
VISION RESEARCH AND
INNOVATION LABORATORY
AN NABL ACCREDITED LABORATORY

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About us:

- Vision Research and Innovation Laboratory (VRIL),was founded in year 2020 and located at Peenya 4th Phase, Bengaluru.

- The organization is promoted by the team of well qualified professionals with good experience and expertise in failure analysis, metallurgical evaluation, mechanical testing, chemical testing, water testing, polymer testing. Our laboratory is equipped with state-of-the-art machinery inline with international standards, thus providing our client quality results

- Vision would always like to keep our path clear and provide better insight into development internally and externally with clients. Vision always wants to move towards research and development of new ideas and also support actively into problem solving to achieve reliable solutions. Our strength would always be our employees and knowledge we have developed into the field.

Quality policy

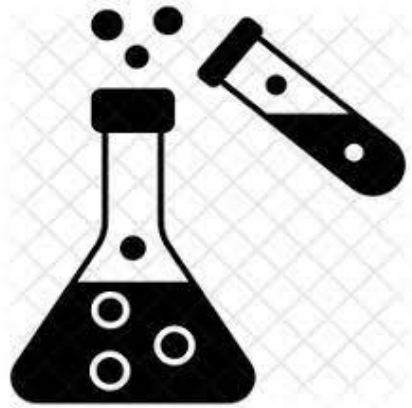
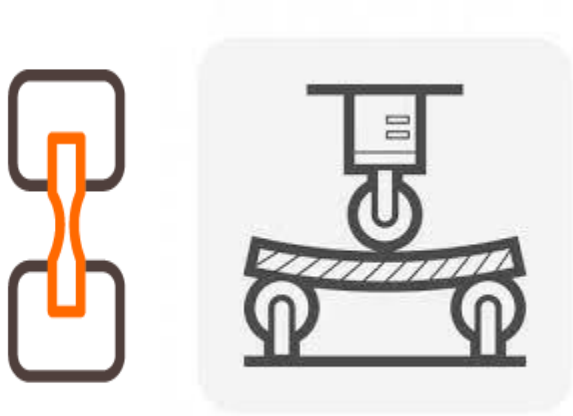
- Our quality policy is to continuously provide accurate & reliable test results.
- By Adhering to International/National Standards
- By maintaining Effective Quality Management System

