



# PILLARS FOR PROGRESS TRANSMISSION & TELECOM TOWERS

## the company

### leading the group

Skipper Limited, established in 1981, is the flagship company of SK Bansal Group. With a culture of excellence and orientation towards growth, the company is positioned to win the future. Skipper is proactive, progressive and has been steadily improving its competitive advantage.

We have recorded a strong financial performance with an annual turnover exceeding ₹ 5000 million (USD 111 million). Our presence in domestic and international market is growing rapidly. We are exporting our products to Middle East Countries, Oman, Sri Lanka, England, Jordan, Germany, Africa, Ghana and Bhutan. Skipper enjoying the strong support from its lenders i.e. Bankers & Financial Institutions who have extended the credit facilities of more than ₹ 3000 million (67 million USD)

#### **Quality Assurance Plan**

Skipper Limited is an ISO 9001:2000, ISO 14001:2004 & OHSAS 18001:2007 certified company. With a robust quality assurance plan in place and with processes that use cutting edge technology, our products are manufactured conforming to domestic and international industry standards.

#### **Green Policy**

Environment and health issues are priority areas at Skipper Limited. In keeping with pollution control and carbon emission we have taken up appropriate initiatives and are pursuing alternatives to implement a green policy.

#### **Products**

Angles

Rolling MS & HT Angle Section size from 45x45x4 mm to 200x200x20 mm Hot-Rolled Skelp

To manufacture tubes & pipes, cold-rolled strips

**ERW Steel Pipes** 

Galvanized & Black Pipes, Hollow Sections

Poles

Swaged, High Mast & Octagonal Poles

Scaffolding Systems

Scaffold Tubes, Props & Jacks, Cuplock Systems

**Hot Rolled Sections** 

Angles, Channels, Joists, H-Beams

Towers

Transmission & Telecom Towers

**PVC Pipes & Fittings** 

SWR Pipes & Fittings

Services

**EPC Projects** 

Transmission and Telecom towers

Trench-less Drilling

Oil & Gas pipelines, OFC and Electric cables

Hard rock drilling, river, canal, highway crossings













# steel towers

### value chain integration

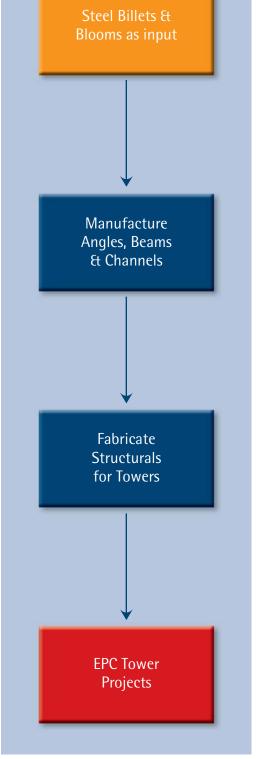
Skipper Limited is one of the leading companies fully capable of executing Tower Projects for Power Transmission / Distribution and Telecommunication sectors on turnkey or task basis.

Our product value chain begins with steel billets & blooms as inputs from which we manufacture hot-rolled structurals.

The structurals are used for the production of steel towers and structures for the power and telecom industries.

Skipper is the preferred partner for almost all tower projects being executed in Eastern India.

All our products are manufactured according to IS specifications using the latest technology.









# a new benchmark

### in strength & versatility

#### **Skipper Towers**

Whether you are looking for a wide selection of Transmission or Telecommunication Towers, Skipper Tower Division is committed to meet your needs and being your supplier of choice.

One of the advantages of doing business with the largest independent manufacturer of towers in the Eastern Region of India, is that Skipper offers unlimited production and a large selection of steel products, including all sizes, strengths and finishes for transmission, distribution, and lighting needs.

Skipper capabilities include - Survey, Design, Draft, Detailing of Towers; Testing, Production, Galvanization, Execution, Civil Erection, Stringing, Testing and Commissioning of multi-utility towers.

