etp®

Company **Profile**

ETP EARTHING & LPS SOLUTION PVT. LTD.

We Deliver What We Commit...

www.etpearthing.com

About the **Company**

ETP Earthing & LPS Solution Pvt Ltd is a leading ISO 9001:2008 certified company dedicated to providing high-quality, innovative earthing (grounding) and lightning protection solutions. Established in 2013 in Surat, Gujarat, India, we have grown into a trusted name in the industry with state-of-the-art manufacturing facilities covering 32,000 sq. ft. Our production capacity includes 50 tons of electrodes and 1 MT of Ground Conductivity Improving Material per month, making us one of the largest manufacturers in this segment.

Our commitment to technological advancements and compliance with international standards ensures that our products are effective, reliable, and safe. We specialize in designing, manufacturing, and supplying low-resistance, maintenance-free advanced earthing systems, commonly known as ‘Chemical Earthing Systems,’ suitable for various complex ground conditions.

MISSION

To design, produce, and supply superior, innovative, and cost-effective grounding and lightning protection systems, integrating IoT-based technology to meet the highest standards of quality and reliability, enhance safety and efficiency, and continuously improve through research and development to ensure the safety of people and infrastructure worldwide.

VISION

To be the global leader in providing innovative, sustainable, and maintenance-free earthing and lightning protection solutions, ensuring every infrastructure is safe and secure with our advanced systems, revolutionizing the industry with cutting-edge technology, including IoT-based innovations, and unparalleled reliability.

OUR CORE VALUES

INNOVATION AND TECHNOLOGICAL ADVANCEMENT

We are committed to continuous innovation, integrating cutting-edge solutions and IoT-based technology to set new industry standards.

QUALITY AND RELIABILITY

Our products are designed and manufactured to the highest standards, ensuring exceptional reliability and performance in all environments.

CUSTOMER FOCUS AND INTEGRITY

We prioritize our customer's needs, offering tailored solutions and exceptional service while conducting our business with utmost integrity, maintaining transparency and honesty in all dealings.

SUSTAINABILITY

We develop eco-friendly solutions using sustainable materials and energy-efficient processes, ensuring minimal environmental impact while maintaining reliability.

Introducing NIESI

Formerly known as ETP EduTech, the National Institute of Electrical and Safety Insight (NIESI) is a leading platform dedicated to advancing electrical safety, innovation, and education. With a deep commitment to fostering knowledge, NIESI serves as an essential resource for electrical engineers, safety professionals, and technicians worldwide. Our mission is to promote the highest standards in electrical safety, grounding systems, and earthing practices, empowering professionals to build safer and more reliable electrical infrastructures.

NIESI

NATIONAL INSTITUTE OF ELECTRICAL AND SAFETY INSIGHT

Why join NIESI ?

- **Workshops and Training Programs**

  NIESI offers specialized workshops focused on electrical grounding, earthing systems, and safety standards. Our Earthing EduTech Workshops cover key topics like earthing principles, system types, safety regulations, and hands-on testing, designed for professionals seeking to enhance their expertise.

- **Knowledge Access**

  Members gain access to exclusive resources, including technical papers, safety manuals, video tutorials, and expert insights, keeping you informed on industry advancements.

- **Certification and Professional Development**

  Our certification programs recognize your dedication to growth in electrical safety and engineering, offering essential skills for career advancement.

- **Networking and Collaboration**

  NIESI provides opportunities to connect with industry leaders and fellow professionals, fostering collaboration, mentorship, and the exchange of ideas for a safer electrical industry.

With NIESI, you're not only staying up-to-date with industry practices but also contributing to the broader goal of improving electrical safety and reliability worldwide. Our members are empowered with the skills and knowledge to lead in the field, ensuring safer electrical installations and innovations for the future, Click the button to Register or scan The QR.

CLICK HERE!

Meet Our Founders

Er. Anand Upasani

Co-Founder & Director

With Honors in Electricals Engineering, Mr. Anand Upasani has rich Experience of 15 years in the Business of Electrical Engineering.

Er. Keyur Nanavati

Co-Founder & Director

Er. Keyur Nanavati works in tandem with other directors of company to take on strategic leadership of sales department with his decade long industry experience.

