



Removing a sample from the induction furnace

Service and quality

Service and quality at Kuhn Special Steel are based on almost five decades of experience in centrifugal casting. In addition, we use high-quality materials that are created for you individually in our in-house development to customers' requirements. We will be happy to help you with materials problems – quickly, without bureaucracy and skilfully and whatever the cause. We also work with external partners in order to determine the precise cause of damage and to make a recommendation on how to prevent such damage in the future.

Together for an ideal result!

Our teamwork with you starts as early as in development. We will be happy to advise you on your design, manufacture or purchasing questions regarding the best stainless steel for your special purpose. Whether it's together with you or for further development for the requirements of a special market, there are always several projects for the development of new or modified materials in progress. Just talk to us! In our modern materials laboratory we can skilfully and rapidly determine the relevant



Spark test on a casting sample by means of spectral analysis

Decanter component during non-destructive inspection



materials characteristics. For special cases we offer you special inspection methods such as scanning electron microscopy incl. energy-dispersive microanalysis, X-ray diffractometry and wear and corrosion tests.

Use our additional skills!

- Very great know-how in damage analysis and close cooperation with laboratories and universities
- Comprehensive range of test equipment
- Quick reaction and help without bureaucracy
- Very great skill with materials
- Constant developments of rust-proof and acid-resistant steels both specific to the customer and non-specific
- Rapid availability of the latest materials

An extract from our test options:

Mechanical technological testing

- Tensile test according to DIN EN 10002-1
- Hot tensile test up to 900°C according to DIN EN 10002-5
- Charpy impact strength test at RT and low temperatures according to DIN EN 10045
- Brinell hardness testing according to DIN EN ISO 6506-1
- Vickers hardness testing according to DIN EN ISO 6507-1
- Rockwell B and C hardness testing according to DIN EN ISO 6508-1

Corrosion tests

- Test for intergranular corrosion according to DIN EN ISO 3651-1 , SEP 1877 or ASTM A-262 Prac. E
- Huey test according to DIN EN ISO 3651-2 or ASTM-A 262 Prac. C
- Pitting and crevice corrosion test according to ASTM-G48

Physical inspections

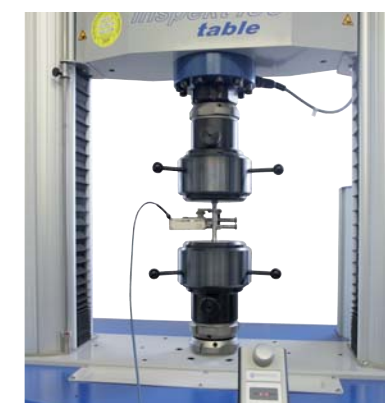
- Permeability properties
- Measuring ferrite content
- Spectroscopic material identification test

Non-destructive tests

- Surface crack test using the dye penetration process
- Ultrasound test
- X-ray test



Hardness test



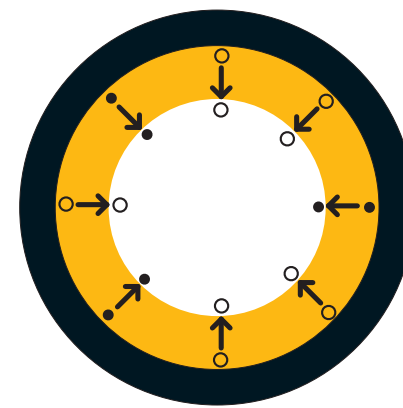
Tensile test



Microscopic inspection of welded joints

Kuhn Special Steel 
Reliable solutions. Always.

**Service and
Quality**



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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.