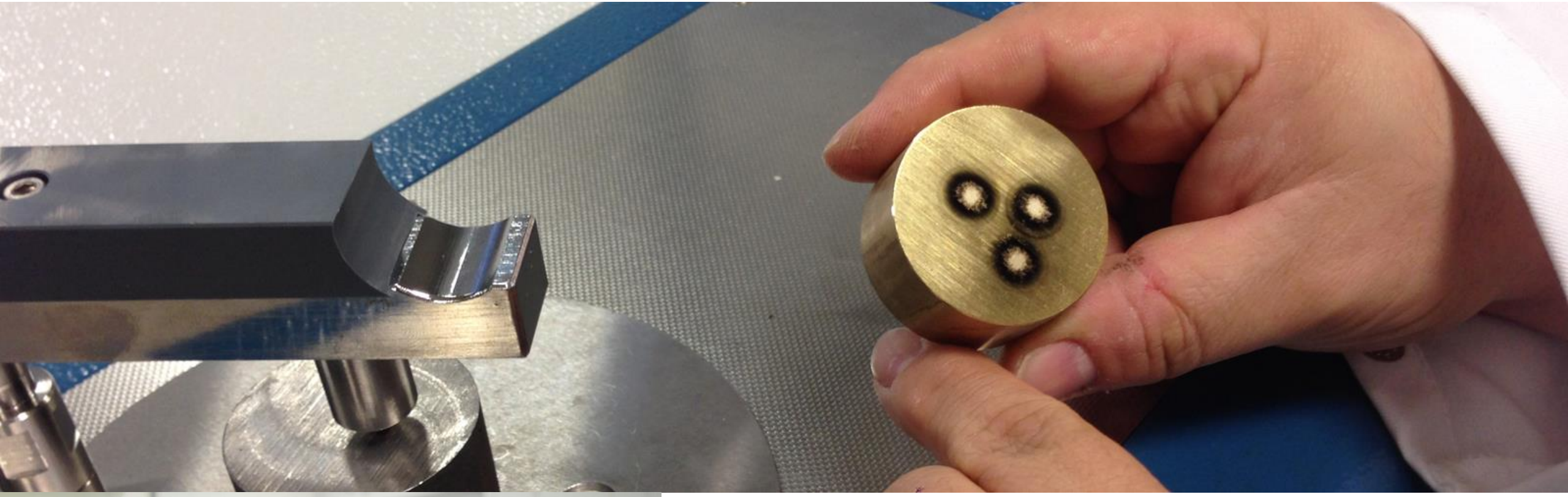
Mission

- Continuously cater customer requirements by adopting, changing technology as per Industrial & Regulatory requirements.

Vision

- To be an Industrial leading muti-disciplinary Laboratory and offer globally advanced portfolio of services

		
Chemical testing	**Mechanical testing**	**Metallography testing**
		
Salt Spray testing	**Water testing**	**Rubbers & Plastics testing**



CHEMICAL TESTING

Chemical Testing

Chemical testing and analysis is vital for regulatory compliance and to understand the quality and composition of chemical substances and materials that are used in products, industrial processes and manufacturing.

Products:

- Ferrous Metals and its Alloys (Steel, SS, Tool Steel, Cast Iron etc.,)
- Non-Ferrous Metals and its Alloys (Aluminium, Copper, Nickel, Zinc and Tin)
- Plastic and polymer products

Type of Tests

1. By OES Spectro Method : This method is quickest compared to the conventional method to determine the chemical composition of a broad range of metals.

