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# POWERING THE FUTURE





# OUR Legacy

**Skipper Ltd.**, established in 1981, with annual sales of USD 300M is the flagship company of the S.K. Bansal Group. We have over 30 years of experience manufacturing steel pole structures, including custom and pre-engineered monopoles and H-frames for electric transmission and distribution applications, telecom towers, high-mast lighting poles, street lighting poles, and swaged tubular poles. We are recognized as pioneers in steel pole manufacturing in India, and are among the top utility structure manufacturers in the world.

## VISION

To make Skipper the preferred supplier of steel pole structures to meet infrastructure needs globally, through our world-class manufacturing of high-quality products.



## MISSION

Skipper is focused on enhancing our products and services to meet global infrastructure demands. We are also committed to reducing our carbon footprint by increasing our use of renewable energy resources. Customer satisfaction is our top priority. We strive to provide an exclusive range of pole products tailored to our customers' needs, and maximizing our resources to ensure timely delivery of our products.



# WHAT MAKES SKIPPER EVERYONE'S PREFERRED CHOICE?

## OUR KEY STRENGTHS THAT DRIVE OUR SUCCESS



### CUTTING-EDGE TECHNOLOGY:

We utilize state-of-the-art technology and materials to deliver precision-engineered, **durable**, and reliable poles, designed to **withstand harsh conditions** & meet **diverse customer needs**.



### VALUE ENGINEERING:

Through innovative designs and cost optimization, we deliver customized, terrain-specific, and modular solutions that maximize value without compromising on quality.



### COMPREHENSIVE SOLUTIONS:

As a one-stop partner, we offer integrated products, accessories, and services, simplifying project execution and enhancing operational efficiency.



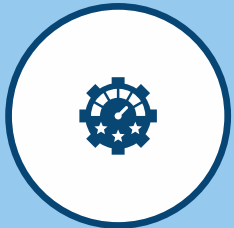
### TESTING EXCELLENCE:

Our tower testing facility, among India's largest, **ensures safety, reliability, and compliance** through rigorous full-scale load testing of every design.



### SCALABILITY:

With ISO-certified and Power Grid-approved plants, we handle large-scale projects efficiently, contributing significantly to infrastructure development.



### STRATEGIC SUPPORT:

Strategically located plants near major ports ensure efficient operations, timely delivery, and access to key raw materials, strengthening our competitive edge.

# THE SKIPPER EDGE

## SPECIALIZATION

Skipper provides a **comprehensive solution** from research and development to final deployment. Our NABL-accredited, internationally benchmarked lab ensures **rigorous quality checks** performed by qualified professionals, meeting domestic and global industry standards.

## PRESENCE

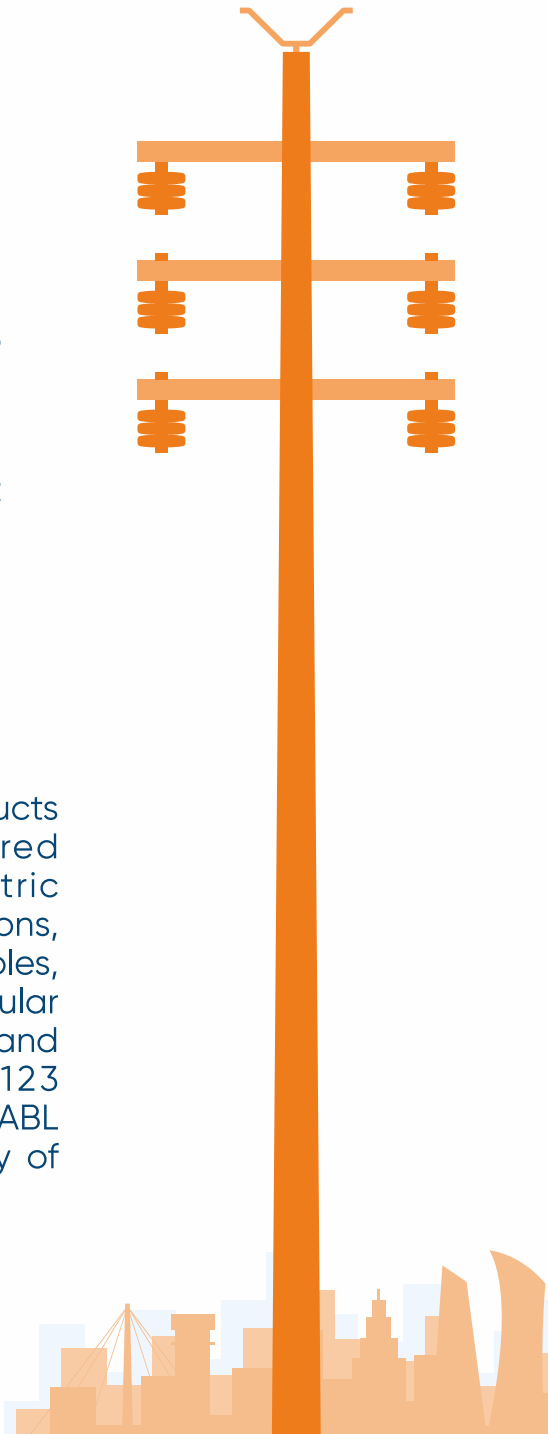
With a Pan-India network and exports to over 65+ countries, Skipper serves North America, South America, Europe, Africa, the Middle East, South & Southeast Asia, and Australia, creating a global footprint for sustainable growth.

