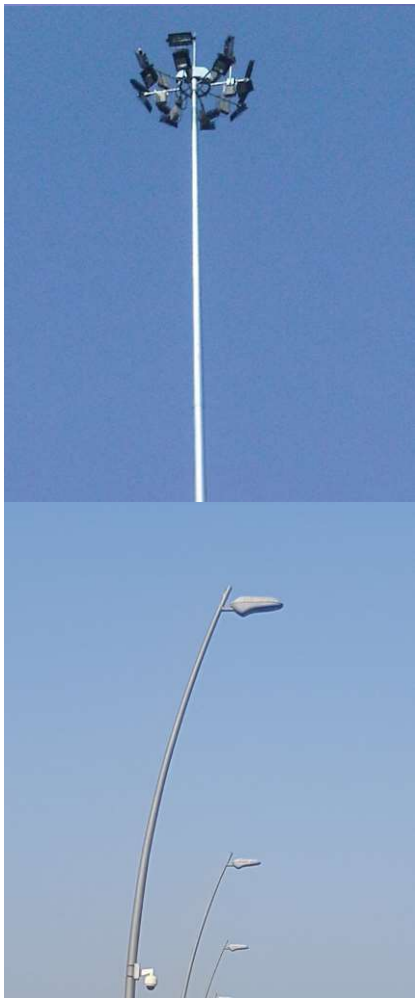
TRANSRAIL

POLE AND STRUCTURE



Integrated Power Transmission Lighting and Solar Solutions

About TRANSRAIL

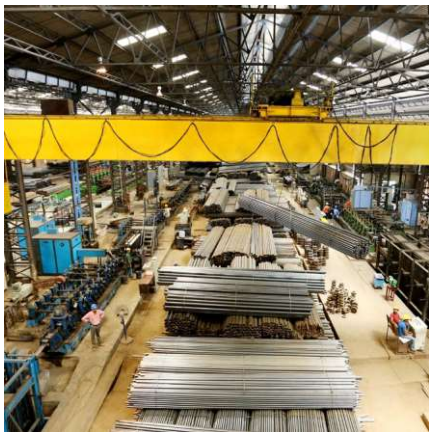
Transrail Lighting Limited is an integrated company offering turnkey solutions in the field of Power Transmission, Distribution, Rural Electrification, Electrical Sub Station, Overhead Railway Electrification, Solar System and Lighting Solution. An active player in EPC and Turnkey projects having presence in INDIA and global presence in over 35 countries.

At its core, we are a company driven by passion for quality, innovation and excellence.

Having multi location manufacturing and supply facilities within INDIA for galvanised T&D structures, monopoles, high masts, stadium masts, street light poles, flag mast, LED and HID Luminaires and solar lighting systems to cater the needs of our customers.

All our operation are certified for ISO 9001, ISO 14000, OHSAS certification.

- Octagonal and Conical Poles
- Decorative Poles and Brackets
- High Masts
- Stadium Lighting Masts
- Flag Masts
- Railway & Metro over head line Structures
- T&D Monopoles
- Traffic and Antenna, CCTV Poles
- Signage Gantries
- GI Engineered Structures
- Sundry Galvanization



OUR IN-HOUSE CAPABILITIES:

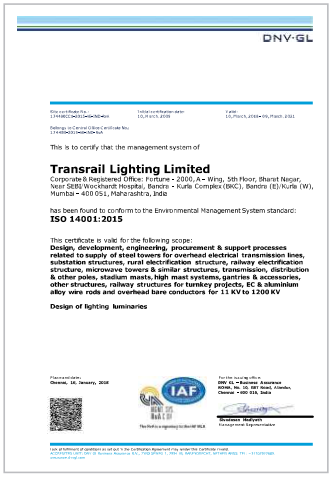
- Design
- Development
- Manufacturing
- Testing
- Supply and EPC Civil, T&D, Electrical and Projects

DESIGN, DEVELOPMENT & QUALITY

Over the years, TRANSRAIL DD & Q wing have invested and developed in house capabilities in Quality design, Innovation, and manufacture of project specific, customized products, solutions and services from concept design to engineering and manufacture of T & D Structures, Monopole, High Masts, Sports Lighting Masts, Lighting Poles, Lighting and many such products used widely in todays Urban and Rural infrastructure projects.

TRANSRAIL Structural design team use globally accepted design Softwares viz. PLS_Pole, PLS_CADD, STAAD PRO CE and inhouse developed calculation and validation tools adopting design procedure to CEI/IEC 60826, ASCE 48-11, other national and international codes and Calculation of wind pressure IS 802 Part 3-1987 and other related international standards





DNV·GL

This is to certify that the management system of

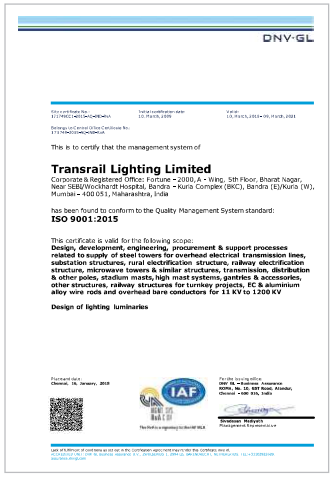
Transrail Lighting Limited

Corporate & Registered Office: Fortune - 2000, A - Wing, 5th Floor, Bharat Nagar, Near SEBI/Wockhardt Hospital, Bandra - Kurla Complex (BKC), Bandra (E)/Kurla (W), Mumbai - 400 051, Maharashtra, India

has been found to conform to the Environmental Management System standard:
ISO 14001:2015