2. By Traditional WET method

3. Additionally we undertake chemical Testing for Water , Building materials, Oils, Plastics and Rubbers


MECHANICAL TESTING

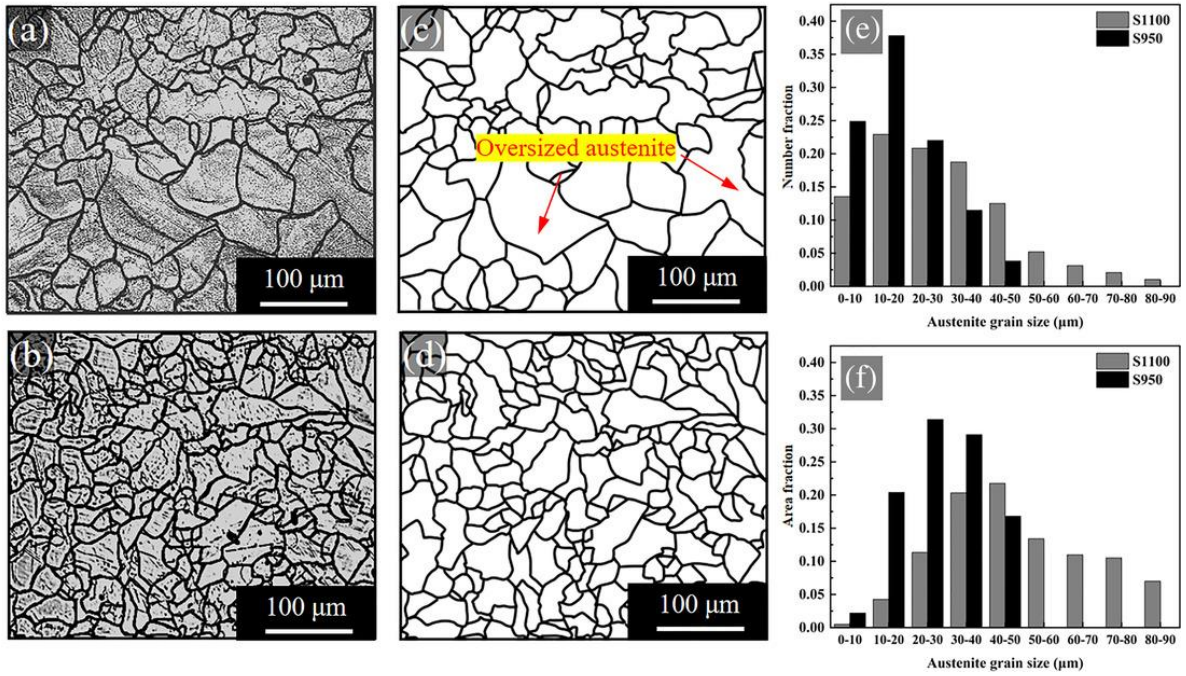
Mechanical Testing

Mechanical testing is a process that is used to determine the mechanical properties of a material. It can be used to evaluate a material independent of its geometry and also at defined geometrical conditions in a given environmental conditions. Some mechanical tests provide information on more than just one mechanical property. For instance, a tensile test not only provides information about a material's ultimate tensile strength, but it also provides quantitative data about its modulus of elasticity and its yield strength.

Products : Ferrous & Non-Ferrous Alloy products, TMT Rods , Tubes, Sheets, Plates, Rods, Wires, Welded & Brazed products, Spot Welded & Seam Welded sheets.

- Tensile test
- 0.2 % proof Stress
- Rockwell hardness
- Brinell Hardness
- Vickers Hardness
- Charpy Impact Test
- Izod Impact Test
- Bend test
- Load Test
- Shear Test
- TMT Bar Test
- Bend & Re-bend test for TMT
- Welder Qualification Tests as per ISO, IS & ASME standards
- Side Bend, Root Bend & Face Bend Test
- Bend test
- Flexural test
- Compression Spring Parameters
- Proof load Test
- Flattening test
- Drift Expansion
- Crushing Test
- Fracture Test
- Breaking Load

METALLOGRAPHICAL TESTING



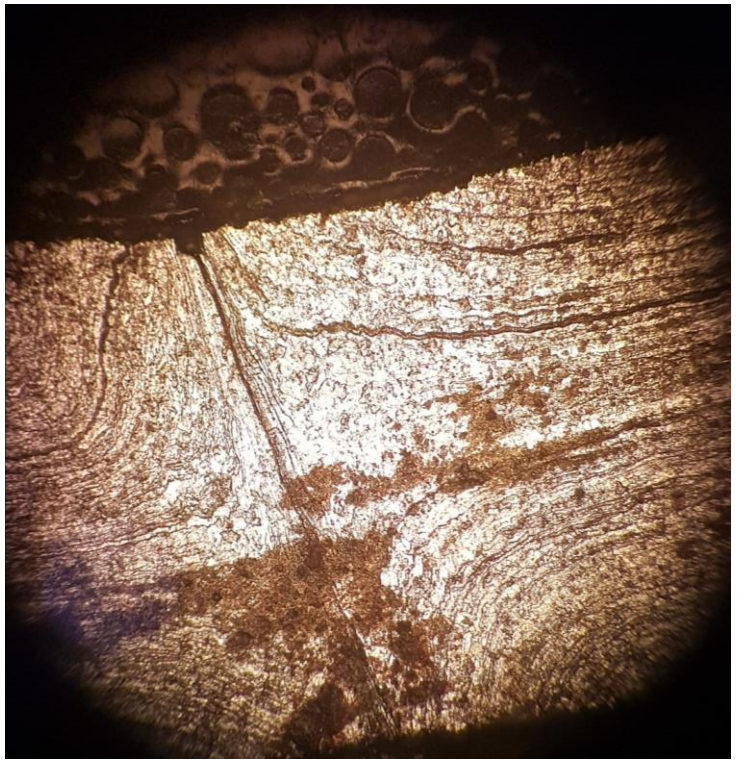
Metallography Testing :

Metallography is the study of the microstructure of all types of metallic alloys. It can be more precisely defined as the scientific discipline of observing and determining the chemical and atomic structure and spatial distribution of the grains, constituents, inclusions or phases in metallic alloys.

