

Products and Services

DEUTSCHE EDELSTAHLWERKE

Providing special steel solutions





Experts in special steel long products

DEUTSCHE EDELSTAHLWERKE is a leading manufacturer of special steel long products. Our broad product range has acquired us a virtually unique position in the world's markets, offering our clients a decisive advantage – they can enjoy the benefit of one-stop solutions. Our products extend from 0.8 mm diameter drawn wire to forged products with a 1100 mm diameter.

Our reputation as experts in special steel long products is based on a steel-production tradition spanning 150 years. Our experience, modern production lines and not least our qualified, dedicated staff are the foundations for the high quality of the products we manufacture.

But new demands create the challenges we thrive on. These in turn help us define our main objectives – continuing product development and further vocational training for our staff. This approach enables us to guarantee our clients increasingly tailor-made, flexible one-stop solutions in the future on all continents.

Our strengths lie in ultimate quality, custom-made services and nurturing client proximity in the most important world markets. We service our clients' needs, starting with practice-oriented advice to the ready-to-manufacture product. At each stage we offer you highly reliable tailor-made solutions.

Quality

DEUTSCHE EDELSTAHLWERKE utilizes highly effective quality-assurance systems. The company has been granted numerous licenses, including the standards ISO TS 16949, ISO 14001, ISO 9001 and QS 9000 certifications. Furthermore, we hold manifold licenses from the aerospace and automobile industries, certificates issued by national institutions for adherence to construction guidelines and pressure vessel manufacture standards. We also comply with safety regulations for power generation.

We monitor all our manufacturing processes from the testing of raw materials, through smelting to casting, from the ensuing testing of internal and surface flaws, dimensional and identity tests of the products machined in our rolling mill finishing line. Mechanical and technological testing of samples is also monitored.

Our EDP system is fed with the specific steel's requirements, provisions for manufacturing and test sequences as well as the data stemming from production, all of which is then analyzed.

By using this thorough documentation, we are in a position to ensure consistently high-quality

reproducibility at any time.

In addition to this we constantly optimize the production-chain processes on the basis of state-of-the-art information and findings.

On site – worldwide

Thanks to the numerous foreign Schmolz+Bickenbach subsidiaries and agents, we are in a position to rely on a detailed network of sales channels f.e. in Australia, Brazil, China, Canada, Malaysia, Singapore, South Africa, Turkey, India and the USA. Such a balanced network of global sales options in the most important markets ensures a high-level local customer service and a resulting consistency of our special steel in all continents.

The direct information flow between end-user and manufacturer – without any intermediary – facilitates clarity and creates greater service flexibility to the markets' demands on our part.

Technical advice

When trying to reach new heights, one is well served by having a competent and reliable partner at one's side. For our clients, our technical advisors are certainly a wise choice.

Should a query arise regarding application

We have a permanent factory stock of some 20,000 tons of tool steel in approx. 4,000 sizes.



**We offer
ex-warehouse
delivery within 48
hours with virtually
100 % availability.**

engineering, the right choice of material, the recommended application of our steel grades or on heat treatment or machining, our sound know-how is an ideal foundation to build on.

Your challenge is the every-day task our technical consultants thrive on – they are always at the client's disposal to find the very best solution.

Machining and service

Thanks to the most modern manufacturing facilities, we are in a position to pre-machine products according to the customer's requirements. We will supply a manufactured component, provide an semi-finished product or deliver a finished, perfectly fitting part (e.g. mandrels or ready-to-install cold rolls). Our clients decide to which extent pre-machining is required.

Our tool and mould manufacture ranges from pre-milled ingots, precision flats and squares to ready-made parts. Rolls, shafts, pilger mandrels, cylinders and rollers for continuous casting are the core of our production. Many clients require steel products delivered without rolling and forging skin. Our works comply here with round billets for tube making, rolled or forged steel bars which can be peeled or turned as well as polished and chamfered after straightening. We manufacture rolled products in various sizes with surface tolerances up to ISO 6. Furthermore, our clients have the opportunity to have bright steel ends machined (i.e. the ends can be cut to keep within narrow tolerance limits), or the material can be directly chamfered. It is also possible to saw materials to a short, fixed length.

Engineering steels

Steel has to meet extremely high specifications if machines or their components are subject to high dynamic stress, as is the case with gears and ball bearings.

The stress placed on engineering products, rollers and ball bearings is immense and were it not for the characteristics of the steels used, neither modern cars, engines nor gear manufacturing would be possible at all.

When a steel has to meet very taxing demands – such as very high purity, exceptional surface hardness or capability of withstanding great fatigue – our high-performance grades are most recommendable.

By using a precise blend of the chemical components needed for a tailor-made application, we achieve ideal processing and utility properties.

Our main production focuses on:

- roller and ball bearing steels
- spring steels
- chain steels
- nitriding steels
- precipitation-hardening ferritic-perlitic steels
- cold-heading and cold-extrusion steels
- case-hardening steels
- quenched and tempered steels

Our principal customers are automobile producers, gear manufacturers and the mechanical engineering branch.



