

Real defect NDT TOOLS PVT LTD

NDT-Products I Inspections I Training

Experts in manufacturing customized blocks for NDT Industry

“ Reliability Through Precision ”

Welcome

Message from the Managing Director

Dear Valued Client,

At **Real Defect NDT TOOLS PRIVATE LIMITED**, we take immense pride in our commitment to excellence in the field of Non-Destructive Testing (NDT). As a leading manufacturer of NDT Flawed Specimens, Calibration Blocks, and NDT Validation Blocks. We provide our clients with high-quality products that are essential for ensuring accuracy and reliability in their testing processes. Alongside our manufacturing capabilities, we also offer comprehensive NDT inspection services to meet your varied industry needs.

Our team of skilled professionals is dedicated to delivering precision-engineered solutions, built to the highest standards of quality and performance. At the heart of our company are the values that define us—integrity, quality, innovation, and customer focus. We strive to foster long-term relationships with our clients by offering customized solutions, delivering on our promises, and continually evolving with the advancements in NDT technology. We believe that your success is our success, and our goal is to be a trusted partner that you can rely on for all your NDT needs.

Sincerely,

Asha Murugesan
Managing Director

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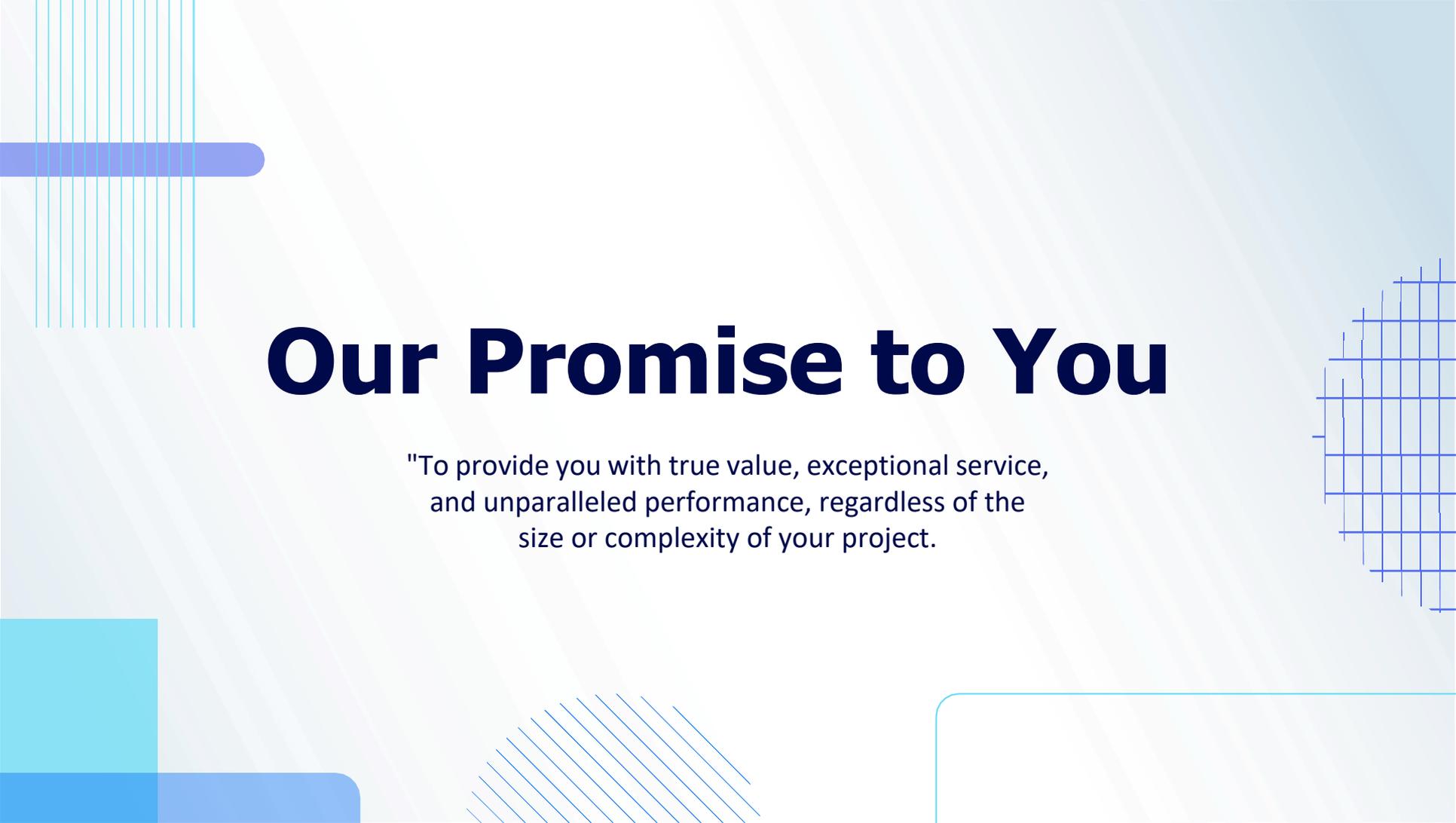
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Our Promise to You

