

INCREASED PLANT AVAILABILITY

Quick coupling systems for all fluid
connections in the steel meltshop



RELIABLE AND PERMANENT CONNECTIONS

for new plants and modernisation projects

The coupling system can be used with all fluid connections on melting and treatment vessels in the steel meltshop, i.e. for BOF and AOD converter and electric arc furnaces as well as for secondary metallurgy equipment such as ladle furnaces, desulphurisation and vacuum treatment plants.

The quick coupling system guarantees the safe and quick changing of blowing lances, pipe and hose connections in steel meltshops.

The quick coupling system developed jointly by SMS group and Georg Springmann, which has been certified by TÜV Nord, provides a cost-effective and efficient technology to reduce changing times for all fluid connections. Thus, the availability of the plant is significantly increased.

PATENT* APPLICATION SUBMITTED FOR THE SYSTEM

The newly developed quick coupling system connects the pipe or hose ends of two fluid lines each

by means of a special flange. Two linked coupling segments connect the flanges, hold them together and seal the connection.

Unlike in the changing method used up to now, only one locking system needs to be opened and closed. The coupling is secured in three ways. Thanks to the coupling's flexible bearing assembly, any connections that are not exactly in line can be aligned without problems when closing the coupling.

SAFETY FOR MAN AND MACHINE

Easy installation and safe handling minimise the risk of injury and increase the plant safety.

Thus, this practice-oriented solution is a worthwhile investment the benefits of which will soon become evident.



*WO 2011/141023 A2

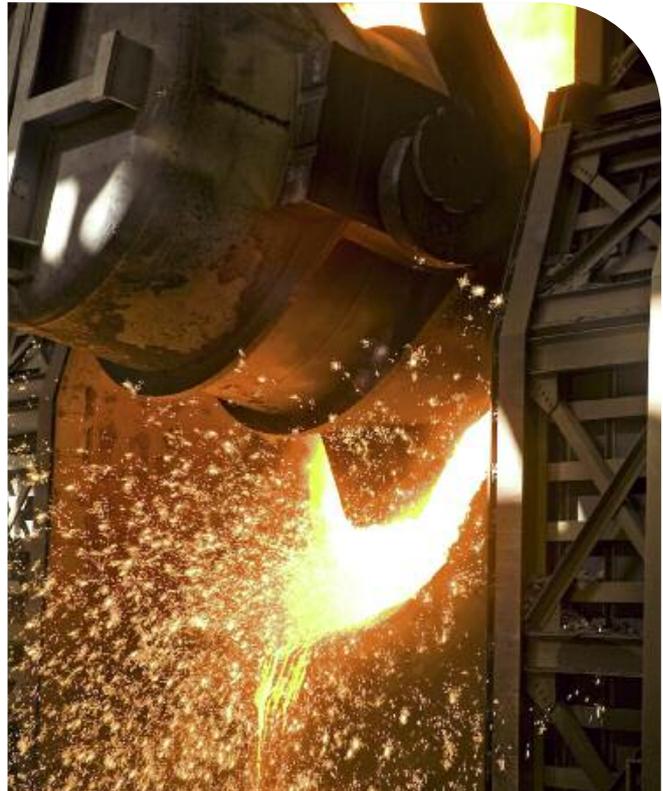
Quick coupling system closed.

Quick coupling system open.

CONVERTER NO. 1 AT İSKENDERUN IRON AND STEEL CO (ISDEMİR), TURKEY

Thanks to the new quick coupling system, the time required for changing the oxygen and cooling water connecting pipes at the oxygen lance could be reduced from previously 120 - 150 minutes to only 60 - 90 minutes. We are very pleased with this result.

Ali Güntekin
Project Engineer, Erenco A.S.



Converter at the Isdemir steel meltshop, Turkey.

REFERENCES - NEW PLANTS

- **Bhushan Steel Ltd.**
Orissa, India
Supply of a converter shop with two 180-ton converters
- **Vizag Steel**
Andhra Pradesh, India
Supply of a converter shop with two 150-ton converters
- **Dragon Steel Corporation**
Taichung, R.O. China
Supply of a 220-ton converter
- **Neelachal Ispat Nigam Ltd. (NINL)**
Orissa, India
Supply of a converter shop with one 110-ton converter

REFERENCES - MODERNISATION PROJECTS

- **İskenderun Iron and Steel CO (Isdemir), Turkey**
Supply of a converter shop with three 200-ton converters
- **SAIL Rourkela**
Orissa, India
Modernisation of a 150-ton converter
- **Vizag Steel**
Andhra Pradesh, India
Supply of a converter shop with three 150-ton converters



The coupling system is the only system for oxygen and cooling water on the world market that has been TÜV-certified and is subject to production monitoring.

SMS group comprises companies working internationally in plant construction and mechanical engineering relating to the steel and nonferrous metals industry. The plants, machinery, services and the process know-how of SMS group are used worldwide in the steel, aluminium and NF metals industries.

Georg Springmann Industrie- und Bergbautechnik GmbH is a medium-sized company focussing on research, development, planning, production and sales in the field of highly specialised cutting-edge plant components.



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