## PLANTS

Skipper operates four state-of-the-art manufacturing facilities in Junglepore & Uluberia (West Bengal), equipped with cutting-edge machinery for manufacturing, designing, and galvanizing.

## PRODUCTS

The diverse range of our steel pole products includes custom and pre-engineered monopoles and H-frames for electric transmission and distribution applications, telecom towers, high-mast lighting poles, street lighting poles, and swaged tubular poles. All pole products are ISO certified and galvanized in-house to ASTM A123 standards, and our testing labs are NABL accredited, ensuring exceptional quality of all products.





# OUR WORLD-CLASS FACILITIES

## HI-DEFINITION CNC PLASMA:

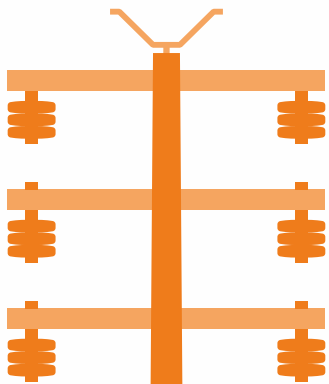
Our **56 m (184 ft) long high-definition plasma bed** ensures efficient cutting of steel sheets into tapered trapezoidal shapes for pole shafts. It also **provides precision cutting for monopole accessories and cross-arm fabrication**, maintaining superior accuracy & speed.

## 2400-TONNE PRESS BRAKE:

This **12 m (39 ft) long press brake** bends 25 mm (0.98 inch) thick high-tensile plates, making it suitable for most monopole designs and applications. Its exceptional capacity ensures high precision in shaping steel components.

## DEVELOPMENT & DESIGN:

A dedicated design team in Kolkata utilizes licensed software like **PLS- POLE, CASSION, STAAD Pro, and AutoCAD** to create customized monopole structures and foundations tailored to project needs.



## GALVANIZING BATH:

A **12.3 m x 2.6 m x 3.0 m (40.35 ft X 8.5 ft x 9.84 ft) galvanizing bath** with a 7-tank pre-treatment process delivers **superior-quality galvanization** meeting ASTM A123, IS, BSEN 1461, and equivalent standards. This setup ensures compliance with domestic and international requirements for polygonal poles.