"To provide you with true value, exceptional service,
and unparalleled performance, regardless of the
size or complexity of your project."

01

About Us

Introduction

Established in 2012 in Chennai, Tamil Nadu, **REAL DEFECT NDT TOOLS PRIVATE LIMITED** is a Sole Proprietorship firm that has emerged as a leading manufacturer in the field of **Non-Destructive Testing (NDT) products**.

We specialize in a diverse range of NDT solutions

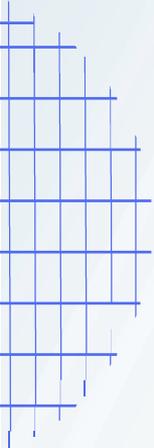
With a strong commitment to quality and innovation, we specialize in a diverse range of NDT solutions, including:

- **NDT Calibration Blocks**
- **NDT Validation Blocks**
- **NDT Flawed Specimens**

In addition to our manufacturing capabilities, we offer comprehensive **NDT Inspection Services** that cater to a wide array of client needs. Our experienced technicians are skilled in utilizing advanced NDT techniques to ensure the safety and integrity of materials and components.

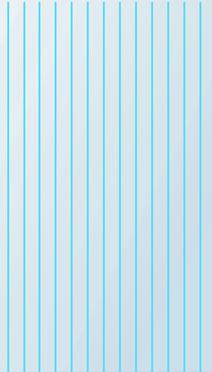
At Real Defect NDT Tools Private limited , our products are highly sought after due to their superior quality, competitive pricing and timely delivery. We prioritize accuracy, reliability, and compliance with industry standards in all our inspection services. We strive to provide outstanding customer service and support, ensuring that our clients receive the best solutions for their NDT needs.

With a focus on continuous improvement and innovation, **we invest in research and development** to stay ahead of industry trends and technological advancements in NDT.



02

Our Philosophy



REAL DEFECT NDT TOOLS PVT LTD

Our philosophy

1



Our mission

To lead globally in NDT solutions with unmatched quality and innovation.



2



Our vision

To provide precise NDT products and services that enhance industry safety and quality.



3



Core values

Quality, Integrity, Customer Focus, Innovation, Collaboration.



