



Corus Wire Rod

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**Endless possibilities**

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# Steelmaking expertise on a global scale

**Corus is an international, customer-focused steel manufacturing company. In 2007, it became a subsidiary of Tata Steel, and the group is now the sixth largest steel manufacturer in the world, with a capacity to produce 28 million tonnes of crude steel per year and employing 83,000 people across four continents.**

#### **Investing in premium products**

Corus Wire Rod is a core business unit within the group located on the integrated steelmaking site in Scunthorpe, UK.

As a strategically important Corus business, it has benefited from a series of major investments in steelmaking, rolling and distribution facilities.

These investments enable the wire rod business to pursue its strategy of developing high-quality, premium rod products and services for the global wire industry.

#### **Understanding our customers**

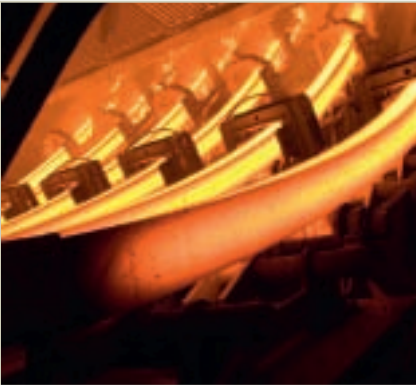
We build long-term relationships with our customers by consistently providing the quality of rod needed to fulfil their requirements.

We are continually investing in our manufacturing processes, our quality systems and our people to ensure we keep pace with rapidly evolving customer demands.



## Continuous investment

**Corus Wire Rod delivers premium grade products from our world-class rod mill. This is achieved by continuous investment in manufacturing facilities and management systems.**



### Ongoing investment in excellence

To deliver consistent high-quality premium rod products, Corus has made significant capital investments at Scunthorpe. In 2005, a €20m development involved enhancement of the rolling mill, new sampling and inspection facilities and introduced a state-of-the-art automated warehousing and despatch facility.

Further investment in 2007 of €190m – the biggest investment at the site for 30 years – introduced a streamlined supply route into the rod mill and improves the quality of billet and bloom feedstock. A brand-new continuous bloom caster was installed to feed a new size of bloom directly into the rod mill and eliminate the need for intermediate reheating and rolling of feedstock. Within the rod mill, a new bloom reheat furnace and breakdown mill were installed to process this new size of feedstock and deliver it in to the existing rod mill process.

The benefits delivered by these investments include:

- cleaner steels with reduced decarburisation and more consistent microstructure
- a simplified and more flexible process route for rod manufacture
- an enhanced rod size range, increasing the maximum diameter from 13.5mm to 15mm, and heavier coil weights up to 2.2 tonnes
- improvements in dimensional control and surface quality of rod
- faster inspection, testing and release of coils
- improvements in coil handling and storage, which eliminate mechanical damage for grades where surface quality is critical.

### Quality-assured products and processes

All wire rod products are manufactured via the same approved process route, throughout steelmaking and rod rolling. Our quality systems satisfy ISO 9001:2000 and are audited consistently by Lloyds register. The Scunthorpe site is also approved to the ISO 14001 environmental management standard.

Corus employs a continuous improvement programme based on the principles of lean thinking. This approach is applied consistently in each of the businesses, with continuous improvement coaches ensuring that we manage our processes and people for optimum performance.

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**Significant capital investments enable Corus to deliver high quality premium rod products.**

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## Working together to add value

### Corus Wire Rod offers much more than steel.

We recognise that our success depends upon our customers' success, and we strive to establish partnerships that add value by providing expertise, advice and resources. We believe in developing special relationships that create value and deliver complete supply chain solutions.

At the heart of our efforts is our knowledge and experience in steel metallurgy and rod manufacture. We work hard to stay one step ahead of the latest innovations, often working in co-operation with our customers on solutions for specific wire applications. By focusing on technical collaboration, we aim to understand each customer's manufacturing process and help them to improve and develop their own products.

