

Testing of Metals & Alloys

Products Tested

All Ferrous and Non Ferrous Metals and Alloys like Steel, Stainless steel, Diesteel, Aluminium, and its alloys, Zice and Lead base alloys etc..



Chemical Spectro/XRF wet Method

Direct spectrometer techniques gave very fast and accurate results. We have the largest capability in the country to analyze both ferrous and non-ferrous metals. Metals not possible to analyze by direct Optical emission spectrometer are analyzed by XRF spectrometer.

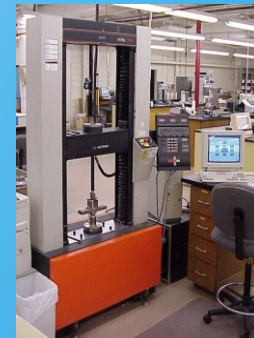
Corrosion Testing

- ▶ Intergranular corrosion tests
- ▶ Oxalic Acid Test, ASTM A 262 Practice. A
- ▶ Ferric Sulfate-Sulfuric Acid, ASTM A262- Practice B
- ▶ Nitric Acid, ASTM A262, Practice C, (Huey Test)
- ▶ Copper-Copper sulfate-16% sulfuric acid, ASTM A262- Practice E (Straus Test)
- ▶ Salt Spray (Neutral / Fog), ASTM B117
- ▶ Pitting Corrosion Test, ASTM Gr 48
- ▶ Hydrogen-Induced Cracking (HIC) Test, NACE TM 0177
- ▶ Sulfide Stress Corrosion Cracking (SSCC), NACE TM 0177
- ▶ Corrosion test as ASTM Gr 35
- ▶ Ammonia Vapour Test
- ▶ Crevice Corrosion
- ▶ Chloride Stress Corrosion Test as per ASTM Gr 36 Specification.



Mechanical Testing

- ▶ Tension tests(at high/ low temp.)
- ▶ Brinell hardness tester
- ▶ Rockwell hardness tests
- ▶ Vickers hardness tests
- ▶ Micro hardness Tests
- ▶ Impact Tests
- ▶ Izod (impact value and fracture appearance) at ambient
- ▶ Temperature Charpy (impact value and fracture appearance upto-196 deg C
- ▶ Compression, transverse
- ▶ Shear tests
- ▶ Bend tests
- ▶ Tests on HTS wire
- ▶ Tests on tubes



Non-Destructive Testing

- ▶ X-ray Radiography
- ▶ Magnetic Particle Testing
- ▶ Ultrasonic Testing
- ▶ Radiography
- ▶ Portable Hardness
- ▶ Surface Roughness
- ▶ Thickness Survey
- ▶ Core Cutting And Carbonation Tests
- ▶ Visual Insepection And Field Services

Metallography

- ▶ Grain Size
- ▶ Effective Case Depth
- ▶ Depth Of Surface Defect
- ▶ Non-metallic Inclusion Content
- ▶ Macroscopic Examination Of Steels
- ▶ Graphite Type And Distribution In Cast Irons
- ▶ In-situ Metallography
- ▶ Depth Of Cladding
- ▶ Phase Quantification (by Micro Hardness Image Analysis)
- ▶ Segregation Of Carbides

Certifications / Approvals

- > ISO 9001 - 2000
- > IS 17025 - 2005 NABL - Chemical, Mechanical, NDT
- > ISO 14000 - 2004
- > Ministry of Environment & Forest under EPA, 1986 (MOEF Approval).
- > State Pollution Control Boards (Haryana, Himachal Pradesh, Orissa)

Major Equipments for Metals & Alloys

- > Spectro meter (OES) G.N.R/ Hilger
- > Spectrometer (XRF)
- > UTM 100/40/5 Ton Computerised.
- > Atomic absorption spectrometer
- > Torsion test appt
- > Izod/ Charpy Impact Tester
- > Magnaflux Yoke type
- > Surface Roughness Tester
- > Ultrasonic Testing Machine
- > Portable Hardness Tester HLD.
- > Salt Spray / Neutral
- > Macro Hardness Tester
- > HIC/ IGC test Apparatus
- > Coating Thickness Tester (FISCHER)
- > Profile Projector
- > Compression Testing Machine
- > Ferrite Meter

Major Customers & Approvals

- > Honda Motors
- > DMRC
- > L & T
- > Railways
- > B.H.E.L
- > Escorts Ltd.
- > Tata Cummins
- > Punj Lloyds Ltd.
- > Gammon India Ltd.
- > N.T.P.C
- > Defense
- > IOCL
- > EIL
- > DGS & D

Other Testing/Calibration Services

- | | | |
|------------------------------|-----------------------------|---------------------------|
| > Mechanical Testing | > Non-Destructive Testing | > Petroleum Testing |
| > Building Materials Testing | > Leather & Textile Testing | > Polymer Testing |
| > Electrical Testing | > Water Testing | > Paint Testing |
| > Drugs & Cosmetics | > Microstructure Testing | > Microbiological Testing |
| > Food Testing | > Thermal Calibration | > Coal & Oil Testing |
| > Electrical Calibration | > Mechanical Calibration | > Environmental Testing |



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