03

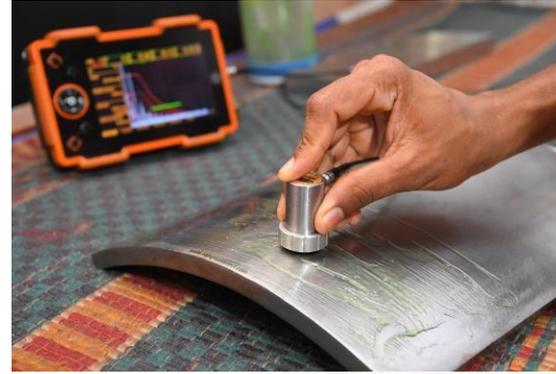
Business Activity

Reliable and Accurate for NDT



Manufacturer

At VAPQ we are committed to manufacturing NDT products with the highest standards of quality and reliability. Our product range includes **calibration blocks, validation blocks, and flawed specimens**, all crafted to ensure precision and durability in inspection and testing applications."



Services

Our NDT inspection service provides top-quality, reliable solutions, **specializing in Advanced Ultrasonic Testing and Conventional Ultrasonic Testing** . Serving various sectors globally, we ensure accurate, thorough inspections that meet international standards for the highest level of precision and safety.

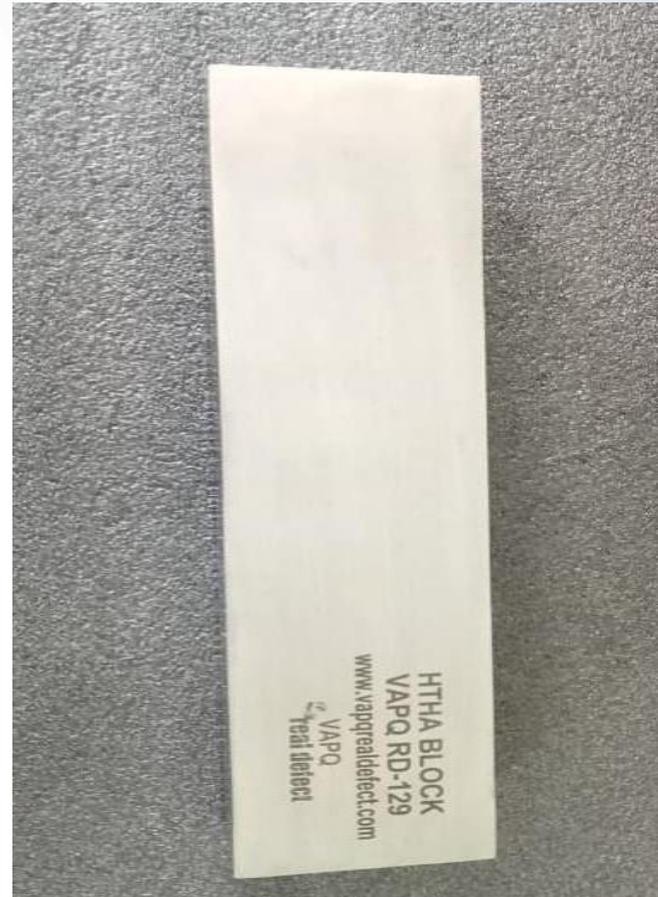
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Product Overview

HTHA - High Temperature Hydrogen Attack Test Samples

Our HTHA (High Temperature Hydrogen Attack) Test Samples are specifically designed for evaluating and validating NDT inspection techniques used in detecting High-Temperature Hydrogen Attack in critical components. These test samples simulate real-world HTHA defects, making them ideal for training, procedure qualification, and equipment calibration.