Ratnadeep Upadhyay

Co-Founder & Director

Mr. Ratnadeep Upadhyay, our finance director, is a seasoned business Commerce alum. His strategic leadership and ethical commitment drive our financial success.

Technical Advisory Board

Er. Y V Joshi

Senior Advisor

Er. Y V Joshi is a prominent Sr. Technical Expert and Distinguished Member of CIGRE. He has held leadership roles such as Former Head of Engineering at GETCO and Past President of ERDA. Er. Joshi is the Secretary of the Society of Power Engineers and a member of various CIGRE NSCs (A2, A3, B2, B3). He is also the Nodal Officer for the IEEMA Transformer Standardization Manual and has contributed to the CEA Transformer Manual. Additionally, he is involved with BIS committees, TISCO, and TRAFOTECH events (2012, 2018, 2020, 2023).

Er. Subhashchandra Takalkar

Senior Advisor

Subhashchandra Takalkar is a Chartered Engineer with over 44 years of experience in Transmission Line Design, Grid Management, and Power System Planning. He has designed 5,000+ km of EHV transmission lines and managed 730 substations during his time with GEB and GETCO. Takalkar founded Takalkar Power Engineers & Consultants Pvt. Ltd., specializing in transmission line failure analysis and consultancy. He is a BIS Transmission Lines Committee Member and an active faculty at CBI&P. His research includes 70+ technical papers, earning him multiple Best Research Paper Awards.

Our Products

Copper-Coated Earthing Electrodes

Our copper-coated earthing electrodes are designed for superior grounding performance, enhanced conductivity, and long-term reliability. Available in both **"pipe-in-pipe"** and **"flat-in-pipe"** variants, these electrodes feature a hollow pipe structure filled with Constant Conductive Compound (CCC) powder, ensuring high current-carrying capacity and efficiency.

Available in **48mm and 76mm diameters**, with Avg. **100 & 250-micron** copper bonding, these electrodes are ideal for body, neutral, and lightning arrestor earthing applications. Built for efficiency and durability, they deliver robust protection and optimal electrical performance.

Hot-dip Galvanized Earthing Electrodes

Built for strength, durability, and superior corrosion resistance, our hot-dip galvanized (GI) earthing electrodes ensure efficient and long-lasting grounding solutions. Available in both **"pipe-in-pipe"** and **"flat-in-pipe"** variants, these electrodes are designed with a hollow pipe structure filled with Constant Conductive Compound (CCC) powder, delivering exceptional conductivity and performance.

With a robust Avg. **80 to 100-micron** galvanization layer, these electrodes are engineered to withstand harsh environments. Available in **48mm and 76mm** diameters, they are ideal for body, neutral, and lightning arrestor earthing applications, ensuring reliable electrical safety and stability.

Copper Coated Solid Rod

Our copper-coated solid rods are engineered for exceptional earthing performance, offering superior durability and high conductivity. Available in a variety of diameters **(14mm, 17mm, 24mm, 32mm, and 38mm)** and lengths **(1m, 2m, 3m),** these rods ensure optimal electrical flow and maximum efficiency with their full cross-sectional design. The avg **100 & 250-micron** copper coating enhances corrosion resistance and electrical conductivity, ensuring long-lasting performance.

These rods are available with or without welded clamps, providing flexibility to suit different installation requirements. With a short circuit capacity ranging from **15 kA to 40 kA** (depending on the diameter), they comply with **IEC 62561-2, UL 467,** and **IEEE-80-2013** standards, offering reliable and efficient grounding for more than 15 years.

Ideal for equipment or machine **body earthing**, these rods are also used in **11 kV, 66 kV, 132 kV, and 220 kV** switchyards, substations, and **lightning protection zones**, as well as for **neutral earthing.**

Ground Conductivity Improving Material (GCIM)®

The performance of an earthing system heavily depends on the surrounding soil structure and conditions around the earthing pit. Despite using the same electrode and GCIM type, earthing performance varies at different locations due to differences in soil composition. This variation impacts the resistance and overall effectiveness of the earthing system.

GCIM is a Ground Conductivity Improving Material mixed with the soil surrounding the electrode during installation. By adding GCIM, the resistivity of the soil decreases, and its conductivity increases, significantly improving the performance of the earthing system.

conductive and non-corrosive, offering advantages over conventional materials like salt and charcoal. Notably, GCIM retains 600% more water than traditional charcoal, which enhances its conductivity and further boosts the earthing electrode's performance.

