

## Industry portrait: Steel industry

### Steel production demands outstanding lubricants

For decades, architects and builders have been relying on steel as a strong component of stable high-rise buildings and bridges. But this versatile material is also used for underwater pipelines and even everyday goods such as knives and forks. In 2015, around 43 million tons of crude steel were produced in Germany – this is the highest level in the EU and shows how important the steel industry is for the German economy. And it is the links to other industries, such as mechanical engineering and the automotive industry, that are particularly significant for the German economy.

No matter what it is eventually made into, steel always undergoes a demanding manufacturing and machining process. From the production of pig iron in a blast furnace and further processing in the converter plants of a steel works, through to the casting process in the continuous casting plant and hot and cold rolling: each stage demands maximum performance from all the production components involved.



High temperatures and pressures are particular challenges in steel works, with their roller tables, bearings, rollers and sprockets. But abrasive dust, water vapour, corrosive process water and oil residues also make production more difficult and can prevent processes from running smoothly. In the worst case scenario, they can stop production completely — an absolute disaster with high costs for any steel producer.

In order to create a reliable and effective manufacturing process under these exceptional conditions, Rhenus Lub works closely with leading steel companies to develop high-performance lubricants that combine all the advantages of tailor-made products — for active protection at all times. Consumption levels are reduced due to the high lubricating effect of the grease.

This has a positive effect on the service life of components and machines, as friction, wear and corrosion are significantly reduced. Rhenus Lub regularly checks the lubricants using state-of-the-art techniques so that rhenus products provide good performance over the long term.

Rhenus Lub also plays a major role when it comes to developing industry-wide quality standards. As an active member of Germany’s VDEh Steel Institute, the Mönchengladbach-based company demonstrates its expertise and develops standards for lubricating greases together with steel manufacturers, machine manufacturers and suppliers. These “SEB approvals” are one of the criteria for many greases used in the industry.

**With its extensive industry knowledge, Rhenus Lub provides the right products for all stages of steel production.**

**Excerpt from the Rhenus Lub product range:**

Crude steel production	Continuous casting plant	Hot/cold rolling	Cold rolling
rhenus MAK 15	rhenus ACN 15 GR	rhenus LEC 2	rhenus CAZ 2
	rhenus LEC 2	rhenus LCA 2	rhenus CJN 2
	rhenus BBD 2		

Product	Application area	Properties
rhenus MAK 15	Screw connections, such as for blast furnaces and steel works	<ul style="list-style-type: none"> <li>— Hot screw separating agent with solid copper lubricant</li> <li>— Use under extreme pressure, high thermal load and with corrosive influences</li> </ul>
rhenus ACN 15 GR	Continuous casting plant	<ul style="list-style-type: none"> <li>— High-temperature aluminium complex grease</li> <li>— Protects against corrosive process water</li> <li>— Reduces friction, even at high pressures</li> <li>— Very good pumping characteristics in central lubrication systems</li> <li>— Good thermal resistance</li> </ul>
rhenus LEC 2	Hot and cold rolling mill	<ul style="list-style-type: none"> <li>— Lithium EP multi-purpose grease</li> <li>— SEB approval (SEB 181 253)</li> <li>— Increased protection against standstill corrosion</li> </ul>
rhenus BBD 2	Connections/screw connectors in hot areas	<ul style="list-style-type: none"> <li>— Metal-free assembly and high-temperature paste</li> <li>— Use with the highest thermal stresses in corrosive environments</li> </ul>
rhenus LCA 2	Hot and cold rolling mill	<ul style="list-style-type: none"> <li>— Lithium EP multi-purpose grease</li> <li>— SEB approval (SEB 181 253)</li> <li>— Particularly suitable for lubricating slow-running, highly loaded roller bearings under humid operating conditions</li> </ul>
rhenus CJN 2	Cold pilger mill (crankshaft bearings)	<ul style="list-style-type: none"> <li>— Special calcium EP grease</li> <li>— Highly water resistant</li> <li>— Suitable for lubricating slow-running, highly loaded bearings</li> </ul>
rhenus CAZ 2	Cold rolling mill (bearing carriers)	<ul style="list-style-type: none"> <li>— White EP lubricating grease (<i>based on special calcium soap</i>)</li> <li>— Highly water resistant</li> <li>— Prevents fretting corrosion and tribocorrosion</li> </ul>



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