



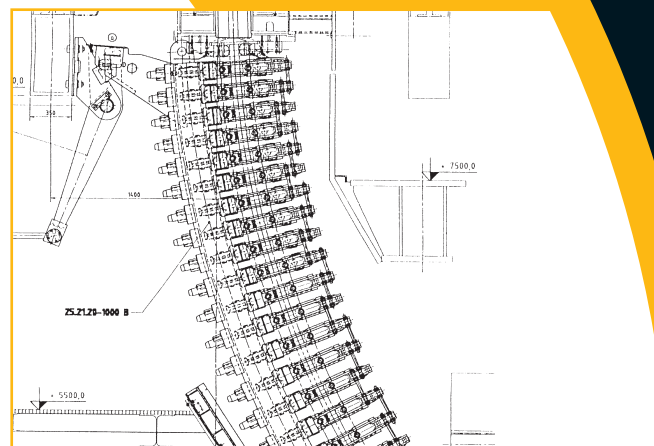
Beam blank plant

## Metal fabrication and steelworks

Metal fabrication and steelworks companies all over the world have for many years relied on rollers and drums from Kuhn Special Steel. Thus for instance both our mono cast rollers (in footrests) and the composite casting rollers (also produced with the centrifugal casting technique) are used in multi-extrusion teeming plants. Here our guide and conveyor rollers guarantee the greatest process security despite being subjected to extreme thermal and mechanical stresses.

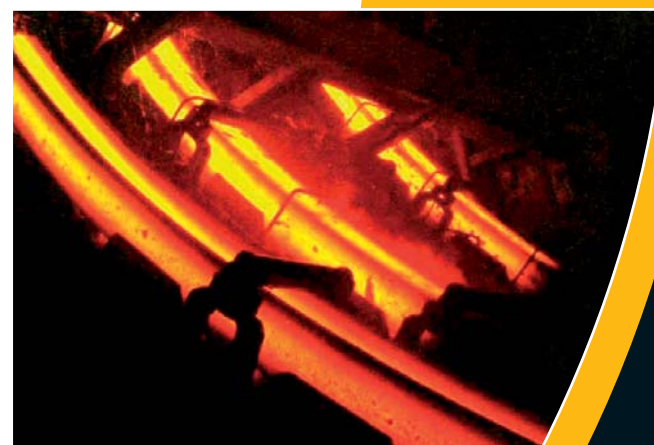
### Other areas of use:

- Kuhn tubes as winding cores for the finished strip in hot and cold rolling mills
- Special alloys, some developed with and for our customers, for high resistance to the stresses that can occur
- Completely finished drums as guide or control rollers with the finest precision tolerances for modern strip galvanising plants
- Centrifugally cast tubes as wear-resistant rollers in sets for rolling mills



Technical drawing of an extrusion casting line

Multi-extrusion teeming plant



## Our know-how applied for you

You benefit, among other things, from very corrosion- and wear-resistant alloys and from the optimum combination of two different materials for the inner and outer layers of an extrusion casting roller in composite centrifugal casting. Whether it's advice on and development of materials for abrasive use even at over 1,000°C or finishing ready for installation on modern CNC lathes, we have the skills and solutions for you.



Extrusion casting rollers are produced at Kuhn Special Steel with composite centrifugal casting

## Benefit from our strengths!

- Over 45 years' experience in centrifugal casting
- 16 centrifugal casting machines and 7 furnaces in use
- Very comprehensive range of machinery with over 20 large CNC-controlled lathes
- Two submerged arc welding plants in use in the company



The machining is done on large CNC-controlled lathes

## Materials:

### Rust-proof and acid-resistant steels:

#### Ferrites and martensites

- Standard alloys
- Soft martensites
- Soft martensites – can be precipitation hardened

#### Austenites

- Standard alloys with and without Mo
- Austenitic alloys with increased Si content

