

Georgsmarienhütte GmbH

160 years' expertise

Steel from Georgsmarienhütte has been providing answers to the dynamic questions of the market for more than 160 years - with crude steel that is cast into ingots after secondary metallurgy in batch weights of about 120 tonnes, or cast into billets on the 6-strand continuous caster.

Range of materials

- Quenched and tempered steels
- Case-hardened steels
- Bearing steels
- PHFP steels
- Tool steels
- Further grades available on request DIN EN ISO 9001

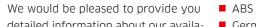
Formats/lengths Billets

■ 165 mm, 200 mm and 245 mm

- Delivery lengths: 3.5 to 7 m

- Weight: 3.5 to 44 tonne ingots for open-die forging
- Slab formats

- Bureau Veritas (BV)
- Saxony-Anhalt
- Shape: square, octagonal, 16-gonal Lloyd's Register of Shipping (LRS)



detailed information about our available **mould formats.** Just contact us.

Certifications

- IATF 16949
- DIN EN ISO 14001
- DIN EN ISO 50001

Approvals/classification bodies

- Det Norske Veritas and
- Germanischer Lloyd (DNV, GL) ■ State Material Testing Office,

- German Technical Inspection Agency (TÜV) including approval to TRD 100 and AD 2000
- TÜV Pressure Equipment Directive

Attestations

- Certification acc. to DIN EN 10204
- Factory certification 2.2
- Acceptance test certificates 3.1 and 3.2
- Part approval (PPAP and VDA)



Stahlwerk Bous GmbH

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Georgsmarienhütte GmbH

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Customised properties, dependable delivery







Diversity from a single source the basis for tailor-made steel products

Crude steel products from GMH Gruppe are made precisely to our customers' specifications. Our wide and varied range of metallurgical concepts, our expertise in achieving exactly the required steel compositions within extremely close analytical limits, and our versatile portfolio of mould formats and billet dimensions make us the first address for customised crude steel products.

Maximum analytical accuracy and optimally adjusted heats assure that ingots and billets from GMH Gruppe are made exactly to customer specification. Our products comply with national and international quality standards. Available in batch sizes of 25, 50, 60 or even 120 tonnes, steel from GMH Gruppe provides our customers in the forging shops and rolling mills maximum flexibility. The extremely broad portfolio of products available in a wide range of grades, dimensions and treatments from our steelworks in Bous, Gröditz and Georgsmarienhütte guarantees that you always get the best solution for your specific application on hand. Steel as you expect it to be - also in ESR quality.

More efficient processing

Our production sites are equipped to cast ingots in a wide range of sizes and shapes. Even within one batch, ingot formats can be changed. This provides our customers maximum flexibility and an additional competitive edge. Our logistical capacities, including the transport of products in hot condition, developed and established over several decades assure efficient handling processes and short transport routes.

Our ambition: to lead the way

We want to be your first port of call for solutions in steel. Therefore, we offer an unparalleled range of solutions, including continuous-cast round billet formats particularly for tube and pipe production, and crude steel grades optimised for applications in the fields of renewable energies, rail technology and maritime environments.

Sustainability leadership

It has always been our aim to promote responsible acting. We continuously further enhance our certified quality, environmental and energy management systems. In Bous, we have installed one of the world's most efficient filter plants. Georgsmarienhütte GmbH was the first steelworks in the world recognised as a 'Climate Protection Company'. Also in Gröditz, steelmaking via the EAF is 100% scrapbased - currently the most sustainable steelmaking route available. With these measures, we also help our customers improve their PCF (Product Carbon Footprint).

Stahlwerk Bous GmbH A wide range of primary materials

The great variety of mould geometries is just one of the Bous site's outstanding qualities. Others are the extensive range of ingot and continuous-cast formats, the more than 800 steel grades available in batch weights of up to 60 tonnes, the state-of-the-art heat treatment facilities and the versatile range of machining options.

Range of materials

- Quenched and tempered steels
- Case-hardened steels
- Bearing steels
- PHFP steels
- Hot-working and tool steels
- Stainless steels
- Further grades available on request

Formats/lengths Billets

- Round: 310 mm. 370 mm. 406 mm, 430 mm and 500 mm
- Rectangular: 320 x 280 mm and 430 x 320 mm
- Delivery lengths: 2.7 to 11.2 m
- Weight: 3 to 62 tonne ingots
- Shape: round, square, polygonal

We would be pleased to provide you detailed information about our available **mould formats.** Just contact us.

Treatment options

- Grinding
- Cropping
- Annealing

Certifications

- DIN EN ISO 9001 ■ DIN EN ISO 14001
- DIN EN ISO 50001

Approvals/classification bodies

- American Bureau of Shipping (ABS)
- Bureau Veritas (BV)
- Deutsche Bahn for monobloc wheels, wheel tyres and wheel bodies (DB-AG)

- German Technical Inspection Agency (TÜV) including approval to AD 2000/WO
- Det Norske Veritas and Germanischer Lloyd (DNV, GL)
- Indian Boiler Regulation (IBR) ■ Lloyd's Register (LR)
- Pressure Equipment Directive 2014/68 EU. Annex I. Section 4.3
- Nippon Kaiji Kyokai (NKK)

Attestations

- Acceptance test certificates 3.1
- Indian Boiler Regulations Form IV



Schmiedewerke Gröditz GmbH **Know-how and versatility**

At Schmiedewerke Gröditz, ingots are produced via the electric steelmaking route, from scrap melting in the 50-tonne electric arc furnace, via treatment in a ladle furnace and secondary metallurgy treatment in a VD/VOD facility, to casting using the uphill casting method. An ESR facility with two remelting stations is available for further refinement of the ingot material.

Range of materials

More than 400 steel grades in more than 2500 variants

Non-alloyed, alloyed and high-alloy steels with chemical analyses to nati- ■ ESR ingots 3.8 t-84 t onal and international standards, or to customer specifications, including:

- High-quality steels, incl. highgrade structural steels
- Nitriding and case-hardening
- Tool steels (cold and hot working)
- Plastic mould steels
- Ledeburitic steels
- Stainless steels (austenitic, ferritic, DIN EN ISO 9001 duplex, martensitic)

Schmiedewerke Gröditz

GMH GRUPPE

Ingot types and weights

Polygonal forging ingots 14 t-76.5 t

- Square/rectangular forging ingots Deutsche Bahn Blockguss-4 t-22 t
- Slabs 10.5 t 79 t
- Cylindrical round ingots

Minimum possible order volume conventional and ESR: 25 t

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- DIN EN ISO 50001

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- Det Norske Veritas Germanischer Lloyd (DNV-GL)
- Lloyd's Register of Shipping (LRS)
- Nippon Kaiji Kyokai (ClassNK)
- German Technical Inspection Agency (TÜV) - approval acc. to AD 2000/WO
- German Technical Inspection Agency (TÜV) - approval acc. to Pressure Equipment Directive

Attestations

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