Over the years, ETP has gained deep insights into soil conditions and environments, leading to the development of the best quality GCIM tailored to different soil types. We offer four variants of GCIM to meet specific needs:

GCIM Hygrolite® | **GCIM Standard®** | **GCIM Excel®** | **GCIM Versatile®**

ETP Versatile Electrode

ETP Versatile Earthing: a groundbreaking solution for Earthing systems across various applications. Designed to surpass traditional methods reliant on water, this innovative technology offers unmatched durability, stability, and low resistance without the need for constant moisture. Its electrically conductive black granular composition enhances Earthing effectiveness in all soil types and challenging ground conditions.

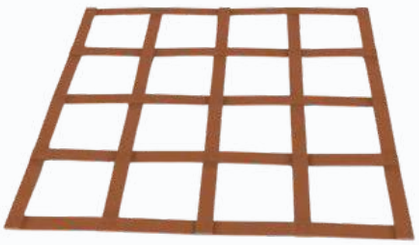
Unlike conventional materials like Bentonite or Charcoal, ETP Versatile Earthing conducts electricity similarly to metals, through electron movement. It eliminates the need for water, ensuring consistent performance regardless of dryness. This makes it a superior choice for treating soil, especially in demanding environments.

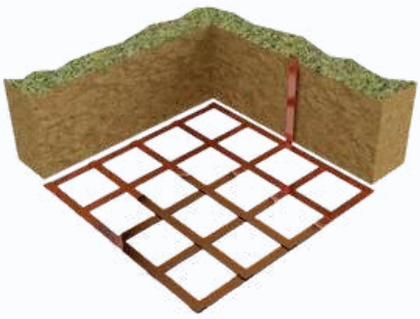
Versatile Earthing are used for these kind of soil :

- Seashore area,Water logged area,river beds area
- Sand or Sandy soil area
- Hilly Terrains, Rocks or Granite
- Polluted (Chemically affected) Soil

EARTH PERMACON MATRICS

The "Permacon Earth Matrics" is an advanced earthing and grounding system designed for superior performance and reliability across diverse soil conditions. It features a robust copper-coated mesh foundation, enhanced by a specially formulated conductive cement with high-purity graphite, ensuring outstanding electrical conductivity and efficiency. With an ultra-low self-resistivity of 0.12 ohm-m, the system effectively dissipates electrical currents, reducing electrical hazards. Its versatility makes it ideal for various environments, including industrial and coastal regions. Engineered for durability and corrosion resistance, the "Permacon Earth Matrics" offers a maintenance-free, long-lasting solution for all earthing needs. Complies with IEC 62561 | UL 467 | IS 3043:2018 IEEE 80-2013





ETP Lightning Arresters

Single Spike Lightning Arrester

Multi Spike Lightning Arrester

ESE Lightning Arrester

Other Products & Accessories

Copper Strip

GI Strip

PPE Chamber

RCC Chamber

Earthing Name Plate. (customizable)

Plate Earthing

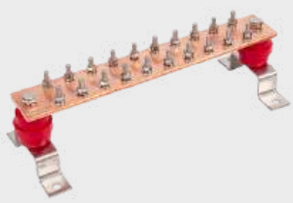
Funnel Earthing

MS Round Bar

LPS accessories

Surge protection device

GI wire



Main Earth Terminal

*image is for illustration purposes only

Our Services

SUBSTATION EARTHING ADEQUACY TESTING SERVICE

A reliable grounding system is essential for the safe and efficient operation of substations. The Earthing Adequacy Test ensures that the grounding system functions as designed, allowing fault currents to dissipate safely while protecting equipment and personnel. The following tests collectively assess the effectiveness of the grounding system.

SERVICES :

- **Ground Grid Integrity Test (GGT)**
- **Riser Integrity Test**
- **Ground Impedance Test**
- **Soil Resistivity Test**
- **Step And Touch Potential Test**
- **Gravel Resistivity Measurement**

WHY PERFORM THESE TESTS?

Ensures compliance with IEEE 81:2012, IEEE 80:2013, IS 3043:2018 etc.

