Rolled billets
FOR THE AUTOMOTIVE INDUSTRY, MINING, THE OIL AND GAS INDUSTRY AND GENERAL MECHANICAL ENGINEERING
The highest standard of billet production

Buderus Edelstahl — Quality from a single source

The entire production process, from melting through to production of the end product, takes place at the Wetzlar site. This also applies for our billets. We melt the initial material from high-quality scrap steel in our own steel plant and process the ingots in our own rolling plant to billets of the highest quality. The mechanical processing and inspection also takes place directly on-site. All production steps are precisely coordinated. This saves time, makes the product hand-over easier and makes us flexible and reliable. The short communication paths between quality assurance, production planning, production and sales enable smooth order processing.

The expectations of our customers have the highest priority at every stage. As a competent partner, we are available for all application queries and work with our customers to find suitable solutions for specific requirements. We produce tried-and-tested standard products, as well as individual steels, which we develop according to the specifications of our customers. Small batch sizes are no problem for us. The success of Buderus Edelstahl is based on a high level of flexibility, reliability and service, as well as on a transparent quality assurance system.
BASE MATERIAL WITH STRONG PROPERTIES

Billets from Buderus Edelstahl make the ideal base material for manufacturing components with the highest safety requirements. Our customers process the billets further in ring-rolling mills and closed die forging plants. These processes are used to make sophisticated products for the automotive industry, mining, the oil and gas industry and general mechanical engineering.

Buderus Edelstahl supplies an extremely wide range of common steel grades. This includes alloyed and non-alloyed special engineering steels, as well as tool and tempered steels. Beyond the standard grades, we can also melt individual alloy specifications on request. For this, we require a complete batch to be purchased, with a delivery quantity of around 75 t. Our customers can spread this quantity over several dimensions and delivery dates.

Our ingot store at the plant site enables us to react flexibly to customer requests and to supply the desired products with a short lead time – as complete batches or in smaller batches depending on the requirements. We supply billets in accordance with the international quality standards DIN EN, SEL, AISI/SAE/ASME, AFNOR, BS, GOST, JIS, UNI. And, of course, we also take into account individual customer specifications.

QUALITY FROM A SINGLE SOURCE

With a furnace capacity of 100 t, Buderus Edelstahl melts its raw materials in its own electric steel plant. For this, we use high-quality scrap steel from the recycling cycles in Germany and Europe. The subsequent secondary and vacuum-metalurgical processes provide the high level of purity of our steels, which have the narrowest compositions and hardening capacities. Buderus Edelstahl specializes in ISO-B quality steels with minimal sulphur content and a high degree of purity. The steel is bottom cast in moulds with hot top insulation to create homogeneous ingots with low segregation. The ingot formats for rolled billets are between 2.8 and 4.6 t.

ROLLING ACCORDING TO INDIVIDUAL REQUIREMENTS

All production processes are precisely defined to ensure that the end product meets the customer-specific requirements. Once the ingots have been heated to rolling temperature in shuttle pusher furnaces, the ingots are rolled to the desired square sections and round dimensions in our computer-supported ingot and billet line. After the cooling, the rolled billets undergo several quality-optimization processes: On automated finishing lines, the billets are aligned, blast descaled, checked for cracks in the surface, ultrasonically tested and ground and sawn if necessary. Before the product is transported to the customer, a full spectroscopic material identification is carried out.

OUR PRODUCTION PROCESS

<table>
<thead>
<tr>
<th>STEEL PRODUCTION</th>
<th>FORMING</th>
<th>PRODUCTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Arc Furnace</td>
<td>Hot Rolled Strip Steel</td>
<td>Hot Rolled Strip Steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cold Rolled Strip Steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rolled Billets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Closed Die Forgings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tool Steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stock Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Machining Facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CERTIFIED TESTING

We guarantee the highest-quality rolled billets for our customers. Our quality assurance system specifies all quality-relevant process steps and inspection points in detail — from melting to forming and heat treatment. We carefully check the quality in all stages of production and document the results. The integrated management system at Buderus Edelstahl GmbH is certified in accordance with ISO 9001, ISO/TS 16949 and ISO 14001.

To guarantee quality right from the start, we take a careful look at the stress profile of the chosen steel and advise the customer in all quality-related matters. We carefully select the materials and alloys used. Our own melting plant, the modern ladle metallurgy and ingot casting also contribute to the high quality standard of our billets.

In addition to the traditional material tests, such as tensile tests, hardness tests, structure and purity level tests in accordance with national and international standards, we also check fracture-mechanical parameters (e.g. KIC), carry out impact tests according to Brugger and conduct tests with the scanning electron microscope and EDX/WDX analyses in our testing laboratory. The testing laboratory is certified by “Deutsche Akkreditierungsstelle GmbH (DAkkS)” in accordance with DIN EN ISO/IEC 17025.

Dimensions
- 60–250 mm square
- Billet length: 4,500–9,000 mm
- Edge radius: between 5 and 25 mm depending on the edge length

Treatment status
- Heat treatment according to customer specification
- Treated for cold cutting capability (max. 250 HB)
- Treated for cold sawing capability (max. 295 HB)

Version
- Surface blast-cleaned or ground
- Surface crack-tested in accordance with specification
- UT-tested for internal faults in accordance with specification
- 100 % materials identification check

Steel qualities
- Quality steels
- Micro-alloyed steels for BY-treatment (AFP steels)
- Special engineering steels, alloyed and non-alloyed
- Case-hardening steels
- Tempered steels
- Spring steels
- Tool steels
- Rolling bearing steels
- Rust-, acid- and heat-resistant steels
- Wear-resistant steels
- Special grades according to customer specification
CLOSE TO THE CUSTOMER ALL OVER THE WORLD

Buderus Edelstahl GmbH is a renowned German manufacturer of high-grade special steels. Both our standard steels and our special steels have an excellent reputation all over the world. With more than 50 sites, service centres and product warehouses, we guarantee close cooperation and quick reaction times for our customers.

Special steels from Buderus Edelstahl are used in vehicle and drive technology, plant and machine construction, as well as tool and mould production. We deliver quality products from a single source for these high-tech sectors:

- Tool steel
- Special engineering steel
- Open die forgings
- Drop forged components
- Hot and cold-rolled strips
- Semi-finished products
- Hardness comparison plates

Legal notice:
Buderus Edelstahl GmbH has taken the greatest care in compiling this information. It is nevertheless possible that details may have changed in the meantime. Please appreciate that we are therefore unable to guarantee the accuracy and completeness of the information provided. We reserve the right to make changes to the context at any time. Please also note that we accept no liability for obvious printing errors and mistakes. All details, information and descriptions are non-binding and only become binding as part of a contract to be concluded separately.

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