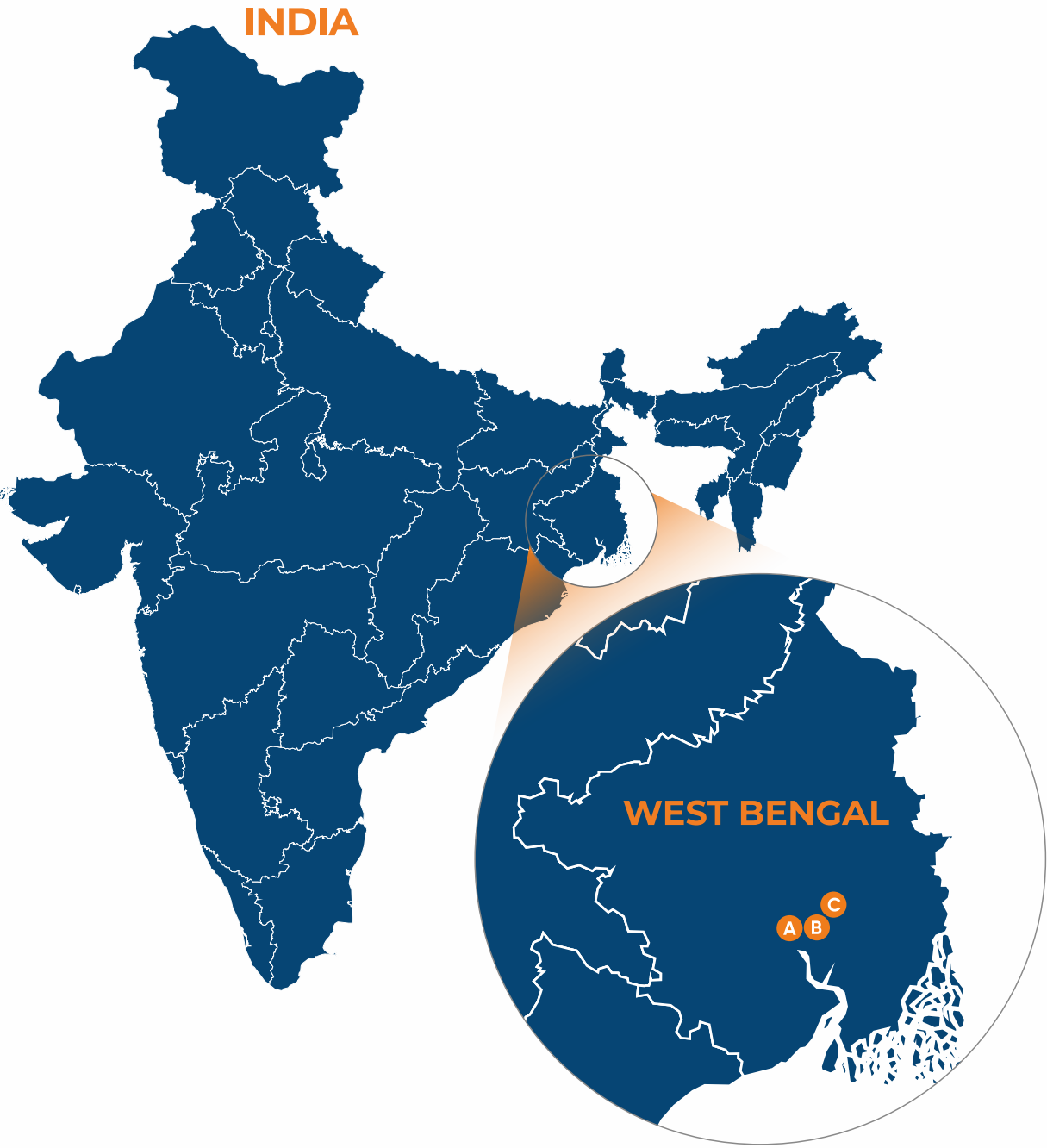
## WELDING MACHINE (SAW):

Our automated **SAW (Submerged Arc Welding)** machine welds large diameter pole sections quickly and efficiently. Our welding staff are certified to **AWS, CWB, and ASME** welding standards, which ensures accurate high quality seam welds and welds around base plates, vangs, and other attachments

## PRODUCT CUSTOMIZATION:

Our poles are manufactured to meet **varied size and design** requirements, tailored for specific industry needs. We also provide **consultancy services**, helping clients select the most suitable product for their requirements while ensuring efficient project execution.

