



Schmiedewerke Gröditz GmbH produces open-die forgings and seamless rolled ring products which can be supplied either rough or finish-machined on request. And in this way it pursues an important goal: the manufacture of products which completely fulfill the expectations of our customers.

## PERFORMANCE

Schmiedewerke Gröditz GmbH stands for variety: variety in open-die forged pieces and rolled ring products. Variety in heat treatment. And variety in mechanical machining.

As a result of this we can offer our customers a wide range of individual solutions.

The material range of around 300 produced steel grades in more than 2,000 analysis modifications reflects this variety.

## MARKET

We produce parts for customers throughout the world which are distinguished by special material properties such as high degrees of purity, even structure, resistance to wear and corrosion. Our principal customers are the general mechanical engineering industry, shipbuilding, the power generation industry, the chemical industry, the offshore industry and vehicle construction.

## QUALITY

Our quality management system assures quality of the highest standard. Schmiedewerke Gröditz GmbH produces in accordance with a variety of national and international standards and/or customer specifications. All manufacturing processes are subject to ongoing controls. A very wide spectrum of different test procedures are applied in order to control and measure the quality of the products.

We implement a strict quality system throughout – from purchasing through production to delivery.





## RANGE OF PRODUCTS AND SERVICES

Schmiedewerke Gröditz GmbH produces open-die forgings and rolled rings, which can be supplied mechanically rough or finish-machined.

In our electric steel plant we are therefore melting ingots in different sizes and formats up to 75 t. For high-quality steels an ESR plant is available as well (maximum ingot weight 84 t).

Contoured forgings for the most demanding applications, in addition to steel bars, are produced in our forging shop. For these a 27 MN resp. a 60 MN open-die forging press are available.

The efficient ring rolling facility produces rings, wheel tyres and flanges. For this purpose construction steels, fine-grained steels, heat-resistant steels, RSH steels, wheel tyre materials, Q & T steels, tool steels and roller bearing steels are used.

Heat treatment equipment for all technical requirements is available within the company. From soft-annealing and normalising to quenching in oil or water (horizontal, vertical), all of the required procedures are possible. Turning, milling, boring and sawing equipment for mechanical rough or finish-machining of the various products are available in the mechanical work shop.

## QUALITY, ENVIRONMENT AND ENERGY

Such a wide variety of products requires an efficient quality and environmental management system to prevent quality problems as well as environmental impacts throughout all of the operating processes and production sequences. An energy management system has been established in our companies in order to reduce electric energy consumption and increase the energy efficiency.

The management system of Schmiedewerke Gröditz GmbH has been certified by Lloyd's Register Quality Assurance in accordance with ISO 9001 and ISO 14001 as well as ISO 50001.

The production of materials for the pressure vessels industry in conformity with standards according to the Pressure Vessel Guideline 97/23/EG as well as the approval as manufacturer according to KTA 3201.1 and KTA 3211.1 were successfully inspected, approved and certified by TÜV SÜD Industrie Service GmbH.

## MATERIALS

Schmiedewerke Gröditz GmbH produces forgings and rolled rings from unalloyed, alloyed and high-alloyed steels in the desired chemical composition in accordance with national and international quality standards.

- High-grade construction steel
- Stainless steel
- Tool steel
- Steel for power generation application
- Special purpose steel

## TESTING PROCEDURES

- Non-destructive testings,
  - destructive testings,
  - metallographic inspections and
  - chemical analysis
- are carried out in order to guarantee uniform high quality.

We work closely together with qualified companies and institutes to carry out additional testing procedures.





## PRODUCT OVERVIEW

### OPEN-DIE FORGINGS

#### CONTOURED FORGINGS

Piece weight	max. 50 t
Diameter	300 mm – 1,800 mm
Length	max. 14,000 mm

#### DISCS

Piece weight	max. 50 t
Diameter	1,000 mm – 3,900 mm
Length	min. 100 mm

#### RINGS

Piece weight	max. 38 t
External diameter	1,000 mm – 4,000 mm
Width	400 mm – 2,000 mm
Wall thickness	min. 100 mm

#### HOLLOW BODIES

Piece weight	max. 35 t
Internal diameter	300 mm – 900 mm
Length	1,500 mm – 6,000 mm
Wall thickness	min. 100 mm

Other dimensions available on request.