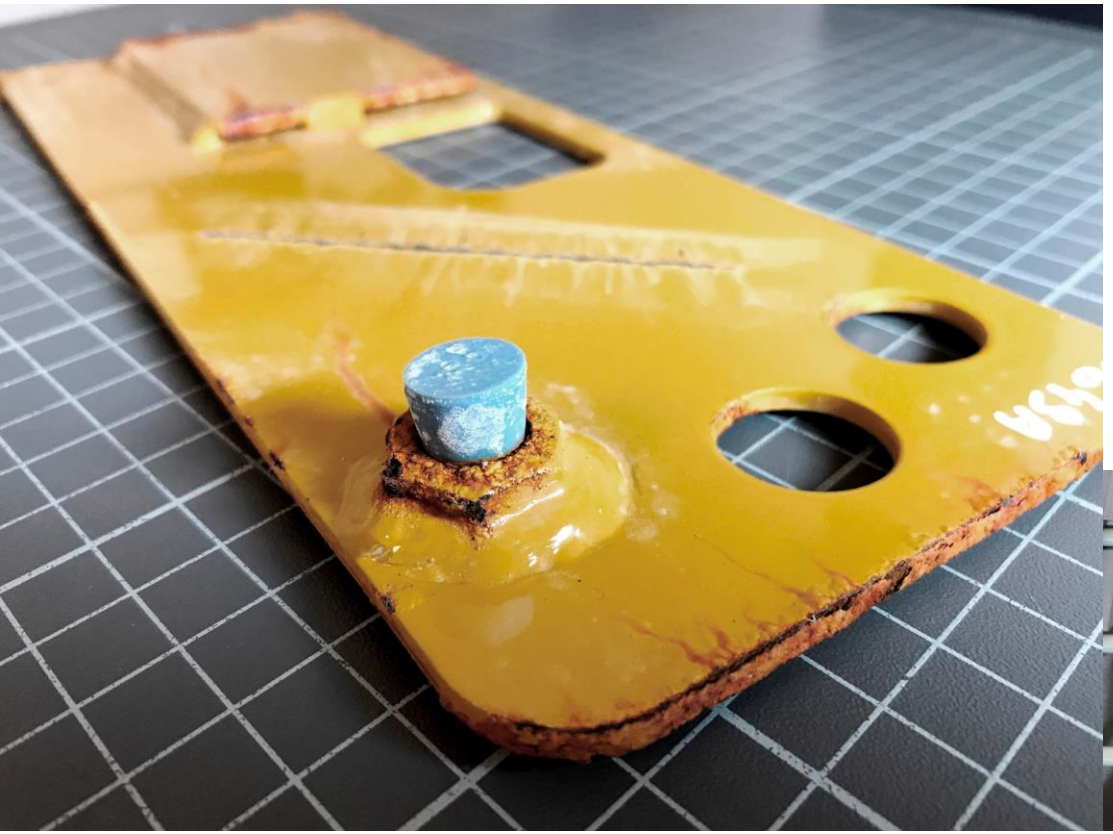
Products : Ferrous & Non-Ferrous Alloy products, TMT Rods , Tubes, Sheets, Plates, Rods, Wires, Welded & Brazed products (Steel, SS, Tool Steel, Cast Iron, Aluminium, Copper etc.,)