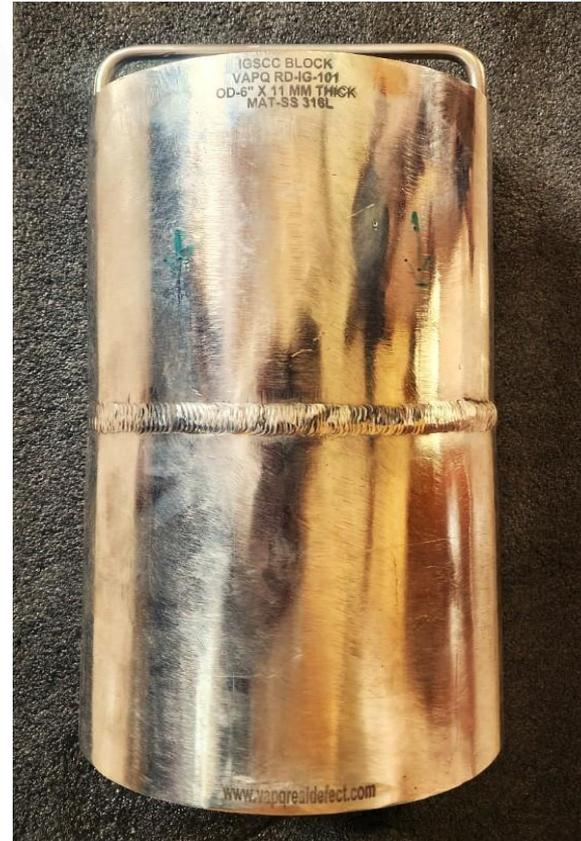
Defect Simulation: Realistic HTHA microstructural changes and damages, including decarburization, micro-cracking, and blister formation, suitable for ultrasonic, phased array, and other advanced inspection methods.



IGSCC - Intergranular Stress Corrosion Cracking Demonstration Block

Our IGSCC (Intergranular Stress Corrosion Cracking) Demonstration Blocks are designed to simulate the complex cracking mechanisms associated with intergranular stress corrosion cracking in stainless steel or similar alloys. These blocks provide a reliable and realistic platform for training, equipment calibration, and procedure qualification in Non-Destructive Testing (NDT) methods like ultrasonic testing, eddy current testing, and phased array techniques.

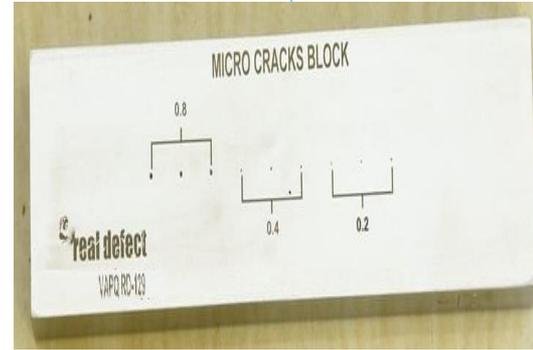
Defect Simulation: Precisely engineered to simulate intergranular stress corrosion cracks, mimicking real-world defects caused by corrosive environments under tensile stress.





HIC - Hydrogen Induced Cracks Test Sample

Our HIC (Hydrogen Induced Cracking) Demonstration Blocks are designed to simulate the cracking phenomena caused by hydrogen embrittlement in carbon steel and other materials. These blocks are essential for training, validating, and calibrating Non-Destructive Testing (NDT) techniques used in industries like petrochemical, oil and gas, and power generation where hydrogen-induced damage is a critical concern.



Micro Cracks Test Sample

Our Micro Cracks Demonstration Blocks are meticulously designed to replicate minute, hard-to-detect cracks in various materials, typically encountered in high-stress environments or fatigue conditions. These blocks are ideal for training NDT technicians, calibrating equipment, and validating inspection procedures, especially for detecting very small or subsurface defects.



NDT Calibration Blocks

Precision is critical in NDT, and our Calibration Blocks are engineered to maintain optimal performance of your inspection equipment. These blocks ensure accurate calibration, allowing for consistent and reliable testing results in various applications.



NDT Validation Blocks

We manufacture NDT Validation Blocks that play a crucial role in verifying the effectiveness of NDT equipment. These blocks are designed to assess equipment performance under controlled conditions, ensuring compliance with industry standards and enhancing the reliability of your testing methods.



PAUT TFM Blocks

Our Phased Array Ultrasonic Testing (PAUT) Time-Focused Method (TFM) Blocks are designed to support advanced testing methodologies, ensuring accurate evaluations in complex scenarios. These blocks are ideal for applications requiring detailed analysis and assessment.