# SKIPPER'S MANUFACTURING FACILITIES IN THE HEART OF KOLKATA



**A** Uluberia – Kolkata (WB)

• **195,000** MTPA

**B** Unit 1 – Kolkata (WB)

• **69,000** MTPA

**C** BCTL – Kolkata (WB)

• **36,000** MTPA

● Engineering Products

MTPA = Metric Tonnes Per Annum



# WHAT WE OFFER

## Tubular Structures



Skipper Ltd. has evolved into one of the world's leading manufacturers for transmission & distribution structures in its engineering products segment. We manufacture a wide range of steel poles for various applications.



## ADVANTAGES OF MONOPOLES IN THE T&D AND TELECOM SECTORS:

- ✓ Minimum space requirement
- ✓ Fewer components, hence swift installation
- ✓ Small footprint
- ✓ Smaller civil foundation
- ✓ Aerodynamic shape ensures lower resistance to air
- ✓ Protection against vandalism
- ✓ Aesthetically pleasing design
- ✓ Short delivery time
- ✓ Urban center installations
- ✓ Upgrading voltage level within existing corridor

# TUBULAR STEEL POLES & H-FRAME STRUCTURES

Monopoles can be used in a variety of utility T&D and communication applications and are ideal for use in restricted right-of-way situations. We design our steel poles utilizing industry standard PLS-POLE in accordance with standards such as ASCE 48, IS 802, IS-5613, IEC 60286, and EIA-TIA 222G. Our design software incorporates applicable design code criteria, and finite element modeling is used for non-linear analysis. Our engineers also utilize foundation design software for various foundation types as appropriate.



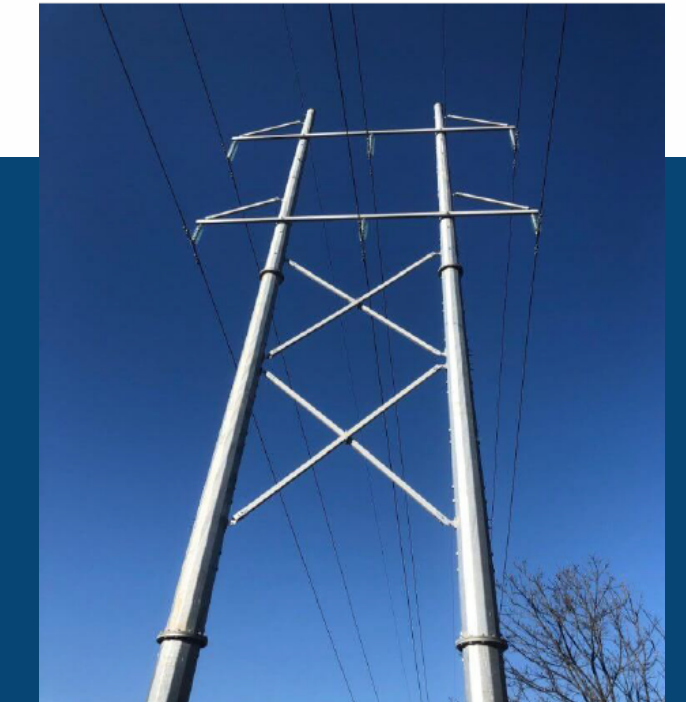
### DISTRIBUTION MONOPOLES:

Galvanized polygonal distribution poles up to 33 kV have following advantages over the conventional poles. Long life, no corrosion, repetitive painting not needed Can be designed for any desired load and height Light weight, easy to install and relocate Aesthetically pleasing, environment- friendly.



### TRANSMISSION MONOPOLES:

We design, manufacture and supply transmission line monopoles from 33kV up to 765kV. Skipper is the only company in India to have successfully designed, fabricated and type tested a 765 kV monopole.



### H-FRAMES:

Skipper offers pre-engineered standard H-frame packages from 69 kV through 230 kV which include standard class poles, crossarms, cross bracing, and hardware. We can also custom design H-frames to meet any specific customer requirements. Our H-frame structures can be direct-embedded or mounted on anchor bolt foundations, designed using slip-joints or flanged joints, and are available in galvanized or weathering steel finish options.