Prevents hazards like electrocution, equipment damage, and downtime.

Detects weak grounding components for timely correction.

CONSEQUENCES OF GROUNDING SYSTEM FAILURES

Safety Risks: Electrocution hazards.

Equipment Damage: Ineffective fault current management.

Operational Downtime: Unplanned interruptions.

BENEFITS OF GROUNDING TESTS :

- Enhanced safety for personnel.
- to assess grounding system adequacy
- Improved system reliability.
- Compliance with standards.
- Proactive issue detection.
- Confidence in safe operations.

LIGHTNING PROTECTION DESIGN/AUDIT SERVICES

A professionally engineered Lightning Protection System (LPS) is essential for protecting structures, equipment, and personnel by intercepting lightning strikes and safely dissipating electrical current into the ground. Our design services cover these key components:

- **Site Assessment:** A thorough site visit is necessary to gather data on the building's surroundings and contents. This helps identify vulnerabilities and informs the risk assessment, whether it is a new installation or old.
- **Risk Assessment:** Using collected data, we perform a risk assessment based on IEC 62305 and relevant standards. Specialized software like ETAP ensuring accurate, reliable analysis tailored to the structure's needs.
- **External Lightning Protection System:** This system protects the structure from direct lightning strikes. We use methods like the Rolling Sphere, Protection Angle, and Mesh Methods to optimize air terminal placement, down-conductors, and grounding systems for maximum effectiveness. Which compliance with IEC 62305 and other relevant standards.
- **Internal Lightning Protection System:** We address lightning-induced surges, which can affect sensitive components even from distant strikes. Our internal LPS design integrates coordinated Surge Protection Devices and equipotential bonding to protect critical systems from high-voltage transients.
- **BOQ Preparation:** A detailed Bill of Quantities for the Lightning Protection System will be provided, outlining the materials required for installation of a new LPS or to upgrade old LPS.

EARTHING DESIGN SERVICES

An efficient earthing system is crucial for electrical safety, providing a low-resistance path for fault currents and reducing risks like electric shock, equipment damage, and operational interruptions. Our specialized earthing design services ensure reliable and compliant solutions, including:

- **Site Assessment:** We begin with a site visit to evaluate factors like soil conditions, climate, and moisture levels. This data helps identify site-specific considerations for the earthing design.
- **Earth Resistivity Testing:** Using industry-standard equipment, we measure soil resistivity, a key factor in determining how well fault currents can be dissipated, forming the basis for an effective earthing design.

FOR HT

- **Touch and Step Potential Analysis:** We calculate touch and step potentials to ensure they remain within safe limits, especially for substation ground grids. This is crucial for preventing electrocution hazards and ensuring personnel safety.
- **Ground Grid Design:** Using software like ETAP, we develop optimized ground grid designs for substations that effectively dissipate fault currents while meeting national and international standards like IEEE 80:2013, IS 3043:2018..etc. for safety and performance.

