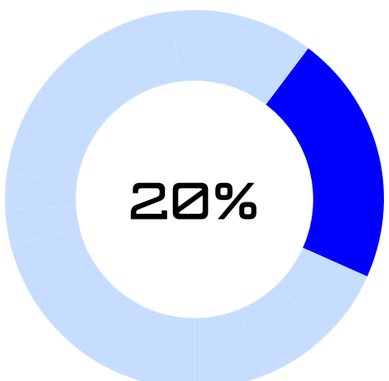
Trust your machines, they got our seals

What if you could make better seal choices to increase reliability of your operation?

What are the main problems that can lead to unexpected downtime?

- Ingress of water, scale and dirt
- Lubricant becomes ineffective
- Smearing on functional surfaces of the bearings
- Quick seal aging
- Seal shrinkage
- Lack of seal rigidity
- Rubber hardening
- In-service bearing failures
- Premature bearing maintenance needs
- Increased maintenance and replacement cost

We are committed to enhancing the reliability of processes and reducing maintenance costs to achieve manufacturing excellence and improved Overall Equipment Effectiveness (OEE). Customers looking for cost-effective and reliable machine operation can rely on us.



of bearing failures can be attributed to sealing issues

Sealing a longer life for your bearings

What if you could make better seal choices to optimize you maintenance cycles?

This is nothing new: metal industry is known for its harsh conditions.

Extreme heat, dirt and other contaminants, pressure, friction and more. Not only external agents, but also lubricants to keep firmly inside the bearings.

All of these elements cause bearing life to be put to the test and often lead to shorter life cycle and even more maintenance and higher Total cost of ownership (TCO).

Our sealing solutions excel in demanding environments, offering outstanding wear and temperature resistance, reduced lubricant consumption and simplified mounting and dismounting procedures.

Our seals are made with durable materials and innovative design and processes, allowing our customer to better align their lifespan with maintenance cycles, even increasing time between maintenance.

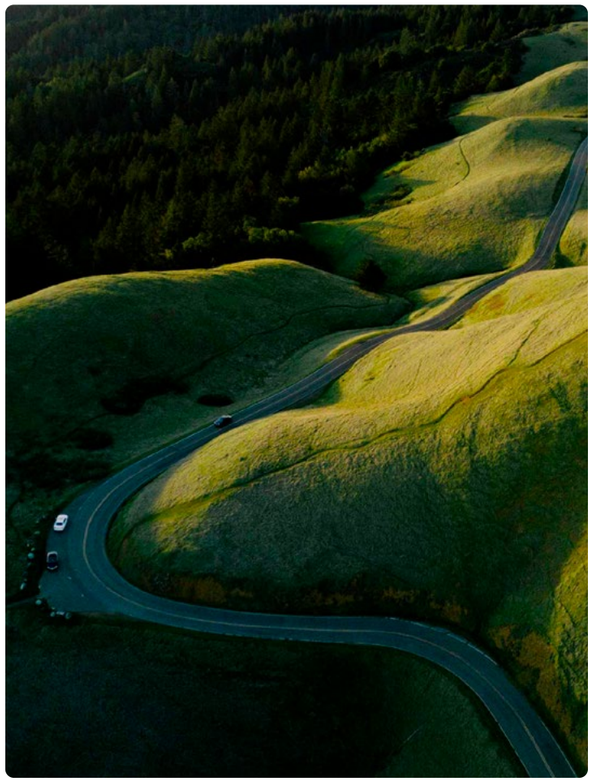
Let’s seal a better tomorrow

What if you could make better seal choices to reduce environmental impact?

If we look deeper into the concept of sustainability, the meaning is more complex than just reducing CO_2 emissions and it is based on three pillars: Environment, Business, and Society or, in other words, The Planet, The Profit, and The People. Only the integration of actions in each of these dimensions would lead us to a holistic approach to globally develop a more sustainable society.

By keeping contaminants out, our seals can extend the lifespan of bearings, reduce waste and make environments safer for the people within them.

Every small action can have significant effects, particularly when it comes to the environment and sustainability. The use of proper seals not only improves efficiency and productivity, lowering TCO, but also reduces the loss of environmentally harmful lubricants.



Hydraulic seals
for hd cylinders

Standard shaft
seals

Heavy industrial
shaft seals

SKF’s ultimate metalworking solution

Temperature and speed extremes; high and constant shock loads; abrasive dust, aggressive chemicals and high humidity – it’s safe to say that few industries can match the extreme operating conditions in steel and other metal mills.

These conditions degrade equipment, cause unplanned downtime and make effective maintenance difficult at best. Increasingly stringent environmental and health-and-safety regulations are also making environmental protection and employee safety top priorities in the industry today.

Nevertheless – as risky, capital-intensive and volatile the industry is – there is still a need to increase productivity and profitability. Being able to stand up against intense global competition calls for flexibility and specialized solutions.

Discover how SKF can help you stay ahead and discover the full range of seals that will change the way you think about rotation.

Catalogue seals	Rubber fabric shaft seals	Rubber metal shaft seals	V-ring seals, SKF Speedi-Sleeve, Hydraulic seals, Standard shaft seals
Catalogue seals flexible in size	All rubber shaft seals	Metal-cased rubber shaft seals	Machined shaft seals, Machined hydraulic seals
Engineered solutions application specific	Rubber fabric shaft seals	Rubber metal shaft seals	Machined shaft seals, Machined hydraulic seals

Profiles overview

Catalogue seals


TR/3 (HFS)


TR/3/P (HFSA)


TR/3/CS (HFSG)


T11 (HFF)


T11/P (HFFA)


T11/CS (HFFG)


TR/3/M (HBS)


TR/3/M/P (HBSA)


TR/3/M/CS (HBSG)


T11/M (HBF)


T11/M/P (HBFA)


T11/M/CS (HBFG)


TR/3/ML (HLS)

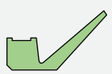

TR/3/ML/P (HLSA)


TR/3/ML/CS (HLSG)


VA


VL


VE


VRME


IN design - standard chevron - NEW

Hydraulic seals


SKF Speedi-Sleeve


Standard shaft seals

Catalogue seals


HSS


HSSG


R01


GK08


GS09

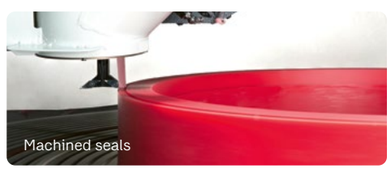

GR06


GR08

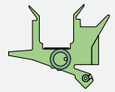

HDS


HDSL


HDS7


Machined seals

Engineered solutions application specific


TDE - Oil film bearing


TR/4- High speed rolling


TR/7/M - High pressure application


TR/5/ML/PTV - High pressure and high speed


TR/VMP - Wire rolling cantilever stand


TR/8/S3 - Wire rolling finishing block

TR/8/M - Wire rolling finishing block

TFW - Back up rolls of rolling mills

TPC - Bearing seal

TR/VO -Back up and work rolls

TR/VA/ML/PTV - Back up and work rolls

Machined seals

Discover more on our website

skf.com | skf.com/seals

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