# SKIPPER LATTICE TOWERS STRUCTURES



## LATTICE TOWERS:

In addition to tubular steel poles and H-frame structures, Skipper also offers a full range of lattice towers up to 765 kV in any configuration including tangents, angles, and deadend towers. Our in-house engineering and drafting teams utilize industry standard software for tower designs, our steel is rolled to meet ASTM A572 specifications, and our hardware meets all applicable ASTM standards. Our state-of-the-art fabrication facilities ensure that only the highest quality structures are produced, with all tower materials galvanized in-house in accordance with ASTM A123 standards. To verify proper fit of all tower components we are able to perform complete prototype assembly tests, and when required for new tower designs we will do full-scale load testing at our large testing station.

## ABOUT OUR PEOPLE

At Skipper, our people are the driving force behind our success. With a dedicated team of 3,150+ employees, we are committed to delivering exceptional solutions that empower infrastructure development globally.

### In-House Expertise

Our team includes 33+ in-house design experts, equipped with cutting-edge tools and software, who specialize in creating value-added, cost-effective designs. These solutions not only meet diverse project requirements but also enhance the competitiveness of project bids.

### Skilled Workforce

Our engineers, technicians, and designers bring years of expertise and innovation to every project. They ensure that our poles and transmission solutions meet the highest standards of quality, safety, and efficiency.

### Leadership and Collaboration

Guided by experienced leadership, we foster a collaborative environment focused on building lasting relationships with our clients. By prioritizing open communication and a customer-centric approach, we consistently deliver tailored solutions that exceed expectations.





# SUSTAINABILITY AT SKIPPER LIMITED

At Skipper, sustainability lies at the core of our operations. We are committed to environmentally responsible practices, energy efficiency, and aligning with global sustainability goals to create a greener future for generations to come.

## ECO-FRIENDLY PRACTICES

From raw material sourcing to the final product, Skipper ensures environmentally responsible practices at every stage of production.



- **Responsible Sourcing:** We procure materials from reputed partners who share our commitment to reducing carbon footprints and adhere to stringent sustainability standards.

- **Life Cycle Assessment (LCA):** Conducting LCAs for towers and poles to identify and reduce embedded emissions, ensuring transparency and accountability in our environmental impact.

- **Zero Liquid Discharge (ZLD):** Recycling and reusing process effluents through advanced Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) systems, ensuring no sludge generation or chemical usage.

## COMMITMENT TO A GREENER FUTURE

Our sustainability efforts are a testament to our alignment with global climate action goals.

- Recognized with the 2023 CII Encon Award for energy conservation excellence.
- Enhancing green cover through initiatives like the “Green with Glory Project Hariyali”, focused on tree plantations.
- Promoting organic farming and fostering eco-conscious practices within and beyond the organization.



## GREEN INNOVATIONS

Skipper implements cutting-edge eco-friendly solutions to reduce its environmental footprint, including:

- **Solar Power:** With a 2.59 MW rooftop solar capacity, generating over 2 million kWh annually, we aim to further expand renewable energy adoption by 2025.
- **Daylight Harvesting:** Rooftop systems at the Uluberia facility maximize natural light, cutting down electricity consumption significantly.
- **Heat Recovery Systems:** Reusing waste heat from rolling mills saves coal, enhances burner efficiency, and reduces greenhouse gas emissions.
- **Sustainable Welding Practices:** Transitioning to an Argon-CO<sub>2</sub> mix gas for MIG welding, cutting 5,000 MT of CO<sub>2</sub> emissions annually.
- **Water Conservation:** Advanced STP systems recycle and reuse treated sewage water, achieving significant water conservation. Post-treatment, water TDS levels drop from 750 to just 50, enabling reuse in industrial processes.



# TEST STATION

One of the World's Largest Tower Testing Station



Featured most modern technology in tower Erection & Loading.



The facility is designed to test all kinds of lattice Towers Monopoles & Guyed Towers with World Class Technical Parameters.



Ultimate Destination for OHTL Contractor & Manufacturers for Prototype Testing.



Fully integrated In House Research & Development Center.



