NABL Certified Lab

"TC-8254" ISO 17025 : 2017, NABL accredited facilities for chemical, testing of bauxite, limestone, iron ore, aluminium alloys, coal, mechanical testing of ferrous & non ferrous alloys.

"RC-1022" ISO 17034 : 2016, NABL Accredited Certified aluminium alloys reference material producer.

About JNARDDC

JNARDDC is recognized as a scientific & industrial research organization by the Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India. It is the only institute of its kind in India pursuing the cause of R&D from bauxite to finished product under one roof.

- Set up in 1989 to provide an R&D support system to Indian Aluminium Industry.
- DSIR recognized Scientific & Industrial research organization.
- World-class research and analytical facilities.

The following Services provided by JNARDDC

- **Bauxite Division**
- **Analytical Division**
- **Coal Characterization**
- **Alumina Division**
- **Electrolysis Division (Physical Testing)**
- **Downstream & Recycling Promotion**

आज़ादी का अमृत महोत्सव

स्वच्छ भारत एक कदम स्वच्छता की ओर

LiFE Lifestyle for Environment

Recycling Promotion

Digital India Power To Empower

Bauxite Division

- Sample Preparation (Screening, sieving, homogenising (Coal, Ores & Rocks)
- Sieve Analysis by Rotap
- Bond Work Index
- Magnetic Separation study by WHIMS (Wet High-Intensity Magnetic Separation) & DMS (Dry Magnetic Separation)
- Calcination test
- Petrology / Ore Microscopic Study
- Bulk Density

Analytical Division

- XRD (X-ray diffraction) Analysis : (Phase Identification & Quantitative Mineralogy for Bauxite)
- Wet Chemical Analysis
- XRF (X-ray Fluorescence) Analysis
- Spectro-chemical analysis by ICP-OES - Inductively Coupled Plasma Optical Emission Spectroscopy
- Rare Earth Element (REE) and Critical Mineral Analysis by ICP-MS (Inductively Coupled Plasma Mass Spectrometry)
- Flame Photometer / Spectrometer
- Mercury Analysis by DMA (Direct Mercury Analyzer)
- TCLP (Toxicity Characteristic Leaching Procedure) / STLC (Soluble Threshold Limit Concentration) IN Waste
- Reactive Silica
- Glow Discharge Spectrometer -GDS
- Gold Analysis using Fire Assay / ICP-MS (Inductively Coupled Plasma Mass Spectrometry)

Coal Characterization

- Proximate Analysis - Moisture (Air Dried, Total, Equilibrated), VM, Ash, Fixed Carbon
- GCV Analysis
- Total Sulphur Analysis
- Ultimate Analysis – C, H, N, S, O
- Ash Fusibility Test
- Sample Preparation Technique – Jaw Crusher, Roll Crusher, Pulverizer, Sieve Shaker
- Trace and Ultra trace Element Analysis.

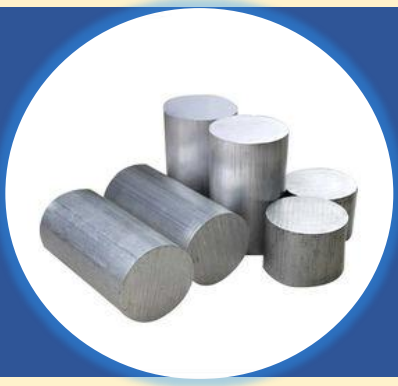
Alumina Division

- Fine Grinding by impact mill 160UPZ
- Bomb Digestion (including liquor, chemical & mineralogical analysis of Mud)
- Autoclave Digestion (- do -)
- Precipitation Study (including liquor analysis & granulometry)
- Available Alumina
- MHA (Mono Hydrate Alumina)
- Bulk Density (powder)
- Angle of Repose (powder)
- Desilication test at specified conditions (including liquor analysis , chemical & mineralogical of Mud)
- Sodium Aluminate liquor Analysis
- Total Organic Carbon by TOC Analyser
- THA (Tri Hydrate Alumina)
- Rheology (Slurry, liquid & paste)
- COMBINE THA AND MHA
- Whiteness
- Mud/ Jar Settling test

Electrolysis Division / Physical Testing

- True Density / Real Density
- APPARENT Density
- Particle Size Distribution
- Thermogravimetric Analysis (20, 10, 5 degree Celcius) (As per temperature)
- Differential Scanning Calorimetry – 20, 10 & 5 degree celcius (As per temperature)
- Pore Size Distribution (MIP - Mercury Intrusion Porosimetry)
- Pore Size Distribution (BET Surface Area Analyser)
- Fluorine Analysis
- Cyanide Analysis

Downstream & Recycling Promotion



- Sample Preparation for Tensile Test, Compressive strength bend strength (Three point Bend)
- Rockwell Hardness
- Microhardness (Vickers)
- Aluminium Melting Furnace (20 Kg : 800 degrees)
- Spectro-chemical Analysis (Spark OES (Optical Emission Spectrometry) : Al)
- Electrical Conductivity
- Cupping Test
- Compressive / Tensile Strength
- Electrical Resistivity
- Scanning Electron Microscope (SEM-EDS: Energy Dispersive Spectroscopy)
- Metallography
- Anodization
- Heat Treatment
- Extrusion Press
- Billet Casting
- Extrusion : Die Design & Simulation
- Coating thickness
- Aluminium Certified Reference Materials (CRMs) product

Reach Out to Us for Service Testing

Mr Nitin Warhadpande
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CTSC Incharge

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