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REF.: INTRODUCTION LETTER

Hello!

Warm greetings from Ahmedabad Laboratories.

We are introducing ourselves as one of the most esteemed material testing laboratories in the Ahmedabad.

As a premier material testing laboratories, we are testing all types of material with range of testing viz.

- Chemical testing
- Mechanical & Physical testing
- Corrosion testing
- Micro structure testing

We comprise hardcore experience in the field of material testing since last many years. We also have highly qualified personnel who are intuitive of carrying all types of material testing with utmost care & preciseness.

We seek to distinguish ourselves by providing the most possible flexibility and reliability in customer service, including sample collection to report delivery at customer end.

As an accredited material testing laboratory, we keep promise for our most precise testing results yet on-time.

Thank you in advance in your anticipated positive response.

Yours faithfully

Managing Director

COMPANY PROFILE:

Vision:

To continuously strive to achieve highest standards of precise material testing services in the concurrence with customers' expectations yet in cost effective manner.

Mission:

To exceed our customers' expectations in quality, delivery, and cost through continual improvement and close customer interaction. Our test certificates are reliable as these are based on accuracy and impartiality.

About us:

Ahmedabad Laboratories is one of the most reputed independent testing laboratories in Odhav, Ahmedabad. Ahmedabad Laboratories has provided services to its clients range of material testing facilities have been added in the laboratory to cater to the needs of the metal industry.

Ahmedabad Laboratories assures its customers to provide accurate, qualitative and speedy services with most modern equipments, meeting national and international standards.

Ahmedabad Laboratories ability to provide value to our metal testing customers is based on organizing multiple talents into a focused set of technological capabilities. Ahmedabad Laboratories provides several testing services, but, no matter which discipline you choose, one thing is certain. When you send a sample to Ahmedabad Laboratories, you can have confidence in the results, because you are working with a company that has a reputation for being meticulous.

At Ahmedabad Laboratories we have set our priorities towards working for a common goal of achieving benchmark judgment. Naturally, accuracy is of paramount importance to us and highest degree of calibration standard is inevitable in order to achieve most authentic analysis.

Ahmedabad Laboratories Test Certificates are widely accepted in the industry and approved by major National and International Inspection Agencies, Departments under Government of India, Public Sector undertakings and Private Sector Industries.

Ahmedabad Laboratories undertakes material testing as per international standards and specifications as defined by ASTM, NACE, DIN, AWS, API, BIS, IS and others. Testing can also be done as per client-supplied specifications.

Ahmedabad Laboratories has been providing testing services under third party inspection agencies. The company is lead by well experienced and qualified technocrats.

OUR SERVICES:

[1] Chemical testing

Chemical testing is the science of chemical characterization and measurement. Qualitative analysis is concerned with the description of chemical composition in terms of elements, compounds, or structural units, whereas quantitative analysis is concerned with the measurement of amount. Analytical chemistry, once limited to the determination of chemical composition in terms of the relative amounts of elements or compounds in a sample. Modern analysis has also placed significant demands on sampling techniques.

- **Wet chemical analysis**

Wet analysis is performed in samples where cut pieces are hard to retrieve. The samples coming to wet analysis are usually in chips or powder forms. Samples include Fe-base, Non Fe base, pure metals, minerals, refractories, chemicals, Zn dust/ash, and Cu dust/ash. The processes performed could be titrimetric, gravimetric, colorimetric and combustion method depending on the element to be analyzed.

- **Spectro analysis**

Spectroscopy includes the measurement of emission, absorption, reflection, and scattering phenomena resulting from interaction of a sample with gamma rays and x-rays at the high-energy end of the spectrum and with the less energetic ultraviolet visible, infrared, and microwave radiation.

We have facility to test metals & alloys of, Fe base with Nitrogen, Ni base, Cu base, Al base, Zn base, Ti base by spectro analytical systems. Alloys of this base are accurately analysed by our spectro. The emission spectrometers are calibrated in Italy by the manufacturer, which are calibrated at regular intervals in the similar fashion. A well-experienced and qualified technical manpower ensures perfect testing confirming to the international standards and norms.

[2] Mechanical & Physical testing

Determination of mechanical properties of material that reveals its elastic and inelastic behaviour when force is applied, thereby indicating its suitability for mechanical applications Properties of a metal or alloy that are relatively insensitive to structure and can be measured without the application of force; for example, density, electrical conductivity, coefficient of thermal expansion, magnetic permeability, and lattice parameter. Does not include chemical reactivity.

Testing procedure of Aluminium Material:

Tensile test means, a method of determining the behavior of materials subjected to uni-axial loading, which tends to stretch the metal. A longitudinal specimen of known length and diameter is gripped at both ends and stretched at a slow, controlled rate until rupture occurs.

Universal Testing Machine (UTM) being used for carrying following tests:

- Bend test
- Re-bend test
- Proof load test
- Compression test
- Flaring test

UTM renders the measurement of:

- Yield stress
- Ultimate tensile stress
- % elongation
- Reduction percentage area (in %)

UTM renders graphical representation of:

- Stress v/s Strain
- Load v/s Displacement
- Stress v/s Displacement

Hardness test

Hardness means a measure of the resistance of a material to surface indentation or abrasion; may be thought of as a function of the stress required to produce some specified type of surface deformation.

[3] Corrosion Testing

Corrosion testing helps you estimate component service life, compare candidate materials in your service environment, and help screen your materials and their condition.

- IGC practice A as per ASTM A 262
- IGC practice B as per ASTM A 262
- IGC practice C as per ASTM A 262
- IGC practice E as per ASTM A 262
- ASTM G-48
- ASTM A 923 method A, B and C

[4] Micro structure testing

- Evaluation of grain size
- General Structure Study
- Decarb Layer
- Nodularity % & Count in S.G iron
- Inclusion rating
- Heat treatment conditions & its effects
- Forming process
- Weld fusion MACRO examination
- Phase study
- Ferrite measurement
- Normality

Sample Size for Material Testing

Ahmedabad Laboratories undertakes Chemical Testing, Mechanical Testing. The following sample requirements will provide optimal sample size for our technicians to conduct the required tests. Your sample size shall meet the requirements listed below, Sample sizes larger than those listed will not present a problem, the table below is considered as a good reference point for most samples.

TYPE OF TESTING	SHEET	PLATE	ANGLE	BAR	PIPE /TUBING
Chemical	50x25	50 x 50	50 Long	50 Long	50 Long
Tensile	50 W x 300 L	50 W x 300 L	300 long	350 Long	350 Long
Bend	50 W x 300 L	50 W x 300 L	-	350 Long	400 Long
Hardness	50 x 50	50 x 50	50 x 50	50 Long	50 Long
Flattening	-	-	-	-	100 Full Ring
Flaring	-	-	-	-	150 Full Ring

Wet Chemical Analysis

Metals Chips - 5 grams minimum, 10 grams preferred.

Time for Completion: 2 Days.

TMT Bar

1 .2 Meter Long, Each Diameter having 3 Samples.

Test Conduct: Chemical Analysis, Tensile (Yield Stress, UTS, Elongation, Bend, & Rebend Test).

Time for Completion: 1 Day.

Weld Procedure Qualification:

The welded test plate should be a minimum of 300 mm Wide by 500 mm along the weld.

Conduct test.

Time for completion – Min. 5 Days.

Note:

- All Dimensions are in mm.
- Grain direction is very important when submitting Plate or sheet for testing. Always mark direction with an arrow on the Sample/s.