NDT Flawed Specimens



Our **NDT Flawed Specimens** are meticulously designed to replicate real-world defects, providing essential tools for training, evaluation, and validation of inspection techniques. These specimens enable NDT professionals to enhance their skills and ensure the accuracy of their testing processes in various NDT methods. This specimens available in various standards like **ASME, API, AWS, ISO 9712, SNT-TC-1A**



“Custom dimensions can be produced according to client specifications to replicate specific defect geometries and inspection scenarios”

—NDT TOOLS Team

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Service Overview

Why Choose Our NDT Inspection Services?

At **Real Defect NDT Tools Private limited** , we offer a comprehensive range of Non- Destructive Testing (NDT) inspection services designed to ensure the integrity and reliability of materials and components across various industries. By partnering with us, you can trust that your materials and components are thoroughly evaluated, helping to maintain the integrity and safety of your operations. Our skilled technicians utilize advanced techniques and methodologies, including:

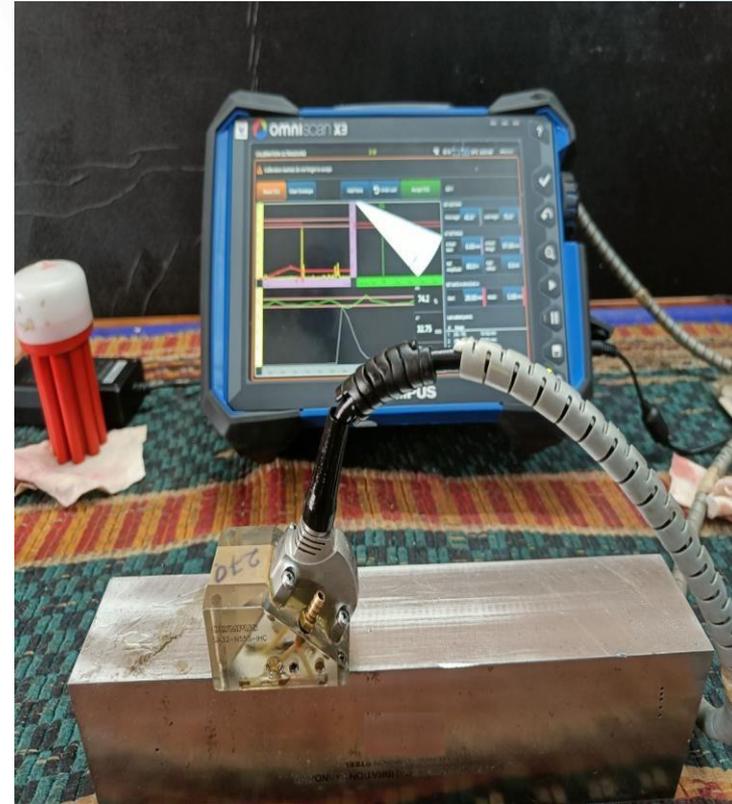
PAUT - Phased Array Ultrasonic Testing

We specialize in Phased Array Ultrasonic Testing (PAUT), offering advanced, high-resolution inspection services across various industries. PAUT is a cutting-edge, non-destructive testing technique that provides precise and detailed imaging, making it an ideal solution for the detection and characterization of flaws in welds, materials, and structures.

Inspection Applications with PAUT:

Weld Inspection, Corrosion Mapping, Structural Inspection, Pipeline Inspection, High-Temperature Hydrogen Attack (HTHA) Detection, Hydrogen Induced crack (HIC), Intergranular Stress Corrosion Cracking (IGSCC) Detection.

We use industry-leading PAUT equipment, including the Olympus Omniscan X3 & MX2 series, which offers enhanced precision and flexibility in ultrasonic testing.



