SKIPPER Limited

Great Place To Work. Certified DEC 2022 - DEC 2023 INDIA

Rediscovering Roots

Embracing Triumph, Shaping Tomorrow

14th September 2023

Power Transmission Lines

Needs & Challenges

Power Transmission – Key Growth Drivers

Present State of the World

Low Electricity Share

- Electricity makes up less than 20% of the total energy consumed today

Over-dependence on Fossil Fuels

- 62% of the power delivered by Grids is presently by Fossil Fuels

Historic Grid Under-investment

- Developed Countries have ignored their grid infrastructure in the last few decades

Long Connection Waiting time

- In many developed countries, average waiting time for a renewable plant to get grid connection is 4 years

Approx. 1.1 Trillion USD has to be invested every year on the Grid till 2050 to enable full transition to Net Zero

Importance of New Transmission lines for Renewables

Generation Resource Location

- Many renewable sources are in remote areas

Energy Reliability

- Renewables can be intermittent due to weather / time of day

Grid Integration

- Existing grid infrastructure needs upgrading

Grid Resilience

- Transmission upgrades enhances grid resilience
- Make utilities better prepared for extreme events

World Paradox : To reduce carbon we need to increase electricity generation but at the same time, we need to stop fossil fuel based electricity generation

Challenges in Building new Transmission Line

Regulatory Complexity

- Stringent regulations and permitting processes
- Environmental assessments and safety compliances

Community Opposition

- Resistance from communities due to property values and health concerns
- Legal battles and Project delays

Land / ROW Acquisition

- Securing land for corridors, often in densely populated areas
- Mitigating impact on ecosystems, wildlife and resources
- Building in urban areas or challenging terrains
- Innovative engineering and construction methods

Cost and Funding

- Limited Budget allocation and securing financing
- Poor Financial health of State Discoms

Expanding and Greening the Grid is a must

Addressing these challenges requires collaboration among stakeholders and Policymakers

Careful and Seamless planning, Transparent planning and advanced technologies and cost efficient Transmission structures are essential

SKIPPER Limited

Skipper is India’s largest and world's only Integrated T&D company having its own Structure rolling, manufacturing, Tower Load Testing Station & Transmission Line EPC.

Company Vision - Atma Nirbhar Bharat

Our Vision

To produce world - class quality products ensuring robust National Infrastructure development and making India the preferred sourcing hub for Global Infrastructure needs

Company vision is strongly aligned with the core principles of Atma Nirbhar Bharat

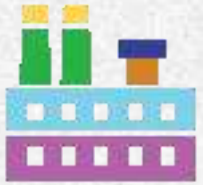
1. Harnessing the strength of Indian manufacturing to meet global transmission needs
2. Commitment to self reliance by using 100% raw materials from India only
3. Cater to global needs for facilitating towards renewables energy and reduce carbon footprints, and evolve towards consumption of hydrocarbons and nonconventional and renewable energy sources
4. Contribute to India's self sufficiency in this crucial (Power Transmission) sector

Core Strengths

41+

Years of Excellence

India’s largest and world's only Integrated T&D company having its own Structure rolling, manufacturing, Tower Load Testing Station & Transmission Line EPC



Largest manufacturer of T&D structures in India

Awarded as “Largest Tower Supplier” by PGCIL & "Best Industry in Water Resources sector" by Central Board Of Irrigation And Power

2450+

Employees

Exporting to 55+ countries

One of the largest & the fastest growing Polymer Pipes & Fittings in India

Product Portfolio

Engineering

Power Transmission Tower

Power Distribution Poles

Monopoles

Telecom Tower

Railway Structures

MS & High Tensile Angles

Test Station and R&D Center

Fasteners & Tower Accessories

Infrastructure

Transmission Line EPC

Telecom EPC

Railway Electrification

Water EPC

Polymer

UPVC Pipes

CPVC Pipes

HDPE Pipes

Fittings

R&D Capabilities

Leading through innovation

- We have strengthened our innovation capabilities backed by our talented designing and R&D teams. Our department is approved by DSIR, Govt. of India.
- We are assuring our clients by conducting prototype tests in our state-of-art test centers.