#### Developing the supply chain

Our approach to supply chain excellence recognises that reducing costs and improving efficiency are key to success in the wire industry. We help customers to achieve these objectives with:

- the most frequent production cycle of any rod mill in Europe. We roll most of our rod diameters at least once within a two-week cycle – offering optimum lead times and helping customers to keep stocks to a minimum
- efficient delivery schedules for destinations around the world, using Corus distribution and logistics resources and specialist haulage contractors
- a range of online services and electronic documents that make dealing with Corus Wire Rod simpler, faster and more efficient.

## Corus Wire Rod

Our philosophy is that successful partnerships are the key to successful business.

As well as delivering quality products and services, we recognise the need to develop and maintain relationships with key people within our customers' businesses. This approach enables us to fully understand our customers' requirements so that we consistently meet their high standards.

### Account management

Leading our efforts to understand every business we work with are our dedicated account management teams. Every customer is assigned to an account management team, who will manage all aspects of the supply chain, from initial product specification and technical stages of an order, to stock management and final delivery.

In many cases, account management teams work in tandem with the local Corus sales office in each country, meaning that help and support is never far away – wherever you are in the world. Corus has sales offices and service centres in more than 40 countries worldwide, and is developing the network in new markets.

### Technical support

The focus of our technical support for customers is to build an understanding of their manufacturing processes, so that we can help to improve and develop their products.

In addition to the expertise within the wire rod business, we draw on dedicated research and development resources at Corus technology centres, such as Swinden Technology Centre. The technical expertise and facilities here enable us to conduct joint research and development projects with customers, helping them to develop innovative solutions for their supply chains.

### Online services

Our online facility offers a range of electronic services and documents that make dealing with Corus simpler, faster and more efficient. The services include:

- rolling programme displays
- order progress
- account status monitoring
- electronic documentation.

We also offer an auto email service, delivering up-to-date order status information and documentation direct to customers' inboxes.

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Corus Wire Rod online services provides an innovative way to work more closely with us.

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# World-class products

## Premium rod products

Major investments at Scunthorpe have focused on improving the quality and range of products we manufacture.

We strive to consistently supply the quality of wire rod demanded by individual customers in a range of markets. Our strategy is to focus on developing high-value drawing quality and premium rod products for the international wire industry.

A wide range of steel compositions, from ultra-low carbon (<0.01%C) to ultra-high tensile (>1.0%C), are available. These include specific grades for tyre cord, free-cutting and cold-heading applications, as well as micro-alloy compositions. The table below summarises the main product qualities, their characteristics and applications in the wire industry.

## Product range

Rod diameter	5.5-15.0mm in 0.5mm increments
Coil weight	Nominal 2100kg
Coil dimensions	Outside diameter 1250mm Inside diameter 850mm

## Product qualities

Category	Steel type	Characteristics	Typical applications
Low carbon steels (<0.25%C)	Aluminium killed and boron for cold heading	Modest strength, superior ductility and formability Good surface quality Hardenability requirement	Fasteners – bolts, rivets and screws
	Rimmed substitute	Modest strength combined with good ductility and formability	General purpose wire, nails, screws and electrode wire
	Silicon killed	High ductility and formability combined with good surface quality	Industrial wire, agricultural wire and nails
Medium carbon steels (0.25%C to 0.40%)	Silicon killed	Moderate strength and ductility	Chains and upholstery wire
High carbon steels (0.40%C to 0.90%C)	Rubber reinforcement – hose, cord and tyre bead	High strength, high degree of freedom from internal inhomogeneity and non-metallic inclusions	Tyre and hose reinforcement
	Microalloy Silicon killed	High strength High strength and good ductility	Prestressed concrete wire Springs and rope wire
Freecutting steels	Lead (Pb) and Sulphur (S) bearing	Good machinability	High volume machined components – nuts, spark plugs
Alloy steels	CO <sub>2</sub> weld and Si Mn grades	Speciality grades with specific characteristics relative to application	Electrode wire Suspension springs

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**www.coruswirerod.com**

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**Corus Wire Rod**

PO Box 1  
Brigg Road  
Scunthorpe  
North Lincolnshire  
DN16 1BP  
United Kingdom  
T +44 (0) 1724 405 455  
F +44 (0) 8790 023 126  
E [wirerod@corusgroup.com](mailto:wirerod@corusgroup.com)