Tool steels

As one of the world's largest manufacturers of tool steels we are in the position to supply our clients with precisely the steels that optimally match their respective demands.

No matter whether economic machinability, high wear resistance, ideal thermal conductivity, good hardenability, excellent polishability or etching properties – our broad range of tool steels meets every demand on quality.

All in all, our tool-steel-delivery range comprises four categories:

- hot-work steels
- steels for plastic moulding
- cold-work steels
- high-speed steels

So as to optimize the resilience of tools and components, it is necessary to use high-grade steels as well as employ individual heat treatment.

Due to the integration of hardening shops into our production line, we are in a position to build on decades of tradition in all heat-treatment areas. This enables us to offer one-stop solutions spanning the entire production chain – from steel production through pre-machining to refining by heat treatment in the most important global markets.

Stainless, acid and heat-resistant steels

Everywhere where steel is exposed to the elements or to corrosion – as exemplified by oil rigs or chemical plants – our acid and heat-resistant stainless steels are very much in demand.

Not only are they exceedingly corrosion resistant, but they also meet the highest technical demands where mechanical stress, high stability and elasticity values are involved. If required they are highly resistant to thermal shock.

Today these steels form the centre of our research. Due to their outstanding mechanical and corrosion-resistant properties, our acid and heat-resistant stainless steels are favoured in the chemical and food industries, in transport technology, energy, medicine and mechanical engineering as well as in offshore drilling rigs.

We supply:

- austenitic, ferritic and martensitic standard grades
- heat-resistant steels
- high-temperature steels
- non-magnetic steels
- valve steels
- special steels for the aerospace industry



**DEUTSCHE
EDELSTAHLWERKE**
belongs to the
world's leading
producers of tool
steel, engineering
steel and stainless
long products.

Product range

Ingots

Continuous casting



Semi-finished products


Sheets


Bars




Engineering steel

1 – 40 t

 138, 150, 265 mm
 475 x 340 mm



 50 – 320 mm, rising in 1 mm increments


 width: up to 800 mm
thickness: 4 – 10 mm
length: up to 2000 mm


 7 – 250 mm
 50 – 160 mm
 width: 80 – 510 mm
thickness: 24 – 160 mm
width/thickness ratio 10:1 max.







Tool steel

0.6 – 40 t

 138, 150, 265 mm
 475 x 340 mm



 50 – 320 mm, rising in 1 mm increments


 width up to 2000 mm
thickness: 2 – 205 mm



 7 – 250 mm
 50 – 160 mm
 width: 80 – 510 mm
thickness: 24 – 160 mm
width/thickness ratio 10:1 max.
 Ferro-Titanit®
 various sizes according to customer requirements


Stainless steel

1 – 40 t

 138, 150, 265 mm
 475 x 340 mm

 50 – 320 mm, rising in 1 mm increments

 7 – 250 mm
 50 – 160 mm
 width: 80 – 510 mm
thickness: 24 – 160 mm
width/thickness ratio 10:1 max.

Depending on the material used, dimensional restrictions are possible.

General note (liability)

All statements regarding the properties or utilization of the materials or products mentioned are for the purposes of description only. Guarantees regarding the existence of certain properties or a certain utilization are only ever valid if agreed upon in writing.



Wire rod

 5.5 – 30 mm

Bright steel

 0.8 – 130 mm

 2 – 16 mm


 2 – 18 mm

 2 – 22 mm

bright steel in bars of
2 to 130 mm


bright steel in coils of
0.8 to 22 mm

Forged products


 open-die forgings,
rotation-symmetric
forgings forged to shape
on request
up to 50 t
single piece weight


 65 – 1100 mm


 50 – 750 mm

 single piece weight
up to 23 t


Pre-machining

 pre-machined
rotation-symmetric
forgings forged to
shape

 5.5 – 30 mm


 0.8 – 130 mm

 2 – 18 mm

 2 – 22 mm

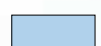
bright steel in bars of
2 to 130 mm


bright steel in coils of
0.8 to 22 mm

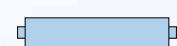
 open-die forgings,
rotation-symmetric
forgings forged to shape
on request
up to 50 t
single piece weight


 65 – 1100 mm


 50 – 750 mm


 single piece weight
up to 23 t

 pre-machined parts,
turned parts, pre-machined
moulds, dies and frames to
customer specification

 cold rolls
20 – 750 mm
diameter

 mandrels diameter
up to 280 mm (round)
length up to 28 m

 5.5 – 30 mm

 0.8 – 130 mm


 2 – 16 mm


 2 – 18 mm

 2 – 22 mm

bright steel in bars of
2 to 130 mm


bright steel in coils of
0.8 to 22 mm


 open-die forgings,
rotation-symmetric
forgings forged to shape
on request
up to 50 t
single piece weight

 65 – 1100 mm

 50 – 750 mm

 single piece weight
up to 23 t

 drill collars
diameter up to
280 mm (round)
length up to 10 m

 pre-machined
rotation-symmetric
forgings forged
to shape





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