## SKIPPER USP

- Customized designs by our Designers for optimum efficiency.
- Multi-Speed VFD Driven Electrical Winches for smooth loading.
- Automated central loading and supervision system to regulate the actual loading.



## TEST BED KEY FEATURES

- Maximum Test Tower base Width ~35 m X 35 m (115 X 115 ft).
- Maximum Test Tower Height- 120 m (394 ft).
- Maximum Cross Arm Spread- 70 m (230 ft).
- Maximum transverse wire load- 120 T per point.



# PROJECTS

## ADANI

33 kV S/C, D/C AND M/C MONOPOLES

## PITCMRL

220 kV M/C MONOPOLES, 132 kV M/C MONOPOLES

## TORRENT

220 kV M/C AND D/C MONOPOLES

## MSRDC, MSETCL

220 kV D/C MONOPOLES, 400 kV D/C MONOPOLES

## STERLITE, WRNER

400 kV D/C MONOPOLES

## STERLITE FOR GPTL PROJECT

400 kV M/C & D/C MONOPOLES

# CREATING GLOBAL INFLUENCE

Skipper's Transmission and Distribution sector extends across India and spans over 65+ countries globally.

## TOWERS

### NEW ZEALAND

### AUSTRALIA

### EUROPE

Finland

### NORTH AMERICA

USA, Canada, Mexico

### MIDDLE EAST

Jordan, Saudi Arabia, UAE, Qatar, Oman, Kuwait, Iraq, Bahrain.

### AFRICA

Kenya, Egypt, Ghana, Nigeria, Zambia, Sierra Leone, Guinea, South Africa Botswana, Burundi, Angola, Liberia, Tanzania, Togo, Mali, Uganda, Senegal, Niger, Malawi, Gambia, Benin, Mozambique, Cameroon, Rwanda, Central Africa.

### SOUTH & SOUTHEAST ASIA

India, Nepal, Bangladesh, Sri Lanka, Indonesia, Philippines, Malaysia, Myanmar.

### SOUTH AMERICA

Peru, Brazil, Colombia, Chile, Paraguay, Panama, Uruguay, Bolivia, Dominican Republic, Trinidad and Tobago.