## STEEL BARS

### ROUND

Piece weight	max. 50 t
Diameter	300 mm – 1,400 mm
Length	2,000 mm – 12,000 mm

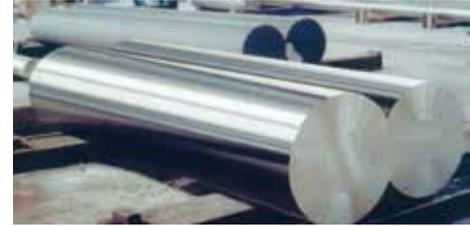
### FLAT

Piece weight	max. 50 t
Width	500 mm – 2,000 mm
Height	100 mm – 1,000 mm
Length	2,000 mm – 12,000 mm

### SQUARE

Piece weight	max. 50 t
Edge length	300 mm – 1,300 mm
Length	2,000 mm – 12,000 mm

Other dimensions available on request.



## HEATTREATMENT SHOP

SOFT ANNEALING, NORMALISING, AUSTENITIZING AND TEMPERING, STRESS-RELIEVING	DIMENSIONS (L X W X H)
Horizontal furnaces	max. 14,000 x 2,500 x 2,500 mm max. 10,000 x 4,500 x 2,300 mm max. 11,000 x 3,000 x 2,500 mm
Vertical furnaces	max. 1,600 x 8,300 mm



QUENCHING IN OIL	DIMENSIONS (L X W X H)
Horizontal	max. 14,500 x 1,800 x 1,350 mm max. 9,500 x 2,800 x 2,150 mm max. 5,500 x 4,400 x 2,800 mm
Vertical	max. 1,600 x 8,300 mm



QUENCHING IN WATER	DIMENSIONS (L X W X H)
Horizontal	max. 9,500 x 3,300 x 1,900 mm
Vertical	max. 1,600 x 8,300 mm

HEATSTABILITYTEST	DIMENSIONS
Diameter	max. 1,800 mm
Length	2,800 mm – 10,000 mm
Testing range length	max. 6,500 mm

PIECE WEIGHT	
Horizontal furnaces	max. 60 t
Vertical furnaces	max. 40 t
Heat stability test	max. 40 t





## ROLLED RINGS

### RINGS

Piece weight	min. 70 kg – max. 1,520 kg
Outside diameter	min. 500 mm – max. 2,800 mm
Inside diameter	min. 300 mm – max. 2,600 mm (Quenching and tempering possible up to 2,800 mm)
Ring width	min. 65 mm – max. 365 mm



### WHEEL TYRES

Piece weight	min. 75 kg – max. 750 kg
Outside diameter	min. 420 mm – max. 2,015 mm
Inside diameter	min. 245 mm – max. 1,830 mm
Tyre width	min. 85 mm – max. 200 mm



### FLANGES\* (BLANKS)

Piece weight	min. 70 kg – max. 800 kg
Outside diameter	min. 550 mm – max. 1,800 mm
Inside diameter	min. 300 mm – max. 1,600 mm
Flange width	min. 75 mm – max. 275 mm

### HIGH-ALLOYED FLANGES\* (BLANKS)

Piece weight	min. 75 kg – max. 300 kg
Outside diameter	min. 550 mm – max. 1,250 mm
Inside diameter	min. 320 mm – max. 1,000 mm
Flange width	min. 75 mm – max. 180 mm

### HIGH-ALLOYED RINGS\* (AUSTENITIC)

Piece weight	min. 70 kg – max. 1,000 kg (with Mo up to 830 kg)
Outside diameter	min. 500 mm – max. 1,800 mm
Inside diameter	min. 400 mm – max. 1,700 mm
Ring width	min. 65 mm – max. 250 mm

### HIGH-ALLOYED RINGS\* (MARTENSITE)

Piece weight	min. 70 kg – max. 900 kg
Outside diameter	min. 500 mm – max. 1,200 mm
Inside diameter	min. 400 mm – max. 1,000 mm
Ring width	min. 65 mm – max. 365 mm

\* Individual technological testing required.





## MACHINE SHOP

### TURNING

#### Horizontal turning lathes

Max. turning length	18,000 mm
Max. turning diameter	2,500 mm
Max. diameter in front of support	2,500 mm

#### Vertical turret lathe

Max. turning height	2,500 mm
Max. turning diameter	4,000 mm

### MILLING

#### Horizontal boring machines

Max. transverse movement	4,850 mm
Max. working height	4,450 mm
Spindle diameter	80, 175, 200, 250 mm

#### Portal milling machine for four-edge finishing

Working length	8,800 mm
Working width	2,100 mm
Working height	1,500 mm

### BORING

Horizontal boring machines	Parameters same as horizontal milling
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#### Deep hole drilling machine