Tested towers & monopoles

765 kV S/C
Monopole

220 kV
D/C Tower

765 kV D/C
Tower

400 kV D/C
Monopole

500 kV D/C
Tower

175+ Towers & Monopoles tested

Highest tower of **120m** height with **1200kV** in India

Optimum efficiency designs

Dedicated in-house R&D center

Core Competencies

Modern Technology:

Automated State-of-the-Art Equipment

- The company utilizes cutting-edge automated equipment, representing the latest advancements in technology.

Value Optimization:

Engineering and Design Excellence

- Engineering and design excellence are prioritized to optimize both product quality and process costs.

End-to-end (Inclusive) Solutions:

In-House Availability of Products, Accessories, and Technical Services

- The company offers a one-stop shop experience by providing a wide range of products, accessories, and technical services in-house.

Strategic Support:

Proximity to Power, Port, and Skilled Labour

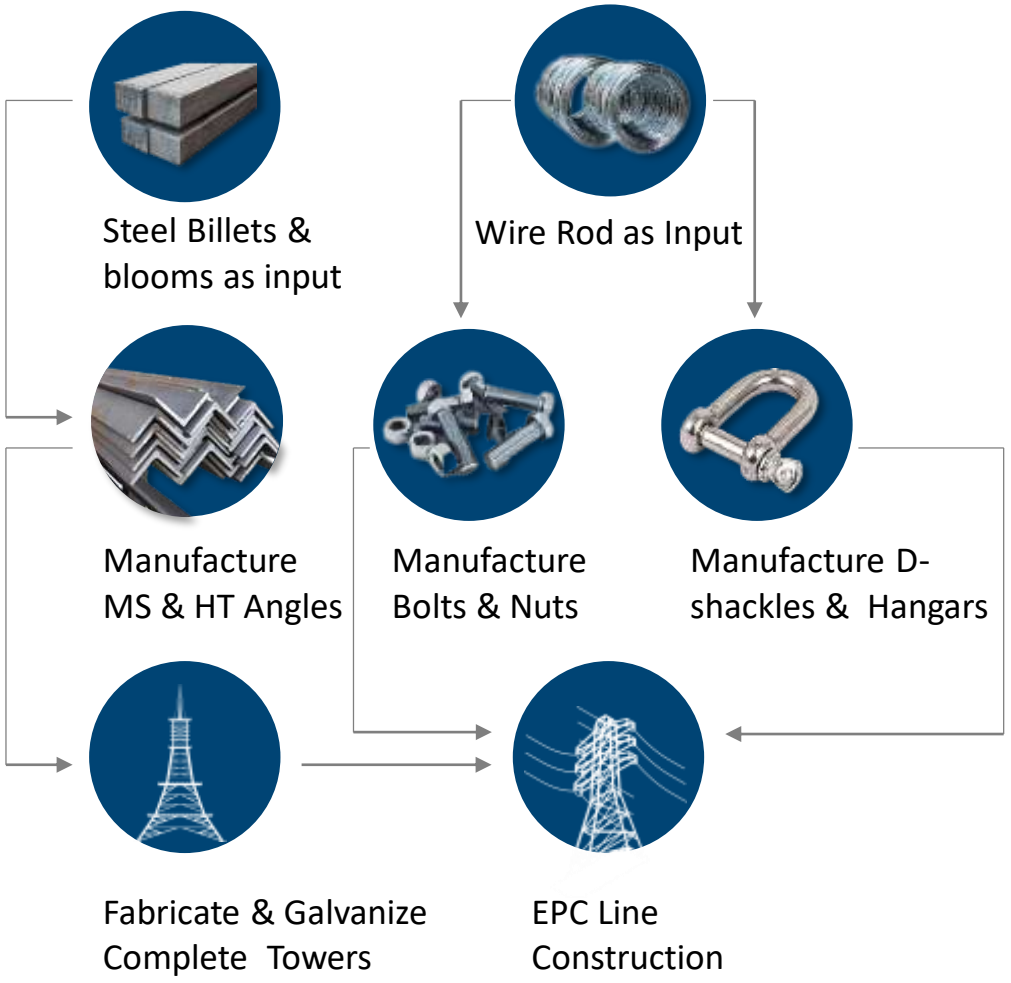
- The company strategically locates its plants in the East, ensuring access to adequate power supply, proximity to Kolkata port, and cost-effective labor.