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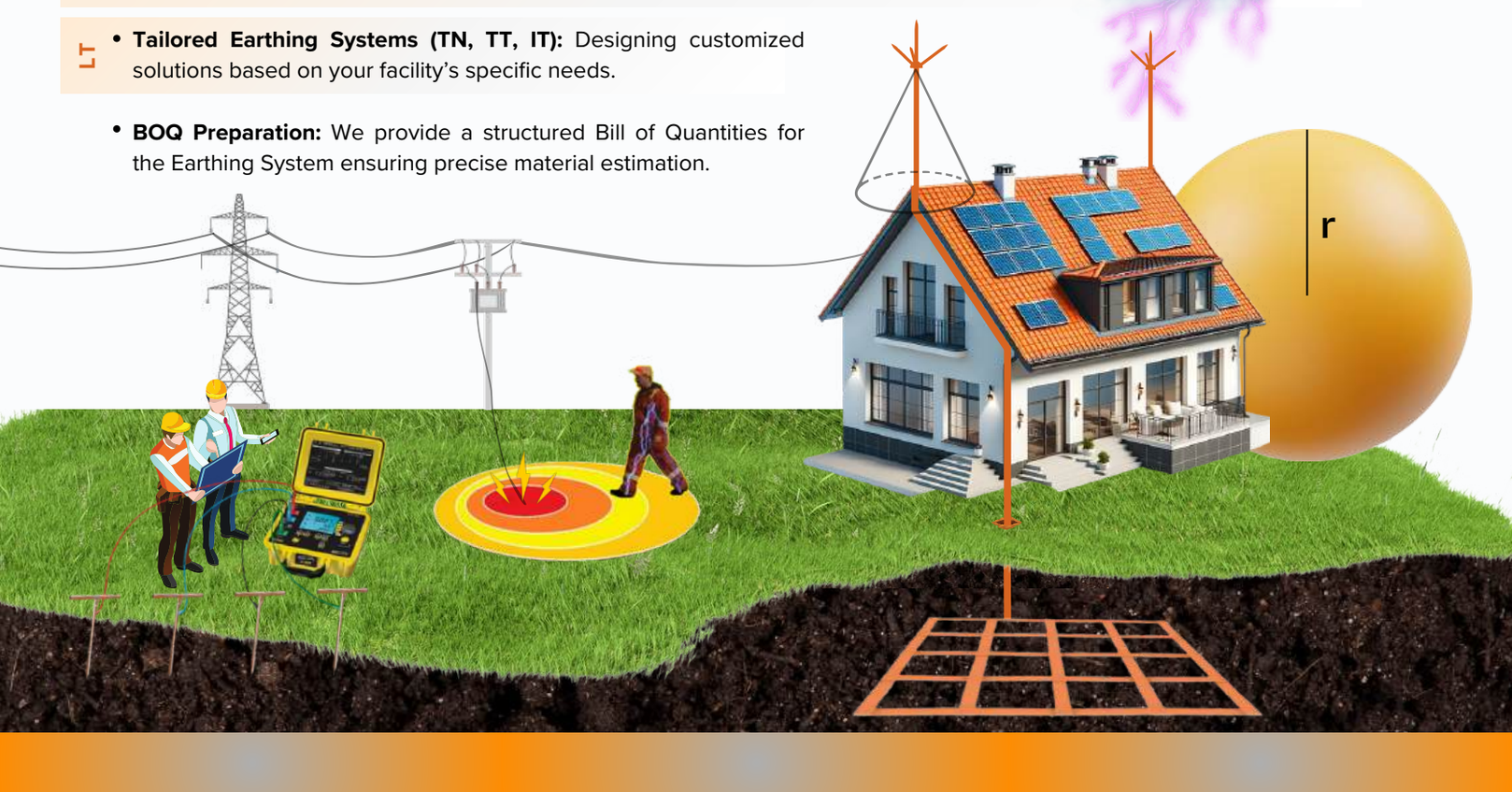
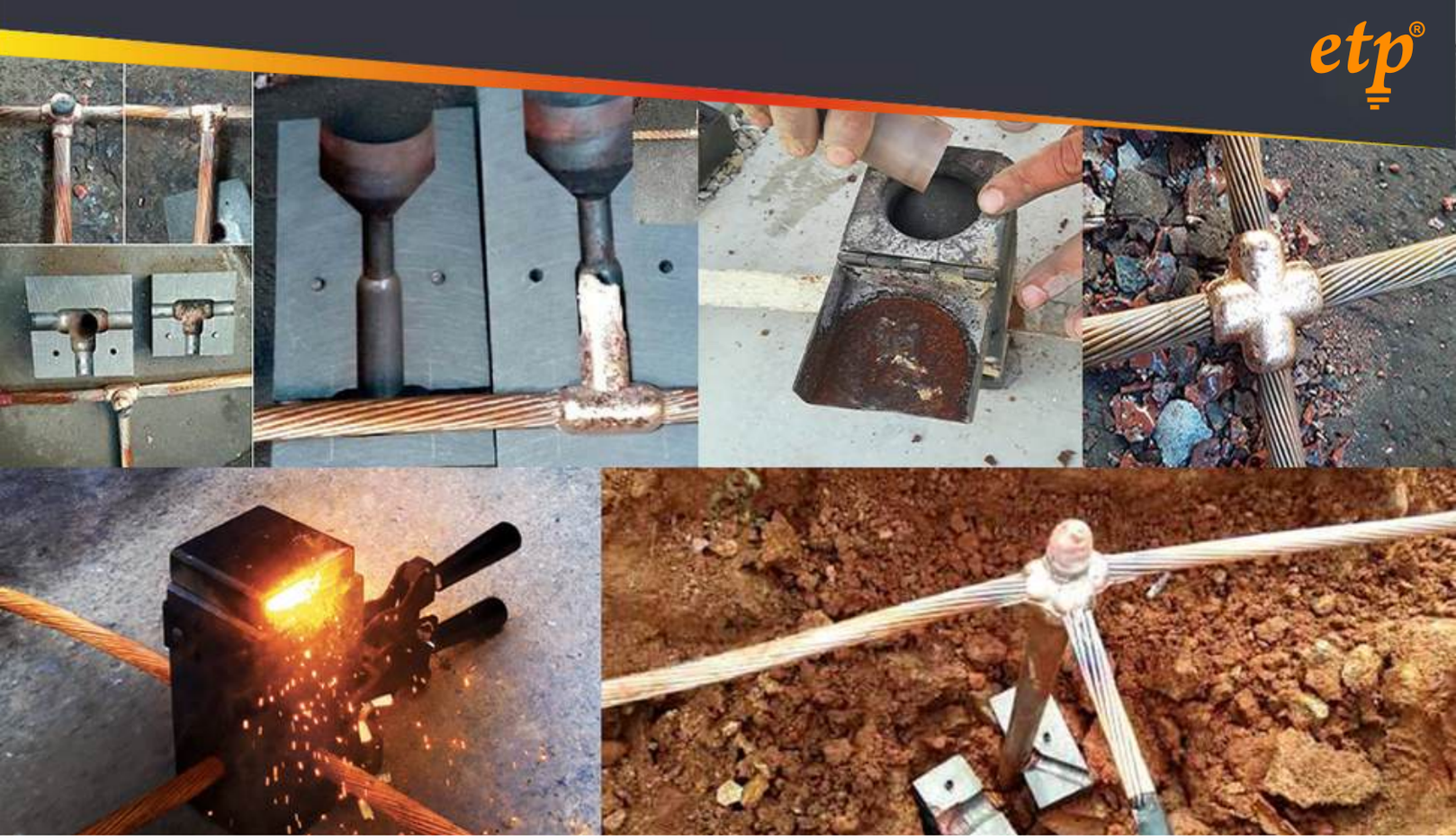
- **Tailored Earthing Systems (TN, TT, IT):** Designing customized solutions based on your facility's specific needs.
- **BOQ Preparation:** We provide a structured Bill of Quantities for the Earthing System ensuring precise material estimation.





