

# HONOURING INNOVATION, CREATIVITY, AND PROBLEM-SOLVING

ENVITEST LABORATORIES PRIVATE LIMITED

## Happy Engineers Day from Envitest Lab: Honoring the Innovators and Problem-Solvers



Engineers Day is a special occasion celebrated to honour the contributions of engineers to society. It recognizes the role engineers play in shaping the world through their innovative ideas, technical expertise, and creative problem-solving abilities. In India,

Engineers Day is celebrated every year on September 15 to commemorate the birth anniversary of Sir Mokshagundam Visvesvaraya, a visionary engineer, statesman, and one of the most eminent civil engineers in India's history.

At Envitest Lab, we proudly celebrate Engineers Day to honor the incredible contributions engineers make to our world. Engineers are the driving force behind innovation, constantly pushing the boundaries of technology, science, and problem-solving to improve our everyday lives. On this special day, we recognize and appreciate the hard work, creativity, and dedication of engineers across all

fields. As a leading test lab, Envitest Lab supports engineers across industries—from telecommunications to aerospace—by providing testing solutions that validate their designs and ensure compliance with international standards. For any product that is getting designed, we work hand-in-hand with engineers to ensure their innovations are ready for real-world challenges.

Today, we honor the engineers who design the infrastructure that keeps our world connected, develop the technology that drives progress, and solve the critical problems we face as a global community. Your expertise and ingenuity fuel the advancements that make our lives better.

### Special points of interest:

- **Hose Down Test:** Carried out first ever Hose Down Test in compliance with NEMA (National Electrical Manufacturers Association) and UL standards.
- We generated a **50 CFM airflow** to conduct a **2,000-hour reliability test** on an industrial actuator, ensuring its durability and performance under extended use conditions.
- We performed **high-accuracy noise and vibration measurements** on a thermal-altitude chamber, designed for conducting reliability tests on precision medical devices, ensuring optimal performance under varying conditions.

## Our Commitment to Engineers

Envitest Lab is committed to supporting engineers in their mission to create products that are not only innovative but also safe and reliable. Our team of experts is dedicated to providing the testing, validation, and certification services engineers need to bring their ideas to life, ensuring they meet in-

dustrial standards and perform under real-world conditions.

The future belongs to engineers who, through their vision, continuously push the boundaries. On this Engineers Day, we extend our heartfelt appreciation to all the engineers who partner with us in building a

better tomorrow. Your dedication to excellence is what drives progress, and we are honoured to play a role in helping you achieve your goals. Happy Engineers Day from all of us at Envitest Lab! Together, we will continue to innovate, create, and shape the future.

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Test setup in action at Envitest Lab, performing TEC ECR testing to evaluate the energy consumption and efficiency of telecom equipment

*As India stands as the second-largest and fastest-growing mobile telephone market globally, it is crucial to address the significant carbon footprint associated with telecom products, services, and network operations.*

## Understanding ECR for Telecom Equipment under MTCTE in India

The Energy Consumption Rating (ECR) is an essential requirement for telecom equipment manufacturers under the Mandatory Testing and Certification of Telecom Equipment (MTCTE) scheme in India. ECR provides a standardized measure of the energy efficiency of telecom products, enabling consumers and service providers to make informed decisions regarding the equipment they choose.

### What is ECR?

ECR is designed to evaluate the energy consumption of telecom products. It helps manufacturers comply with energy efficiency standards, with critical information to choose more environmentally friendly and cost-effective solutions. By focusing on reducing energy consumption, the ECR aims to promote sustainability within the telecommunications industry.

### Energy Passport

Compliance ensures that telecom products are energy-efficient. Upon compliance with ECR, manufacturers can apply for an Energy Passport. This passport highlights a product's energy consumption performance and allows comparisons with other telecom equipment within its category. This helps India's growing focus on reducing environmental impact.

## ECR Test Facility at Envitest Lab

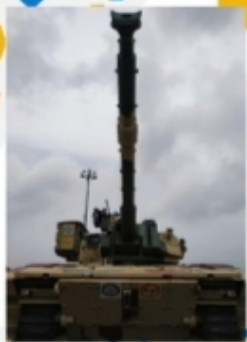
At Envitest Lab, we take pride in our role in the transformative effort toward a greener telecommunications sector. Our facilities are designed to capture Energy Consumption Rating (ECR) values for a wide range of telecom products, ensuring that manufacturers can comply with the Telecom Engineering Centre (TEC) standards. This commit-

ment not only supports industry compliance but also contributes to the broader goal of reducing carbon emissions within the telecom landscape.

Envitest Lab is fully equipped to conduct ECR tests, featuring advanced measurement tools that ensure precise and accurate assessments of telecom products. Our test facility enable meticulous

evaluation in compliance with TEC standards. Moreover, our team of trained professionals brings extensive expertise to the testing process, ensuring reliable results that aid manufacturers in achieving compliance. With a commitment to quality and precision, Envitest Lab plays a pivotal role in supporting a greener telecom sector.

## Zorawar Light Tank: India's Indigenous Defense Milestone



On July 6, 2024, India marked a significant milestone in its defense capabilities with the unveiling of the indigenous "Zorawar" light tank. This event reflected country's commitment to self-reliance in defense manufacturing with the collaborative efforts of industry leaders and defense research organizations.

Envitest Lab has played a

small yet crucial role by contributed by testing few sub-assemblies and electronic systems integral to the Zorawar tank. Our team carried out testing designed to ensure that component meets quality and performance standards.