Scalability:

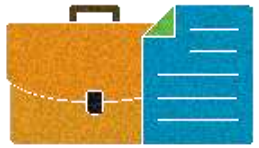
Power Grid Approved and ISO Certified Large Manufacturing Capacities

- Power Grid approved and ISO certified plants possess significant manufacturing capacities, enabling participation in large-scale project orders.

Our Value Chain



Core differentiators



Broad Based Portfolio

Diversified Products delivering sustainable growth

Transitioning with focus on global market

Customization facilities

Exciting Opportunities Ahead

Build on Long-Standing Relationships with our Customers

Integrated R&D for further competitiveness
Strong Bidding Pipeline

Our Ability to Win

India's largest and world's only end to end Integrated T&D company having its own Structure rolling, Design & Load Testing, Tower , Pole and fastener manufacturing and EPC

Our Plant Location in Eastern India and close proximity to port gives significant logistics cost advantage for both raw material as well as outward freight

Winning projects through competitive offerings

Enhanced Profitability

Operational efficiencies & margin expansion

Looking to Deleverage

Repeat and referral business from all our clients

Global Footprints

SKIPPER Limited

South America
- Peru
- Brazil
- Colombia
- Chile
- Paraguay
- Panama
- Uruguay
- Bolivia
- Dominican Republic
- Trinidad and Tabago

Middle East
- Jordan
- Saudi Arabia
- UAE
- Qatar
- Oman
- Kuwait
- Iraq
- Bahrain

South and South East Asia
- India
- Nepal
- Bangladesh
- Sri Lanka
- Indonesia
- Philippines
- Malaysia
- Myanmar

Australia

New Zealand

Europe
- Finland

USA

Canada

Africa
- Kenya
- Egypt
- Ghana
- Nigeria
- Zambia
- Sierra Leone
- Guinea
- South Africa
- Botswana
- Burundi
- Angola
- Liberia
- Tanzania
- Togo
- Mali
- Uganda
- Senegal
- Niger
- Malawi
- Gambia
- Benin
- Cameroon
- Mozambique
- Rwanda
- Central African Republic
- Burkina Faso

Optimistic Outlook

The massive global and domestic focus and investment on building T&D infrastructure catering to Renewables will drive up the demand for setting up new transmission networks.

Post Covid India has emerged as a preferred sourcing location vis-a-vis other Asian Countries; creating new opportunities for us.

India plans to generate and integrate 500 GW Of renewable energy sources by 2030 and construction of over 50,890 Ckm of new transmission lines with an capex outlay of Rs 2.4 Trillion

As the global focus on renewables energy continues to grow, many countries will require new transmission lines to be built to cater to a new green energy network.

Our global presence puts us in an advantageous position to act upon such opportunities in the coming years.

Suggestive Steps - To boost Global Competitiveness

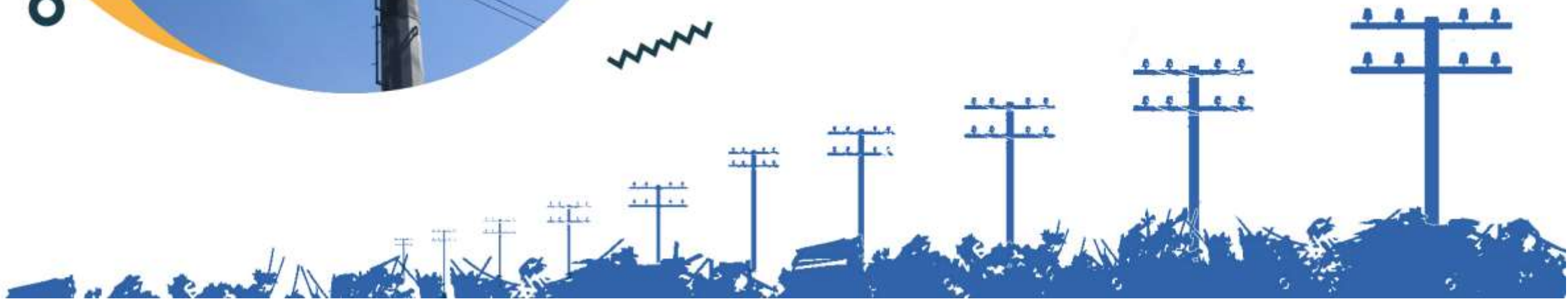
- Imposition of duty on Steel Semi Finished exports
- Higher RodTep on exports of Transmission Towers & Poles
- Re-starting incentives on Service exports
- Price Variation in TBCB Transmission Projects