TOFD - Time of Flight Diffraction

We providing advanced Time of Flight Diffraction (TOFD) inspection services, delivering highly accurate and efficient results for critical industrial applications. TOFD is a reliable non-destructive testing (NDT) method known for its ability to detect and characterize internal flaws, making it especially effective for weld inspections and flaw detection in thick materials.

Applications of TOFD:

Weld Inspection, Corrosion Mapping, Crack Detection, Thick-Wall Inspections.





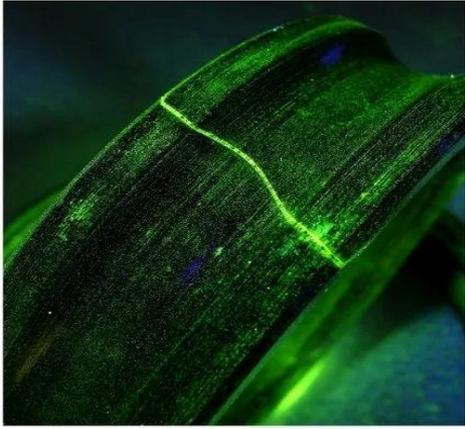
HTHA - Hydrogen High Temperature Hydrogen Attack Inspection

Our HTHA inspection services are designed to evaluate the susceptibility of materials to hydrogen attack at elevated temperatures. This inspection is critical for industries such as oil and gas, where material integrity under high-pressure conditions is paramount.



IGSCC - Hydrogen Intergranular Stress Corrosion Cracking (IGSCC) Inspection

IGSCC inspection focuses on identifying and assessing stress corrosion cracking in materials exposed to corrosive environments. Our experienced technicians employ specialized techniques to detect IGSCC, helping to ensure the safety and reliability of critical infrastructure.



FMPI- Fluorescent Magnetic Particle Inspection

Fluorescent magnetic particle inspection (FMPI) is a non-destructive testing method that uses ultraviolet light and magnetic particles to detect surface defects in ferromagnetic materials. Wet fluorescent magnetic particle inspection is more accurate than dry powder testing for detecting small discontinuities. It's also faster and easier to apply than other methods. FMPI is ideal for detecting fine discontinuities at or just below the surface of a material. It's often used for machine parts, such as gear components, and smaller machinery.



UT - Ultrasonic Testing

We offer conventional Ultrasonic Testing (UT) services to ensure the integrity and reliability of materials and structures, without causing any damage. Using high-frequency sound waves, our UT solutions deliver precise detection of internal flaws and defects, enabling you to maintain the highest standards of safety



ET - Eddy Current Testing

We provide advanced Eddy Current Testing (ECT) services, one of the most efficient Non-Destructive Testing (NDT) techniques used to detect surface and near-surface defects in conductive materials. This method is widely used for material sorting, flaw detection, and thickness measurement, offering a reliable solution for industries

“We specialize in providing top-tier technical manpower contracting services to meet the diverse needs of our clients across various industries. Our commitment is to deliver skilled, qualified, and experienced professionals who can seamlessly integrate into your projects, ensuring efficiency, expertise, and excellence”

—NDT TOOLS Team

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Strength of Resources

Technical Capabilities

Vertical Machining Center (VMC)



It is a high-performance Vertical Machining Center (VMC) engineered for precision machining, specifically designed for die and mold manufacturing.

Electric Discharge Machine (EDM)



We have high-precision machining of complex parts and intricate features. With a travel capacity of 300 x 200 x 250 mm and a working tank size of 850 x 530 x 300 mm

TIG & ARC Welding Machines



Our TIG (Tungsten Inert Gas) and ARC Welding Machine is a versatile, high-performance welding equipment designed for a wide range of industrial applications.

Surface Grinding Machine



Our Surface Grinding Machine is designed for precision grinding of flat surfaces, delivering exceptional surface finishes and precise tolerances. With a travel capacity of 450 x 225 x 270 mm



Conventional Lathe

Our Lathe is a robust and high-performance machining tool designed for precision turning operations. With a length of 4.5 feet.