EXOTHERMIC WELDING

At ETP, we specialize in Exothermic Welding to create strong, permanent, and reliable electrical connections for earthing and lightning protection systems. Exothermic welding, also known as **thermite welding**, is a highly efficient method of joining metal components through a chemical reaction that produces an irreversible, high-quality bond. This process is widely trusted across various industries, including **utilities, telecommunications, and railways**, for its unmatched reliability and performance, and **complies with IEEE 837 and UL 467** standards for safety and reliability.

Benefits of exothermic welding

Strong & Permanent Joints: The connection is permanent and irreversible, with a lifetime equal to the earthing system.

Low resistance: The connection maintains low resistance over time.

Corrosion resistance: Exothermic connections are resistant to corrosion.

High mechanical strength: Exothermic welds have higher mechanical strength than other types of welds.

Proven Technology: Trusted in various industries, including utilities, telecommunications, and railways.

WE ARE APPROVED WITH BELOW UTILITY

GETCO

આપણી મેટ્રો

VADODARA MUNICIPAL CORPORATION

Rajkot Municipal Corporation

GSECL

TATA POWER

adani Renewables

SMS group

Sardar Sarovar Narmada Nigam Limited

DGVCL

LARSEN & TOUBRO

ओएनजीसी ONGC

ADITYA BIRLA GROUP

torrent POWER

TATA PROJECTS

AARTI INDUSTRIES LIMITED

MGVCL

UPL OpenAg™

susten By Mahindra

UGVCL

Zydus dedicated to life

HIKAL

adani Ports and Logistics

PGVCL

JUNIPER Green Energy

Smart City INDORE

adani Transmission

CORPORATE OFFICE

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Palanpur, Surat, Gujarat -
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WORKS

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