Introduction of Supplier grading and price differentials

SKIPPER Limited

POLES APART

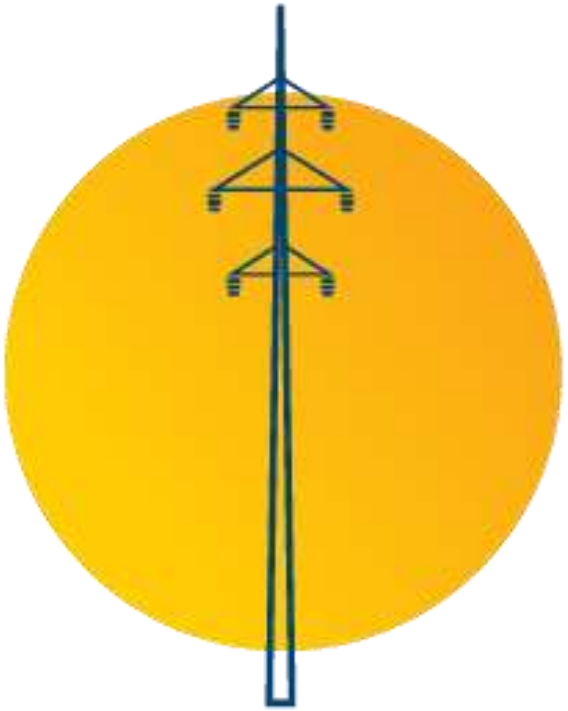
A Skipper Limited Presentation



Pole Structures

Advantages of pole structures can be classified as following

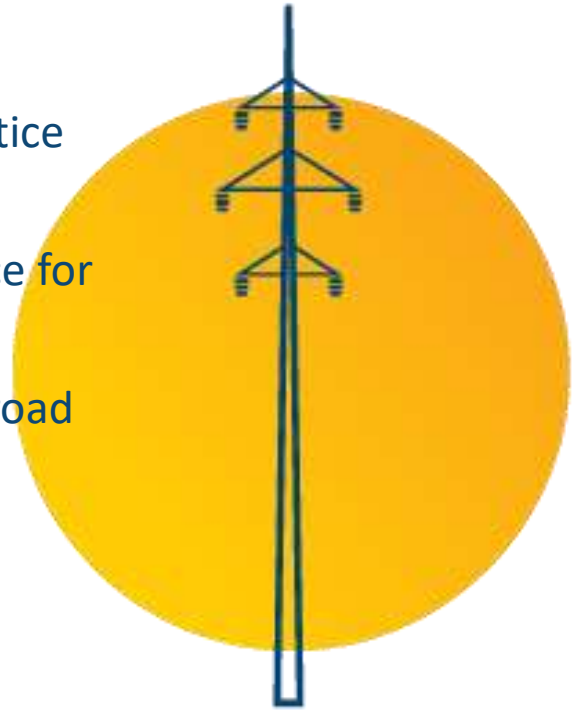
- **Less foot print leads to less right of way requirement**
- Custom design solution / flexibility in design modifications
- Aesthetically better visual appearance
- Fewer components compared to lattice towers
- Faster Assembly & Installation
- Higher Reliability under extreme conditions such as high wind speed/cyclones etc.
- Less / Nil maintenance leads to longer service life



Pole Structures

POLE STRUCTURES serve as a solution to listed specific requirements

- Where road width cannot be increased due to large lattice structures
- Height raising at metro Crossings due non-availability of the space for lattice towers in Urban Areas
- Height raising at Flyovers/River Crossings due non-availability of the space for lattice towers
- No space to construct new transmission lines with lattice towers except road median/foot-path/service roads
- Hilly/Valley regions where lower foot print is available for lattice towers
- Up-gradation of Rating without long shutdown (ERS)



Geometrical Features: Joint Type

SLIP TYPE JOINT

SLIP TYPE JOINT IS VERY COMMON AND CAN BE ADAPTED/USED FOR ALL LOCATIONS BARRING AREAS WHERE WE MIGHT HAVE LOGISTICS, TRANSPORTATION OR ERECTION ISSUES

FLANGE TYPE JOINT

FLANGE TYPE JOINT IS USED WHERE LOWER SECTION LENGTHS ARE REQUIRED AND THERE IS NO SPACE TO MOBILIZE HEAVY CRANES. IT IS RECOMMENDED ESPECIALLY IN HILLY/VALLEY REGIONS

BUTT WELDED TYPE JOINT

CURRENTLY, MOST OF THE UTILITIES DO NOT RECOMMED THIS TYPE OF JOINT.