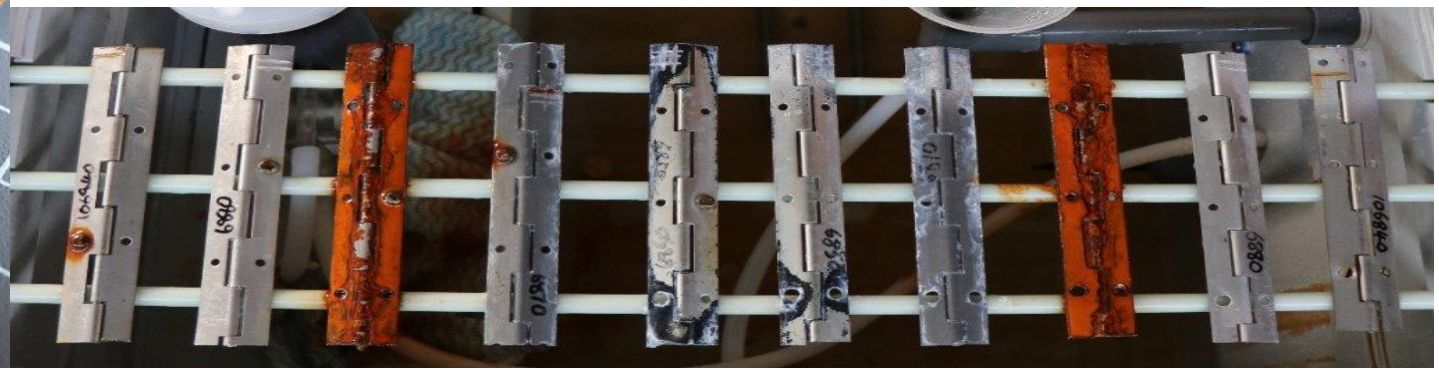
LIST OF TESTS

- Micro Structure
- Grain Size
- Decarburization depth
- Inclusion Rating as per ASTM/ DIN Stannard
- IGC Practice A & E as per ASTM A262
- Case Depth by hardness Survey Method
- Macro Examination
- Grain Flow
- Weld Flow for ERW tubes
- Weld Depth
- Plating / Coating Thickness
- Nodularity Count
- Phase Analysis
- Welder Qualification as ASME Sec IX



ENVIRONMENTAL TESTING





Environmental Testing

Environmental testing is one of the important test, an product need it to undergo before it puts into market and actual use. Since, this tests will be simulating the actual conditions what the products experience in actual atmospheric conditions

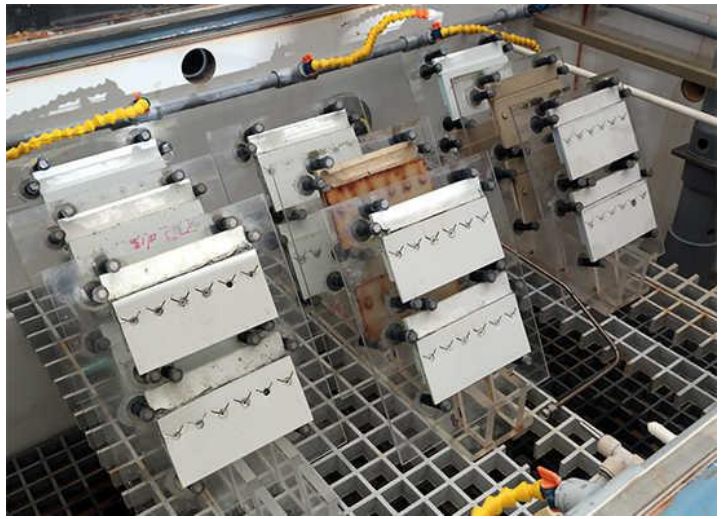
And commonly adapted is Salt spray testing, It is an accelerated corrosion test that produces a corrosive attack to coated samples in order to evaluate (mostly comparatively) the suitability of the coating for use as a protective finish. The appearance of corrosion products (rust or other oxides) is evaluated after a pre-determined period of time. Test duration depends on the corrosion resistance of the coating; generally, the more corrosion resistant the coating is, the longer the period of testing before the appearance of corrosion or rust.

PRODUCTS :

- TMT Rods
- Coated Panels & Parts
- Chromium Plated parts
- Automobile parts
- Marine Application components
- Stainless Steel components

LIST OF TESTS

- Neutral Salt Spray test as per ASTM B117
- CASS Salt Spray test as per ASTM B368




POLYMER TESTING

Polymer Testing

Polymer Testing ensures that material complies with industry specifications applicable to industries such as aerospace, automotive, consumer, medical and defence amongst others. Identifying the capabilities and limitations of a material is of high priority to suppliers, manufacturers and product developers on every level of the polymer industry supply chain. Polymer testing helps to perceive product efficiency to withstand different environmental conditions, resistance against rough handling and also to determine shelf life of the product