### AUSTRALIA

### NORTH AMERICA

USA, Canada

### SOUTH AMERICA

Colombia, Paraguay, Bolivia

### SOUTHEAST ASIA

Philippines

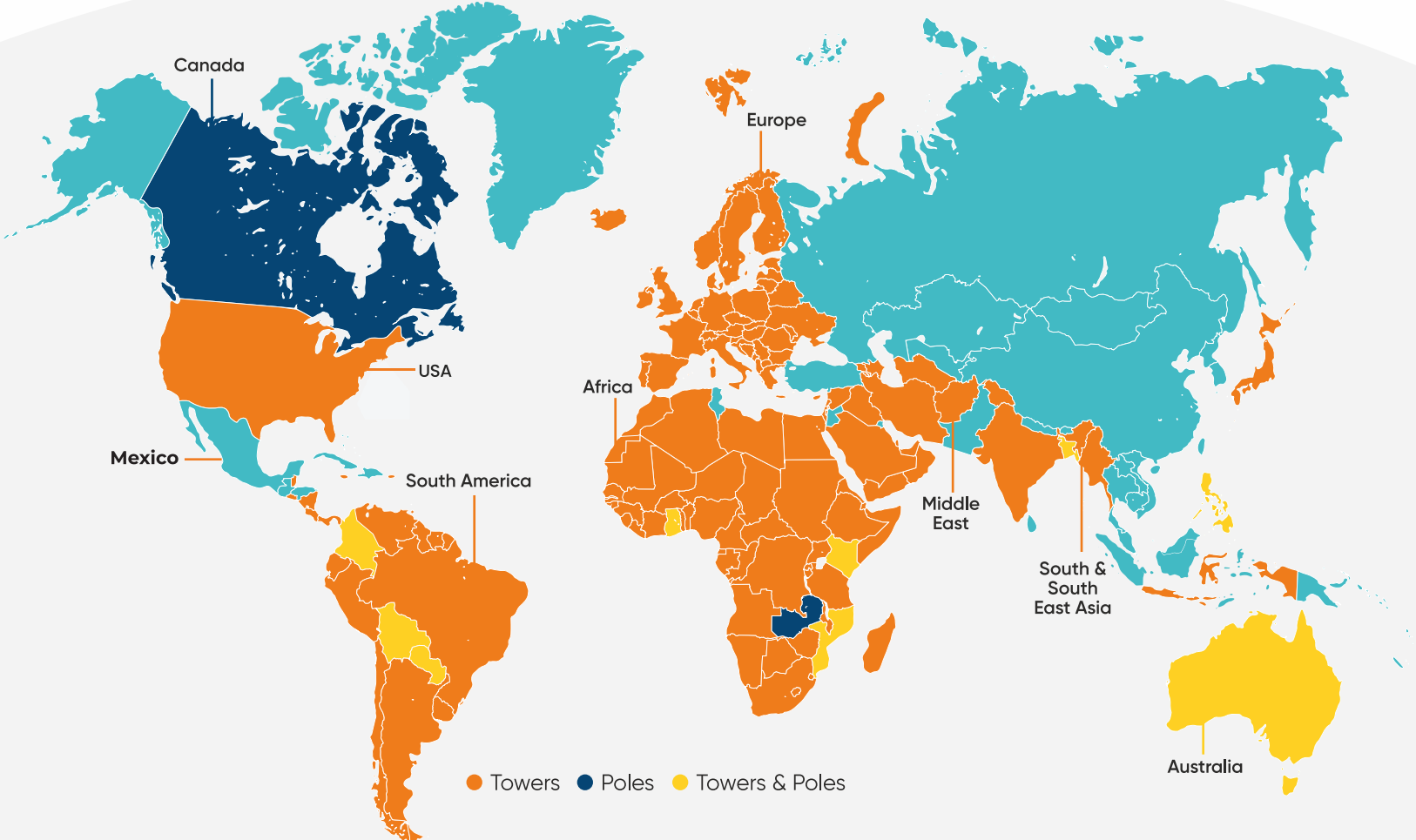
### ASIA

Bangladesh

### AFRICA

Mozambique, Zambia, Ghana, Kenya

## POLES





# OUR PROJECTS

## STERLITE FOR GPTL PROJECT 400 kV M/C AND D/C MONOPOLES

The project includes four 400 kV double circuit transmission lines spanning 143 km (88 miles), along with three Gas Insulated Substations (GIS) at Prithla, Kadarpur and Sohna Road, two bay extensions at Dhanonda, and a LILO connection to the 400 kV DC Gurgaon–Manesar transmission line. Notably, it introduces India's first vertical GIS substations at Prithla, Kadarpur, and Sohna, featuring a multi-storied design with a rooftop 220 kV open switchyard. Compared to conventional GIS substations, this innovative approach reduces land usage by 75%, from 12 acres to 3.8 acres.

The Gurgaon Palwal Transmission Project (GPTL) not only addresses Haryana's peak energy demands, expected to surpass 12,000 MW in FY 20–21, but also aims to significantly reduce pollution levels by minimizing the use of over 10,000 diesel generators in Gurugram. Innovative solutions, such as multi circuit monopole towers and vertical GIS substations, optimize space usage and reduce land requirements by 75%, resulting in a substantial offset of over 18,000 tons of CO2 emissions annually. These advancements not only ensure reliable power supply but also contribute to cleaner air in the National Capital Region (NCR).



