



**TECHNO LABORATORIES**



**DEDICATED TOWARDS  
BETTERMENT**



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## ABOUT TECHNO LABORATORIES

Techno Laboratories (TL) is an independent Test Laboratory founded in 2022. We have acquired recognition from the Oil & Gas, Offshore & Marine and Manufacturing industries as a leading provider of quick, reliable, and accurate testing of metals. We offer a wide selection of services including mechanical tests, chemical, metallographic analysis, corrosion tests and non-destructive tests, etc.

Tests performed by TL are in-line with the most recent international benchmark of ISO/IEC 17025 which attests TL's technical competency in laboratory testing. For specialized products, or products which are uncommon, TL's highly regarded and experienced team will develop testing methods which are suited for the specific purpose.

**CERTIFICATIONS**



### **Our Vision:**

To be the world's first choice materials testing lab.



### **Our Strategy:**

Lowest Risk Provider – We give you the right answer, on time  
Superior Customer Service – We are great people who make doing business easy

## WHY CHOOSE US?

### We Care

We care about our clients and will take the time to understand your testing objectives, so that we can advise on an appropriate scope of testing, always within your budget. We will assist you in understanding the inspection & testing processes and methods, work together with you to review your test results and help you understand the implications of the test results on your production or process.

### We are Experienced

Our team is having several years of experience in testing metals across multiple industries. We are confident that we can provide our clients with practical advice on test specifications, requirements and acceptance criteria.

We ensure our team members are well trained and knowledgeable through a combination of comprehensive series of internal and external training as well as guidance from our experienced seniors, so that you are assured that testing is always carried out competently and reliably.

### We Go Further

We understand that inspection and testing should always complement your production schedule, not hinder it. We strive to provide you with your test results in the shortest amount of time and consistently review our operations, from receiving of samples to generation of test reports, in order to be as efficient as possible to enable your production or inspection schedule to always be on time.

WHAT WE DO?



### Mechanical Testing



### Metallographic Examination



### Corrosion Testing



### Chemical Analysis



### Non-Destructive Tests



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## Mechanical Testing —

Mechanical testing is carried out to determine whether a material is suitable for its final application, for quality control or in research and development to predict how a material will react under other types of forces. This is achieved by measuring properties such as Young's Modulus, tensile strength, yield strength, elongation, reduction in area, hardness, and impact resistance.

### Test we are providing.

- ✓ Tensile Test
- ✓ Transverse Weld Tensile
- ✓ All Weld Tensile
- ✓ Through Thickness Tensile
- ✓ Charpy Impact Testing at room temperature until minus 196 Deg C
- ✓ Welder Qualification tests
- ✓ Welding Procedure tests
- ✓ Hardness testing (Rockwell, Brinell, Vickers, Micro Vickers)
- ✓ Flattening test
- ✓ Bend test
- ✓ Nick break test
- ✓ Flaring test
- ✓ Flanging test
- ✓ Fillet fracture test
- ✓ Compression test
- ✓ Proof load test
- ✓ Peel Test



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## Metallographic Examination —

Metallography is the study of sample microstructure. Analysis of a material microstructure helps to establish if the material has been processed correctly and is a critical step in determining product reliability and for understanding why a material failed.

### Test we are providing.

- ✓ Decarburization
- ✓ Effective Case Depth evaluation
- ✓ Stereomicroscope Evaluations at 8-60X magnification
- ✓ Optical Microscope Evaluations at 50-1000X magnification
- ✓ Grain Size analysis using comparison charts as per ASTM E112
- ✓ Ferrite content by manual point count method as per ASTM E562
- ✓ Microstructure for the degree of banding as per ASTM E1268
- ✓ Microstructure Analysis
- ✓ Coatings evaluation
- ✓ Inclusion Rating
- ✓ Intergranular Attack (IGA)



## Corrosion Testing —

Corrosion generally happens when materials are exposed to an aggressive environment, which results in a degradation of material.

Corrosion testing helps analyzing the metal resistance to corrosion at different weather conditions, such as temperature and humidity. The process is measured and analyzed to determine the chances of corrosion.

We can analyze variety of metal samples, including duplex and austenitic stainless steels and wrought nickel-rich chromium-bearing alloys.

### Test we are providing.

- ✓ Pitting Corrosion Test as per ASTM A923 Method C; ASTM G48 Method A, C & E
- ✓ Crevice Corrosion Test as per ASTM G48 Method B
- ✓ Intergranular Corrosion Test (IGC) as per ASTM G28 Method A & ASTM A262 Practice A, B, C & E
- ✓ Hydrogen Induced Cracking Test (HIC)
- ✓ Sulfide Stress Corrosion Test (SSC)
- ✓ Stress-Oriented Hydrogen Induced Cracking Test (SOHIC)



## Chemical Analysis —

Our chemistry division gives in depth chemical analysis of the properties of metals and alloys. Chemical testing of metals is achieved using qualitative and quantitative analysis.

### Test we are providing.

- ✓ Optical Emission Spectroscopy (Spark OES Analysis)



## Non-Destructive Tests —

Non-destructive testing (NDT) is a testing and analysis technique used by industry to evaluate the properties of a material, component, structure or system for characteristic differences or welding defects and discontinuities without causing damage to the original part.

### Test we are providing.

- ✓ PMI – Spark Optical Emission Spectroscopy
- ✓ PMI – X-Ray Fluorescence Method
- ✓ Portable Hardness Test
- ✓ In-situ Replica Metallography
- ✓ Iron Contamination Test (Ferroxyl)

NON-DESTRUCTIVE TESTS

CORROSION TESTING

CHEMICAL ANALYSIS

METALLOGRAPHIC EXAMINATION

MECHANICAL TESTING



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