Stainless Steel – Test and Analysis

Make the most of an unique material

Stainless steel is an unique material with many good properties apart from the built-in corrosion resistance. FORCE Technology has a wide range of analysis and test services that can ensure the quality and reliability of your product, whether it is a processing plant, a surgical instrument, a facade plate, a sensor or a bolt.

In the event of failure or damage, our test methods can identify the cause so that with the assistance of our specialists you will find a good solution to the problem.

Avoid incorrect material

The consequences of using the wrong material in constructions can lead to high costs and impair integrity and personal safety. We can determine the chemical composition with e.g. PMI, XRF and OES. We help you choose the right method and can do the site analysis. And our specialists are always available with impartial advice.

Documentation by standards

Standardized tests provide you with documentation that your product complies with requirements and specifications, whether they address corrosion resistance, mechanical properties, heavy metal emissions or the like, to ensure the best possible life and properties of the product. We, for example, carry out tests for pitting corrosion (ASTM G48), intergranular corrosion (ASTM A262) and salt spray test (ISO 9227).

Surface finish is essential for properties

The surface is crucial for achieving the attractive properties of stainless steel, such as corrosion resistance, ease of cleaning, appearance etc. In our surface characterization laboratory, we have the most advanced surface characterization and analysis equipment, including 3D, microscopy and X-ray. We can also test whether equipment meets the hygienic design requirements of EHEDG.

Find the cause and source of impurities

When high purity requirements are required, stainless steel is the preferred material. It is important to know the cause and source of impurities, particles, scaling and discoloration or similar, if it occurs. We can identify the impurity, its composition and cause with electron microscopy and chemical analysis. Does the impurity come from an external source or does it originate from the stainless steel in the form of corrosion, discoloration or rouging?

Choose the right steel grade by testing

The range of stainless steel is large, and it pays off to choose the right quality to meet the requirements for corrosion resistance, strength and weldability. With accelerated electrochemical corrosion testing, we can measure the corrosion resistance of stainless steel directly in your product, to ensure the most cost-optimal choice of material. We are happy to help defining other test methods that can answer your questions.

Validation and performance testing

Does your product meet extreme requirements such as tightness, pressure rating, dimensional stability, chemical resistance or other safety requirements? In our Accelerated Corrosion Testing Laboratory, we offer special tests of stainless equipment at high pressures and temperatures in aggressive environments (liquids and gases). When the standards are insufficient, we offer a customised test that verifies compliance with, for example, the certification of your product.

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Did you know that FORCE Technology is an independent approved technology service provider whose purpose is to create value with the customer? Here you can get advice, sparring and problem solving based on a deep technological understanding and a strong professional network.

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