As the Zorawar prepares for its upcoming development trials, we are confident that our testing will

support the tank's integration into the Indian Army. Envitest Lab remains committed to upholding the highest standards in testing and quality assurance, contributing to the development of advanced defense solutions that bolster India's military capabilities. Together, we look forward to a future where indigenous technologies lead the way in enhancing national security.



## Protecting Against Water Intrusion

The Hose Down Test is a crucial method used to evaluate the water resistance of equipment enclosures, ensuring compliance with NEMA (National Electrical Manufacturers Association) and UL standards. This test simulates the exposure of equipment to high-pressure water jets, mimicking real-world conditions in industrial, outdoor, or washdown environments. Under NEMA standards, enclosures

are tested for their ability to protect internal components from water ingress, ensuring that they remain operational and safe even when exposed to direct water sprays. The UL standards emphasize safety requirements, ensuring that equipment can withstand harsh conditions without posing electrical hazards or experiencing functional failure. The Hose Down Test involves subjecting the equipment

to controlled, high-pressure water jets at various angles and distances. By performing the Hose Down Test, manufacturers can ensure that their products meet stringent safety and performance criteria, making them suitable for use in industries where exposure to water is common. This test is essential for achieving NEMA and UL certifications, which are critical for product reliability and market acceptance.



Hose Down Test is running live, splashing water at a rate of 240 liters per minute from a distance of 3 meters.

## Envitest Lab at Bengaluru Space Expo 2024

Envitest Lab participated in the Bengaluru Space Expo 2024 (BSX), a pivotal event that highlighted the rapid growth of India's space sector, driven by the relentless efforts of ISRO and the Government of India's vision for enhanced private sector involvement. As a premier test laboratory, we recognized the importance of

this biennial exhibition in fostering collaboration among industry leaders, innovators, and enthusiasts.

We engaged with fellow participants to understand their unique technology needs and challenges, ensuring our services aligned with the evolving demands of the sector. The expo provided an excel-

lent opportunity for us to connect with key stakeholders, exchange ideas, and demonstrate how our advanced testing solutions could contribute to the safety and success of space missions. We were thrilled to collaborate with industry players to drive innovation and growth in India's space exploration efforts.

*At BSX 2024, held at the BIEC in Bengaluru, we showcased our state-of-the-art testing capabilities tailored for the space industry. Our expertise in environmental testing, reliability assessments, and compliance solutions aimed to support the burgeoning space technology landscape.*

## Ensuring Quality & Reliability in Fiber Optic Technology

At Envitest Lab, we prioritize quality and performance in fiber optic technology to support the growing demands of high-speed data transmission. Our comprehensive testing services ensure that fiber optic cables and components meet the highest industry standards. We conduct rigorous assessments, including

attenuation, splice loss, and return loss tests, to verify signal integrity and performance reliability.

Our facilities enable us to perform tests, simulating various conditions that fiber optic systems encounter. This ensures that products are robust and capable of maintaining optimal performance in real-world scenarios.

By adhering to international certifications and quality control protocols, Envitest Lab guarantees that every fiber optic solution we evaluate meets stringent benchmarks. Our commitment to excellence not only enhances reliability but also instills confidence in the technology that powers today's communications infrastructure.



## Empowering Products

NABL Accredited Laboratory  
DGAQA Approved Lab  
TEC Recognized Lab  
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WE'RE ON THE WEB!

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## About Envitest Lab



**WHERE EXCELLENCE MEETS ASSURANCE.**

**OUR VERTICALS**

-  TESTING
-  CERTIFICATION
-  INSPECTION
-  ENGINEERING

Working tirelessly behind the scenes to guarantee product success

ENVITEST Lab abbreviated for "ENVIRONMENTAL TESTING", established in 2017 at Bangalore Electronic City, is a ISO/IEC 17025 certified company with an objective to offer high-quality testing, inspection, pre-compliance, certification, and engineering services for the across the globe products.

We serve across domains products for the compliance and certifications. Over time we kept on add-

ing the new testing facilities to bring more opportunities for growth but would allow to provide a more complete portfolio of testing solutions to our customers. From our humble beginnings, we have grown from a simple test house who worked on the world's most complex engineering projects to become a leading test lab of standard and custom test services. Throughout our journey to become one of the premier worldwide service providers of testing solutions, we have held true to the philosophy that the customer comes first.

Our Disciplines -

**Electronics and Electrical Product Test** covering Optic fibre, electrical connectors for

automotive and MIL, Aircraft electrical characteristic, Product safety, Product performance, Product susceptibility test.,

**Telecom Product Test** covering telecom products which covers PON and GPON Test, Interface Test, EMI/EMC test, Router and Switches and many more.

**Environmental Test** for Any Product covering - Shock and Vibration, Bump, Thermal, Humidity, Damp Heat, Cold Hot temperatures, thermal shock, Ingress protection, dust, water, contamination, fungus, Ultraviolet UV, salt and acidic corrosions and many more.

## Our Services

- ◊ Climatic Simulations
- ◊ Dynamics & Vibration
- ◊ Contamination and Ingress
- ◊ Materials / Metallurgical Testing
- ◊ Aircraft Electrical Testing
- ◊ Electrical Safety Testing
- ◊ Optical Fibre Cable Testing
- ◊ Telecom Interface Testing
- ◊ Electrical Cables and Connectors Test
- ◊ International Approvals
- ◊ Customized Tests
- ◊ Engineering Services