Olympus OmniScan X3 & MX2 (PAUT)

Our Olympus OmniScan X3 and OmniScan MX2 are PAUT instruments designed for high-precision inspections in various industrial applications. With up to 64 channels



Drill & Tap Machine

Our Machine is a versatile and high-precision tool designed to perform both drilling and tapping operations efficiently. With the capability to handle a Drill Size of $\text{Ø}40 \times 1000 \text{ mm}$.



Ultrasonic Testing Equipment

We use state-of-the-art Ultrasonic Testing (UT) equipment from leading manufacturers like Olympus and GE to provide high-precision, reliable inspections.

07

Experience in Industries

Extensive Industry Experience



With years of experience supplying NDT calibration blocks, validation blocks, and flawed specimens to clients around the world, understands the unique needs of various industries globally. Our products support rigorous inspection requirements and are trusted by industry leaders in:

- Aerospace
- Oil & Gas
- Manufacturing
- Power Generation
- Automotive.

Our experience spans both routine and highly specialized inspection needs, making us a dependable partner for clients in safety-critical industries.

08

Company Projection

Our Company Projection

Product Innovation

We are continually investing in the development of new calibration blocks, validation blocks, and flawed specimens to meet the evolving needs of our clients across various industries



**REAL
DEFECT**



Global Market Expansion

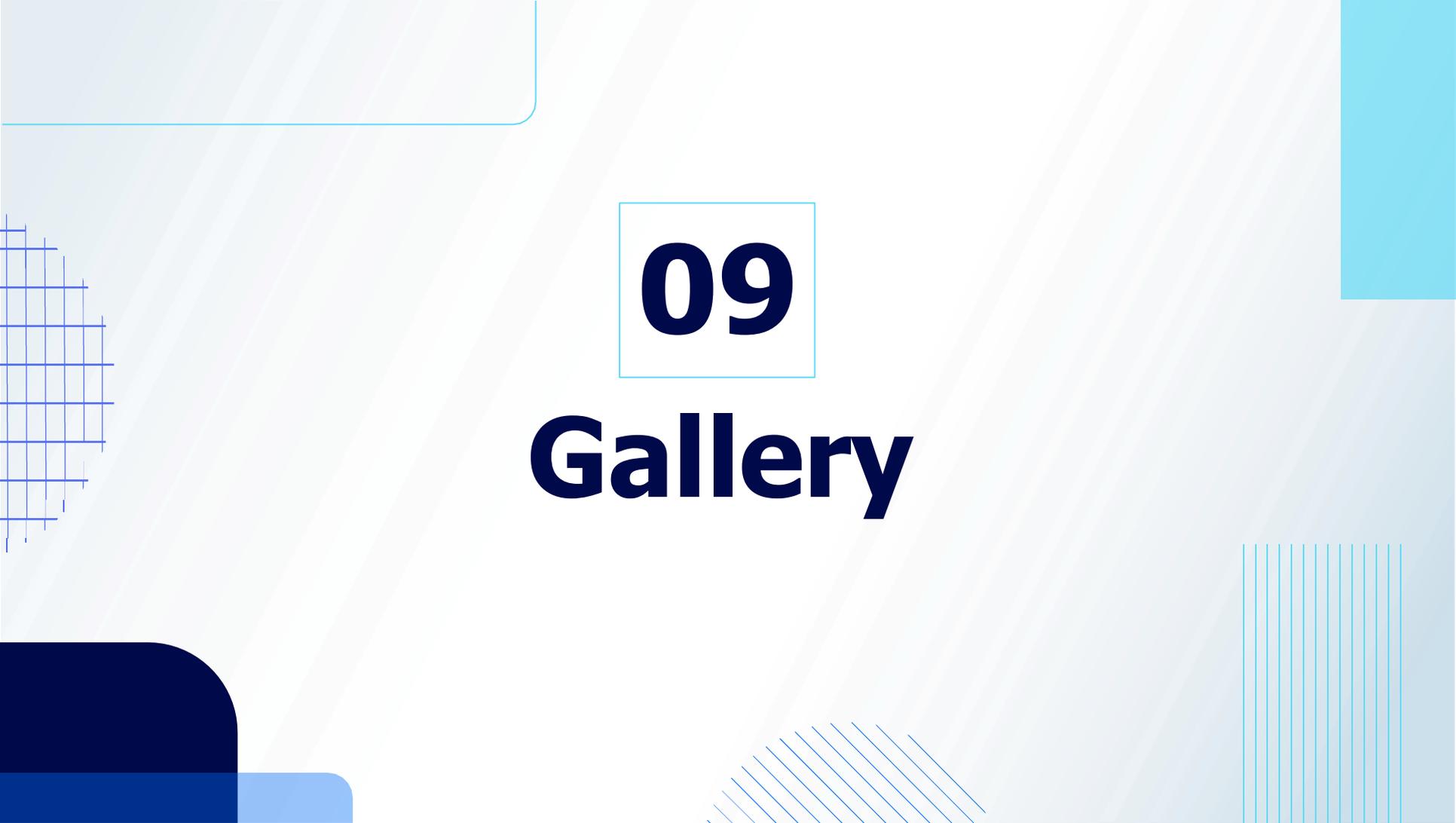
We aim to increase our market share worldwide, especially in regions where industrial standards are rising, and NDT solutions are critical for regulatory compliance.