### Wear-resistant steels:

#### Manganese hardened steel

#### Steels for tools

- Cold-working steels
- Hot-working steels
- High speed steels

### Heat-resistant cast alloys

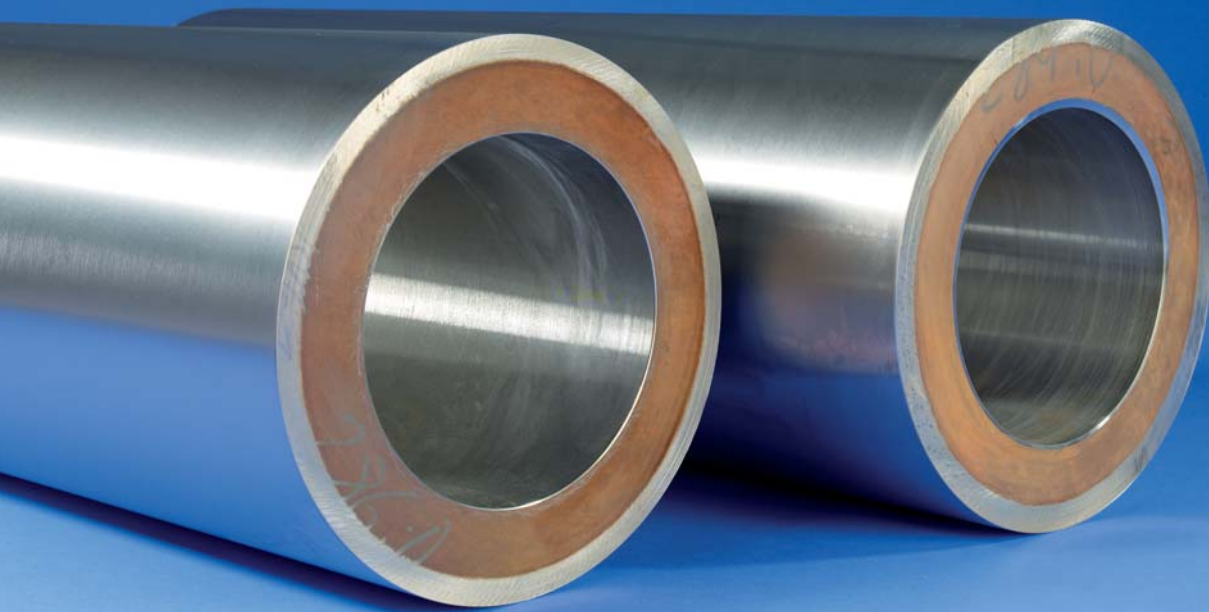
#### Tempered steels

#### Heat-resistant steels

### Possible size range:

(apart from composite):

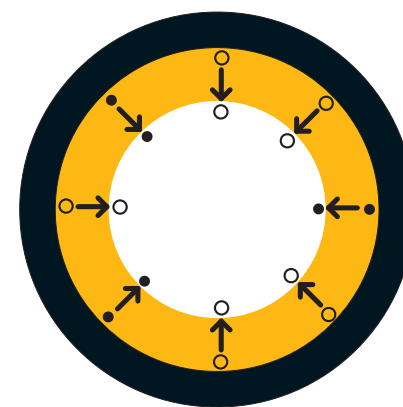
Maximum external diameter 1,100 mm (in exceptional cases up to about 1,300 mm) and 3.3 tonnes cast weight depending on the wall thickness.



Composite casting rollers: 2 materials – 1 component

**Kuhn Special Steel**   
Reliable solutions. Always.

**Metal Fabrication/  
Steelworks**



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**Kuhn Special Steel**   
Reliable solutions. Always.

### **The centrifugal casting technique**

Our core competence is in the centrifugal casting technique with subsequent finishing. We have mastered the application of this production technique for the most varied stainless steels and alloys. The range varies from low-alloy steels to iron-free alloys. We contribute our materials know-how as early as the development phase so as to produce a perfect product at the end.

We manufacture over 70 % of our products as finished products individually and precisely to customers' drawings. And individual parts and small runs represent no problem for us. Moreover we manufacture each one in materials that can be cast reliably with the centrifugal casting technique and we are also happy to manufacture special materials to your particular specifications.

In centrifugal casting, the steel is cast via the axis of rotation into a rotating canister and it solidifies at up to 120 times the acceleration due to gravity. These great rotation forces and the solidification in an inward direction create a particularly dense and pure structure. Impurities and gas inclusions are driven to the surface and can be removed in subsequent processing.

The products manufactured with this technique therefore have outstanding technological properties that are greatly superior in many areas to conventional static casting.

Our varied options for the preparation and finishing of rotationally condensed stainless steel meet our customers' most varied requirements. Whether it's lathes, finishing and polishing machines or our CNC processing centres – our great strength as a specialist in centrifugal casting is also matched in finishing.