## MSRDC, MSETCL 220 kV D/C MONOPOLES, 400 kV D/C MONOPOLES

The aim of utilizing 220 kV and 400 kV D/C monopoles for utility diversion/shifting in the Samruddhi Expressway project in Maharashtra was to facilitate the construction process while ensuring efficient and reliable power transmission. These high-voltage monopoles play a crucial role in meeting the energy demands of the expanding infrastructure along the expressway while minimizing disruption to existing power lines and other essential services. By enabling the vertical alignment of power lines, these monopoles optimize land usage and reduce the footprint of utility infrastructure, especially in densely populated areas. The streamlined construction processes, reduced downtime, and minimized disruptions positively impact the local community, garnering support for the Samruddhi Expressway project. Overall, the utilization of high-capacity monopoles not only ensures reliable power supply but also enhances the efficiency, safety, and sustainability of the construction process

# OUR PROJECTS

## STERLITE, WRNER 400 kV D/C MONOPOLES

The deployment of Sterlite's WRNER 400 kV D/C monopoles in row-prone areas near Mumbai is a pivotal step in fortifying the power infrastructure and securing the energy future of the region. The project aims to ensure a stable electricity supply to Mumbai, crucial for preventing blackouts and meeting the growing demands of the metropolitan area. Utilizing monopoles offers several benefits, including efficient land utilization in densely populated areas, faster installation, and improved resilience to extreme weather conditions. Additionally, the smaller environmental footprint of monopoles helps minimize disturbance to local ecosystems and accelerates the expansion of the power transmission network.



## MSRDC, MSETCL 220 kV D/C MONOPOLES, 400 kV D/C MONOPOLES

The Kharghar Vikhroli Transmission Limited project, spanning approximately 74 km (46 miles) of 400 kV and 220 kV transmission lines, along with the construction of a 1500 MVA 400 kV Gas Insulated Substation (GIS) at Vikhroli, is critical for addressing Mumbai's growing power demands. By enhancing transmission capacity, the project ensures a reliable and stable power supply for the city, crucial for supporting economic growth and meeting the needs of residents and industries. The addition of transmission lines facilitates efficient electricity flow, reduces grid congestion, and optimizes power infrastructure utilization.





# OUR PROJECTS

**TORRENT**  
**220 kV M/C AND D/C MONOPOLES**

Torrent's innovative use of 220 kV M/C and D/C monopoles on SG highway in Ahmedabad marks a significant milestone as the first monopole installation in the torrent system. This decision was driven by severe space limitations and a commitment to preserving the aesthetic beauty of the highway. By opting for monopoles, torrent effectively addresses space constraints, providing a compact and streamlined solution that requires minimal ground space compared to traditional lattice towers. The sleek design of the monopoles not only minimizes visual clutter but also blends seamlessly with the surroundings, contributing to the aesthetic appeal of SG highway. Moreover, their structural stability enhances safety for pedestrians and motorists, showcasing torrent's dedication to ensuring a secure environment.



# OUR PROJECTS

**PITCMRL**  
**220 kV M/C MONOPOLES, 132 kV M/C MONOPOLES**

The installation of PITCMRL's 220 kV M/C monopoles and 132 kV M/C monopoles stands as a crucial aspect of facilitating the upcoming Pune metro project. These monopoles, towering at 75 meters (246 ft), provide a vertical solution that optimizes space utilization in densely populated regions with severe footprint availability issues. By minimizing the need for extensive ground space, they address land constraints typically encountered in urban environments, ensuring efficient power transmission without compromising reliability. Their sleek and modern design enhances the aesthetic quality of urban landscapes while minimizing environmental footprint compared to traditional lattice towers, thus maintaining ecological balance in environmentally sensitive areas. Additionally, the robust power transmission network ensured by these monopoles supports the energy demands of a growing urban population and the operational requirements of the Pune metro, contributing to uninterrupted service and reliability.



**ADANI**  
**33 kV S/C, D/C AND M/C MONOPOLES**

The replacement of conventional RSJ poles with 33 kV monopoles marks a significant enhancement in one of the largest renewable energy projects in the Khavda region, spearheaded by Adani. These monopoles, specifically designed for Adani, offer a multitude of advantages, including heightened reliability, improved aesthetics, and a reduced footprint. By integrating advanced design and construction, these monopoles bolster the resilience of the power distribution network, ensuring a more robust infrastructure for the region. The reduced footprint of these monopoles is particularly advantageous in projects where space optimization is crucial, allowing for more efficient land use across various terrains. Furthermore, the adoption of cutting-edge technology in the form of 33 kV S/C, D/C, and M/C monopoles improves the efficiency and reliability of the power distribution network.