Geometrical Features

BASE PLATE TYPE POLE

- Base plated type poles can be used for any height/rating/span as long as its is within manufacturing capability
- Easy to assemble and install

Base plate pole on median

132 kV single sided cross-arm

220 kV M/C pole with aux cross-arms

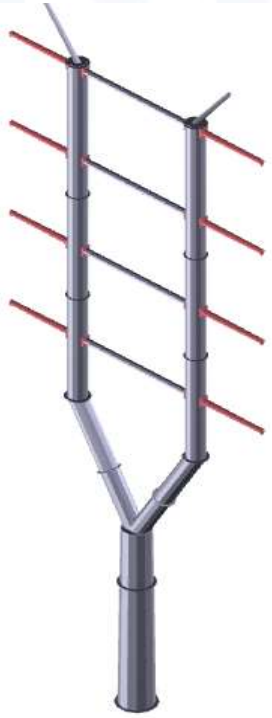
Geometrical Features

DUAL, TRIPLE OR FOUR POLE STRUCTURES

Sometimes one pole configuration may not be sufficient as per customer/site requirement due to manufacturing limitations, so we suggest dual-pole or multi-pole structure in order to cater to the requirement

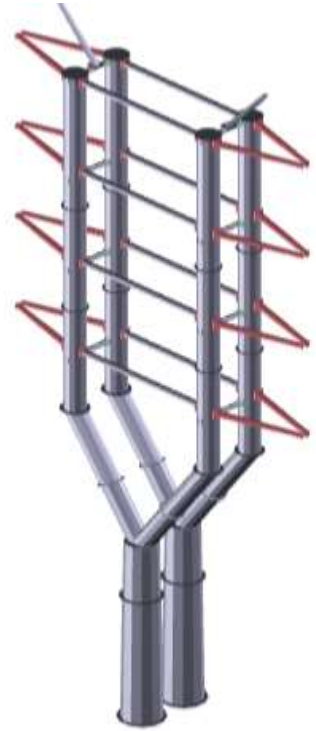
DUAL H-POLE 400 kV

DUAL H-POLE 66 kV



Y-POLE for M/C

DUAL INLINE POLE



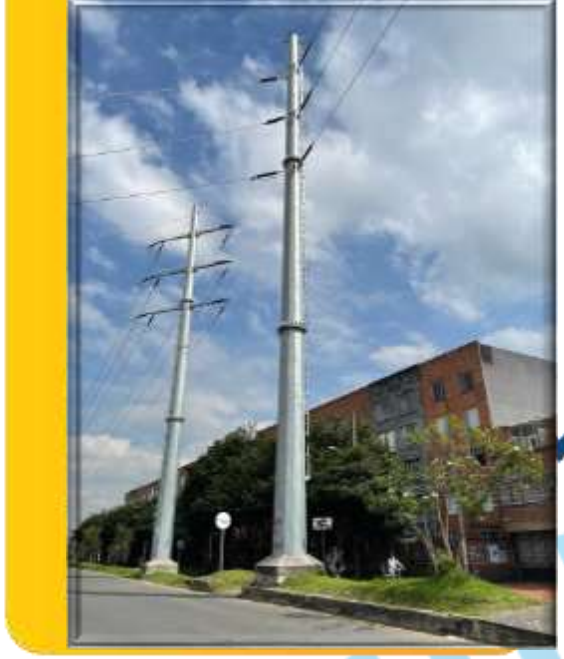
DUAL Y-POLE for M/C

Supplied photographs

220 kV D/C Poles – Special Pole

132 kV D/C CT Pole - HVPNL

220 kV CT MC Pole - Torrent



115 kV D/C Poles Supplied in Colombia

Supplied photographs

110 kV Embedded Pole

400 kV D/C Pole - MSETCL

220 kV M/C pole UPPTCL

400 kV M/C pole Sterlite

Thank you

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