Max. drilling length	10,000 mm
Max. drilling diameter	380 mm

#### Deep hole honing machine

Max. workpiece length	10,000 mm
Max. honing length	3,800 mm
Max. honing diameter	450 mm

### SAWING

Max. diameter	1,550 mm
Max. four-edge	2,100 mm x 1,050 mm

CRANE CARRYING CAPACITY	75 t
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Business units of the  
GMH Group:

Raw Materials Recycling

Steel Production

**Forging Technology**

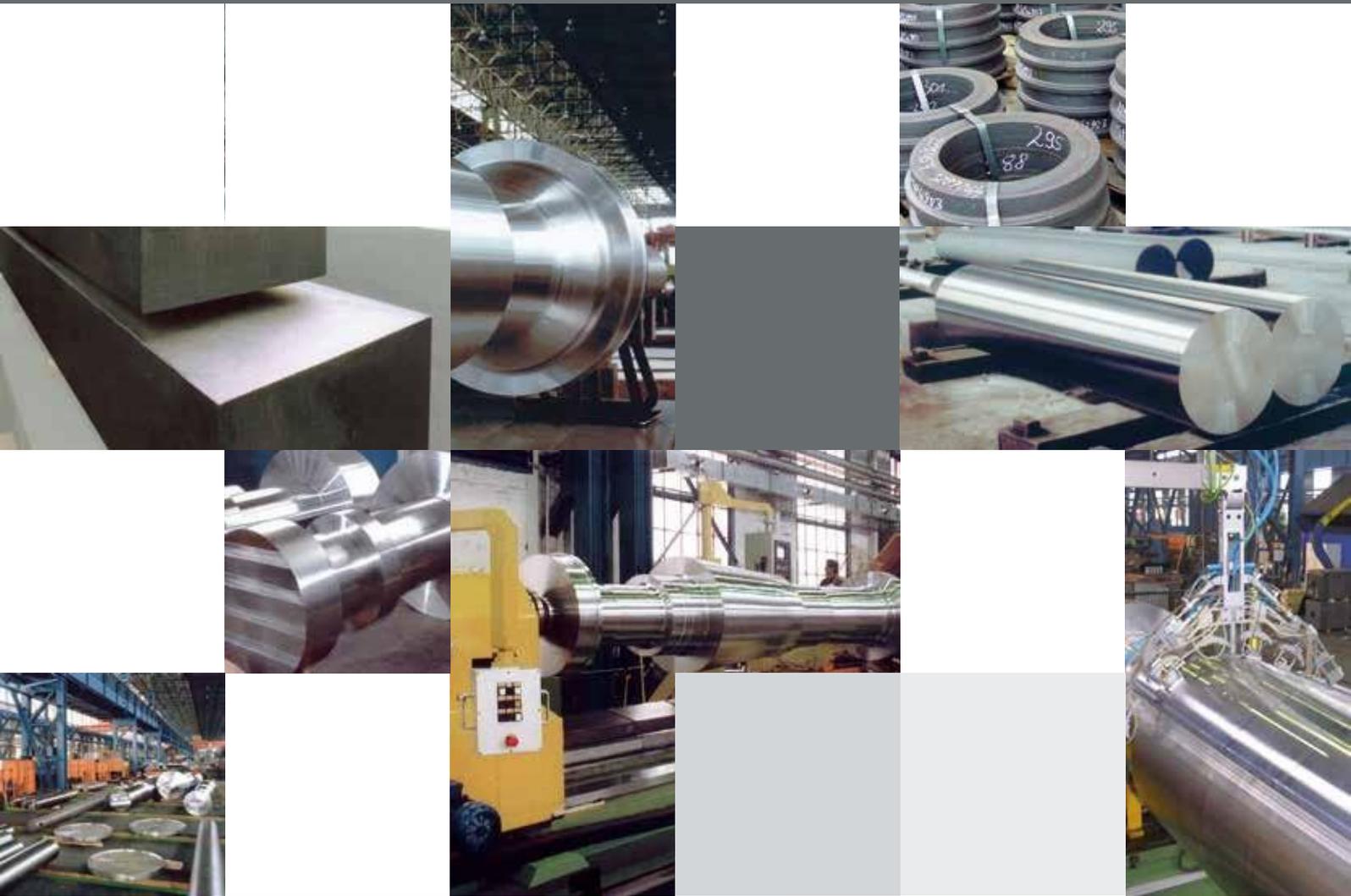
Steel Processing

Railway Systems

Castings Steel/Iron

Plant Engineering

Services



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