Enhanced Customer Support

We plan to expand our client support team to provide faster, more efficient assistance with technical queries, product recommendations, and post-sale support.

Strategic Partnerships

We are actively seeking partnerships with leaders in aerospace, oil & gas, manufacturing, and power generation to strengthen our position as a go-to supplier for NDT solutions.

The background features a light blue gradient with diagonal lines. There are several geometric shapes: a white rounded rectangle in the top left, a solid light blue rectangle in the top right, a dark blue rounded shape in the bottom left, and a light blue rounded shape in the bottom right. A grid of thin blue lines is visible on the left side, and a series of vertical blue lines is on the right side.

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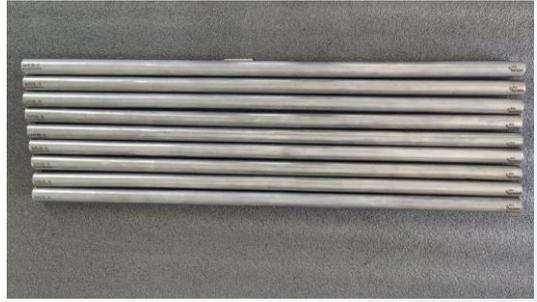
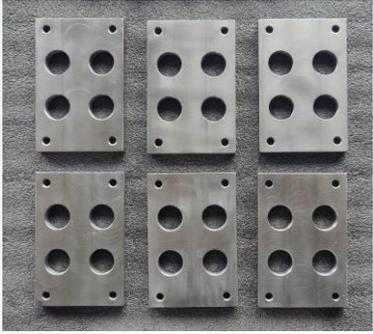
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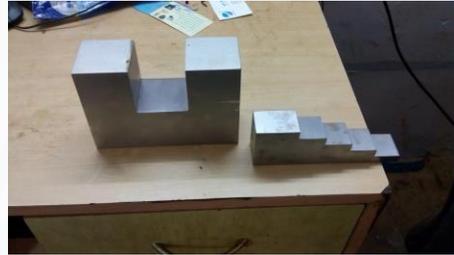
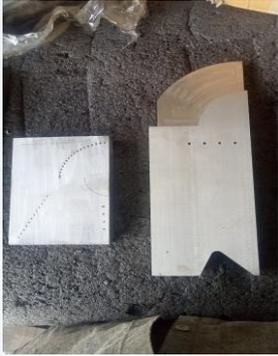




























Thanks

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