Products : All polymers including Plastics & Rubbers

Type of Tests

- Identification of plastics & rubber
- Density
- Melting point
- Halogens
- Filler content(Ash Content)
- Moisture Analysis
- Water Absorption
- Softening points
- Melt flow rate / index
- Spectroscopy infra-red spectroscopy (FTIR)
- Elemental analysis – includes XRF and SEM – EDAX
- Tensile strength & elongation
- Shore A & Shore D Hardness
- Compressive strength
- Flexural strength


WATER TESTING

Water Testing

Water is an important requirement in daily basis, which is used for drinking and food preparation purpose. And water used in many activities such as in construction and curing, should be free from salts and solid particles. Due to domestic or municipal sewage, industrial waste, organic waste, fertilizers and pesticides or surface drainage contamination occurs. Various analysis of Tests are carried out to ensure safety including both Chemical & Microbiological parameters mostly based on application.

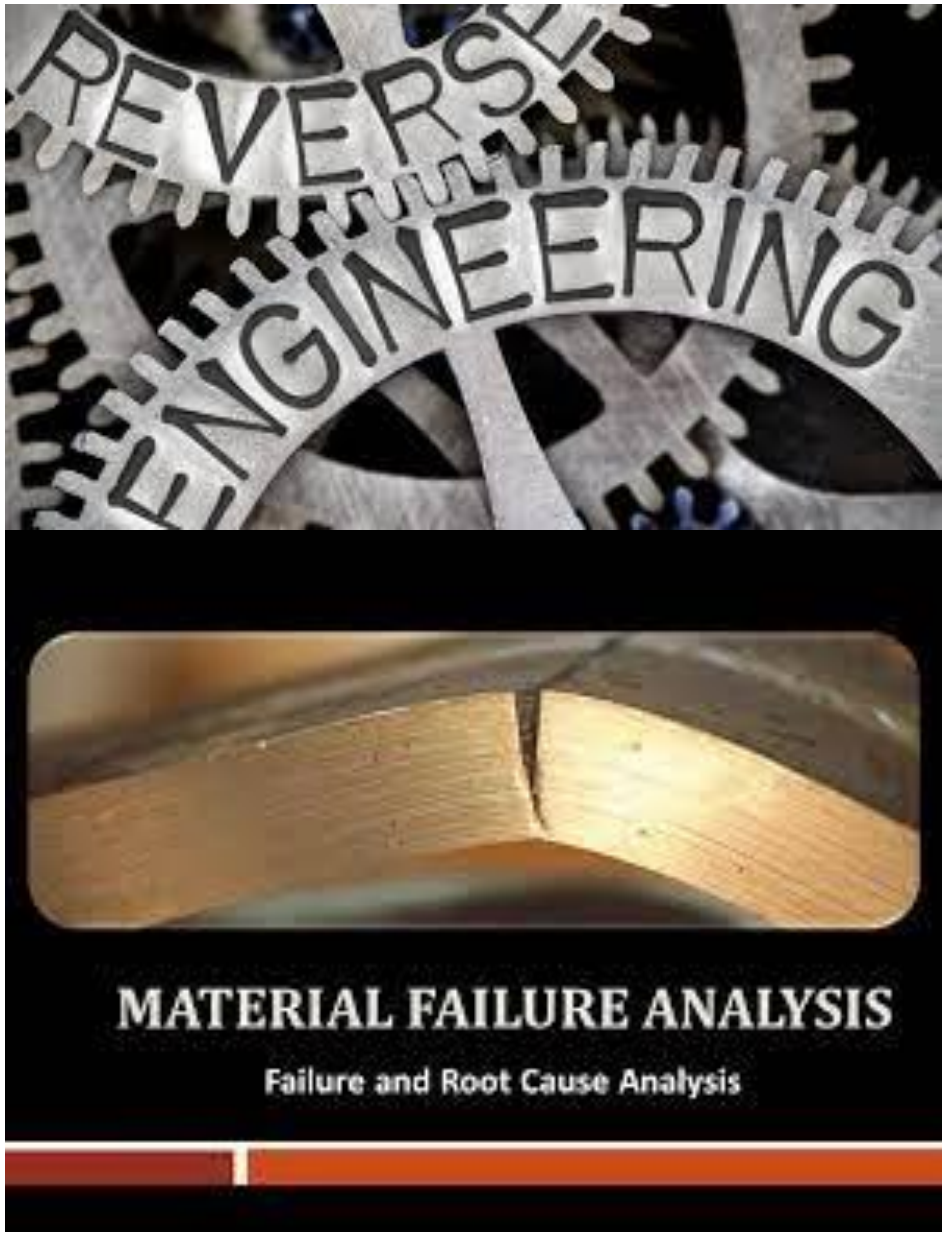
❑ Type of Tests

- pH, acidity, and alkalinity
- Chloride, chlorine residual, sulphate , nitrogen
- Turbidity, Colour and Taste
- Total Dissolved Solids(TDS)
- Electrical Conductivity
- Iron, Manganese, Copper and Zinc %
- Dissolved oxygen
- Water Hardness
- Toxic inorganic and organic substances

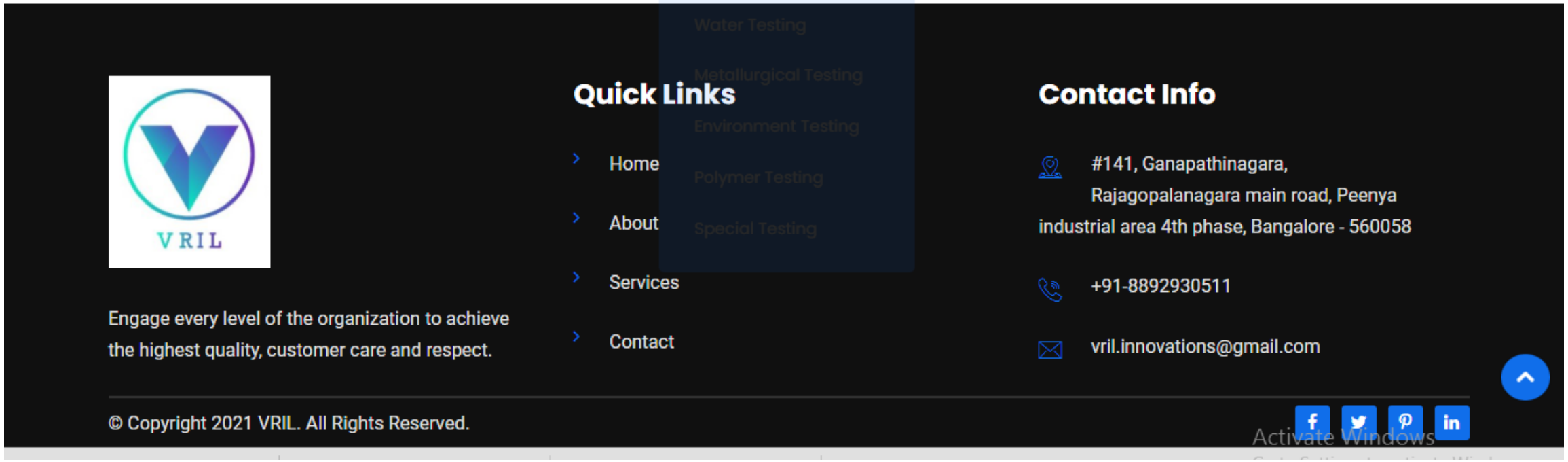
SPECIAL SERVICES

Special Services :

- Failure Analysis
- Reverse Engineering
- Design Concept Development
- Facility Layout design
- Customized Testing as per customer needs
- CAD projects
- LAB BUILD & ISO 17025 NABL Consultation



Contact us :


Water Testing
Metallurgical Testing
Environment Testing
Polymer Testing
Special Testing
VRIL
Engage every level of the organization to achieve the highest quality, customer care and respect.
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