#### For Power Transmission

- From 66 KV to 800 KV (Single circuit, Double circuit and HVDC)
- Substation and Switchyard Structures
- Railways Masts and Portals

#### For Telecom Industry

- □ Roof top towers 9m to 30m
- ☐ Ground Based or Green-Field towers 30m to 100m
- Ramboll towers From 9 m to 60 m

#### **Custom-built Towers**

- Square Angular Tower
- Tri-Angular Tower
- Polygonal Tower
- Monopoles
- Guyed Masts
- Tubular Towers
- Hybrid Towers (Leg Tubes and Bracing Angles)
- Ground Based Towers
- Roof Top Towers
- Broadcast Towers
- High Mast Towers
- Windmill Towers



## features

### engineered for the best



#### **Design Considerations**

Skipper Towers and Foundations are designed and engineered based on the following considerations :

- Soil Bearing Capacity (SBC)
- Presence of Water Table/Normal Soil/Soft Rock/Hard Rock
- Factor of safety
- Design Code (IS:802 or International TIA-222G)
- □ Wind Zone (140 kmph-200 kmph)
- Voltage level
- No. & Type of conductor
- Operating temperature
- Antenna Mounting requirements and Antenna Height (No of GSM. MW-06/1.2/1.8/2.4m)
   Climbing Provisions
   Safety Equipment

#### Special Work features

Skipper Towers and Foundations are fabricated at our Jangalpur and Uluberia Plants which are equipped with the latest equipment.

- Two modern plants capacity of 80,000 per annum.
- Twelve Nos. of CNC Angle Lines and Plate processing.
- Complete Traceability of materials.
- ☐ Four Galvanizing Baths (upto 14 m Length)
- □ In-House Chemical and Physical testing facilities using modern equipment
- Quality conforming to various International Standards
- Supplied over 1,00,000 MT of tower materials across the world

The well-equipped Tower production lines have adequate provisions for

- Inspection of raw material
- Straightening of the sections
- □ Sizing of the section
- Numbering of the section
- Punching the holes on sections and plates
- Hot dip galvanizing of all machined components the Hot Dip Galvanizing Process is carried out in fully automated temperature controlled Galvanizing bath, & Quenching Tank and is also controlled through cooling Tower by Auto Control process
- □ Assembling to the requirements with or without welding



# ramboll towers

### Green Field & Roof Top towers for Mobile networks

Ramboll Telecom, Denmark, is the World's largest telecom design company and has been involved in the planning, analysis, design, inspection and maintenance of telecommunication structures for nearly 60 years in over 30 countries.

Based on Skipper's high quality standards, production strength and adherence to Health & Safety norms, Ramboll India (a 100% subsidiary of Ramboll, Denmark) has chosen Skipper as it's manufacturing partner to cater to tower requirements for Indian as well as International telecom markets.

Ramboll towers are 100% Tubular and are manufactured according to National and/or International Standards with a quality plan defined by Ramboll. Ramboll's production experts supervise the production closely and follow complete documentation.

#### **Benefits**

Some key benefits which Ramboll tower customers enjoy are

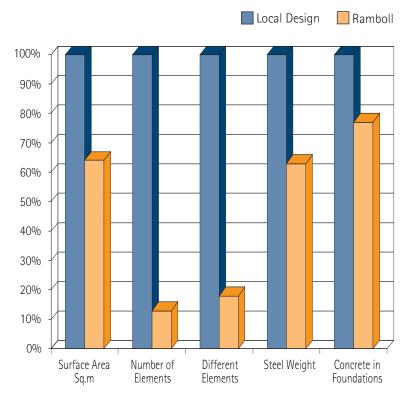
- High Quality
- ☐ High Safety Standards at Factory and Site level
- Lower Site build up cost
- Ready-made tower designs as well as Foundation banks for a wide range of Wind speeds, Antenna loadings and Soil conditions suitable for a single tower for sharing even upto 7 operators
- □ Low weight and hence easy transport
- Optimised for the actual need
- Faster Assembly time (60 mtr tower erected in 4 days)
- □ Low maintenance cost
- Very few different elements which greatly reduce the chance of wrong or short shipment
- □ Integrated climbing and Cable ladder with large space
- □ Concept of Cast-in Part (CiP) that eliminates the need for Templates
- Lesser ground area required for GFT (Green-Field tower) sites.
- Lower Weight and lower Foundation forces mean that Ramboll RTT's can be placed on weaker buildings also.

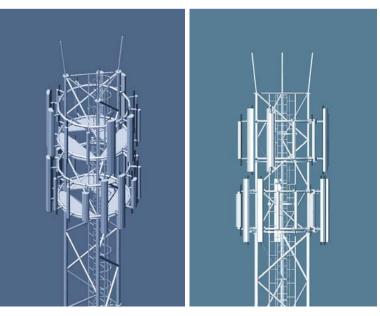


# ramboll towers

Green Field & Roof Top towers for Mobile networks







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### the product lines

**Hot Rolled Sections** 

Angles, Channels, Joists, H-Beams

Angles

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