This certificate is valid for the following scope:
Design, development, engineering, procurement & support processes related to supply of steel towers for overhead electrical transmission lines, substation structures, rural electrification structure, railway electrification structure, microwave towers & similar structures, transmission, distribution & other poles, stadium masts, high mast systems, gantries & accessories, other structures, railway structures for turnkey projects, EC & aluminium alloy wire rods and overhead bare conductors for 11 KV to 1200 KV

Design of lighting luminaries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has been found to conform to the Quality Management System standard:
ISO 9001:2015

This certificate is valid for the following scope:
Design, development, engineering, procurement & support processes related to supply of steel towers for overhead electrical transmission lines, substation structures, rural electrification structure, railway electrification structure, microwave towers & similar structures, transmission, distribution & other poles, stadium masts, high mast systems, gantries & accessories, other structures, railway structures for turnkey projects, EC & aluminium alloy wire rods and overhead bare conductors for 11 KV to 1200 KV

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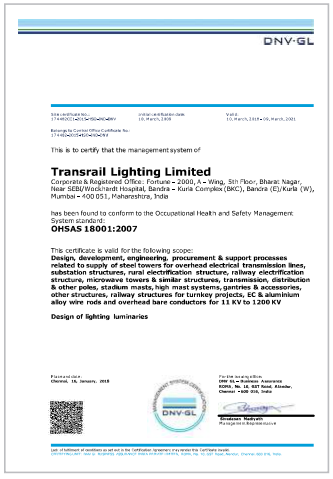
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has been found to conform to the Occupational Health and Safety Management System standard:
OHSAS 18001:2007

This certificate is valid for the following scope:
Design, development, engineering, procurement & support processes related to supply of steel towers for overhead electrical transmission lines, substation structures, rural electrification structure, railway electrification structure, microwave towers & similar structures, transmission, distribution & other poles, stadium masts, high mast systems, gantries & accessories, other structures, railway structures for turnkey projects, EC & aluminium alloy wire rods and overhead bare conductors for 11 KV to 1200 KV

Design of lighting luminaries


DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

This is to certify that the management system of

Transrail Lighting Limited

Survey No. 227/1/1/1/1, 228/3, 228/3, 228/4, 228/5, Khanvel Khordi Road, Khordi Village, Silvassa – 396 230, Union Territory of Dadra & Nagar Haveli, India

has been found to conform to the Environmental Management System standard:
ISO 14001:2015

This certificate is valid for the following scope:
Manufacture and supply of transmission, distribution & other poles, stadium masts, high mast systems, gantries & accessories, other structures, railway structures, supply of lighting luminaries

GALVANIZED OCTAGONAL AND CONICAL STREET LIGHTING POLES

- TRANSRAIL designs and manufactures wide range of flanged mounted type hot dip Galvanized Octagonal, Conical and Swaged poles in its modern plant
- Manufactured using HR Coils of Steel Grade conforming to BS EN 10025, Cold cut and sheared by CNC machines ensuring accurate sizes, dimensions and thickness from 3mm to 6mm
- Automated Fabrication, SAW deformity free welding for sleek and aesthetic appearance and finish
- Single Section Construction up to **14m** of varying thickness, conacity and cross section
- Hot dip Galvanized with pre treatment of 7 tank process confirming to BS EN ISO 1461
- Poles are provided with Vandal resistant and weather proof doors to facilitate easy access of junction box for maintenance

DECORATIVE STREET LIGHTING POLES

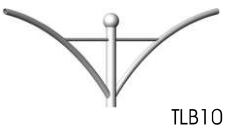
- TRANSRAIL have developed special designs for Tubular and Conical curved poles to meet the requirements of today's Contemporary and modern road designs and blend with Urban city scape, Architectural forms and designs as per project needs to satisfy and Smart City requirements
- Manufactured using HR Coils, Seamless tubes, sheared by CNC, Plasma cutting and bending machines ensuring accurate forms, sizes, dimensions and thickness from 3mm to 6mm
- Multi section, Single and Twin arms for Decorative and functional street lights up to **14m**
- Hot dip Galvanized with pre treatment of 7 tank process confirming to BS EN ISO 1461
- Surface final finish of PU Painted or Powder Coated with wide range of Colour and finish options to meet project requirements

DECORATIVE BRACKETS

- To complement TRANSRAIL make Octogonal, Conical, Decorative Curved and Bent Poles wide range of creative design cum functional decorative brackets with Single and Twin arms of varying lengths and sizes producted to match the project needs

TLB5

TLB6



TLB10

TLB12

TLB9

TLB11

TLB4

TLB13

TLB3

TLB8

TLB14

TLB1

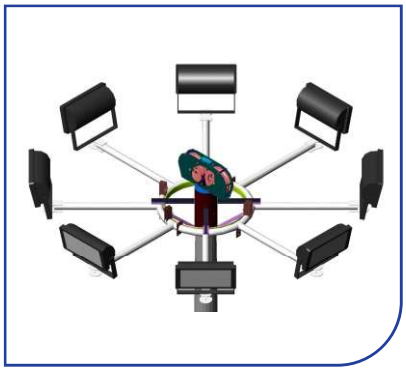
TLB15

TLB16

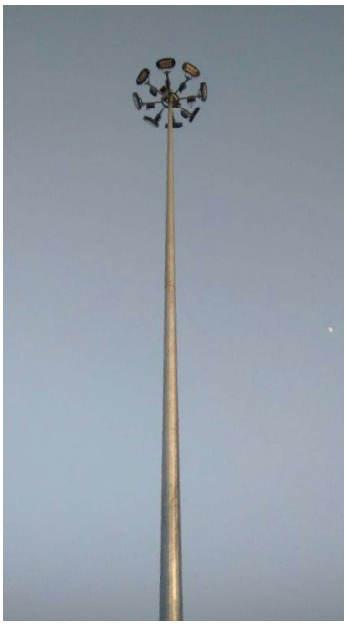
TLB7

TLB2

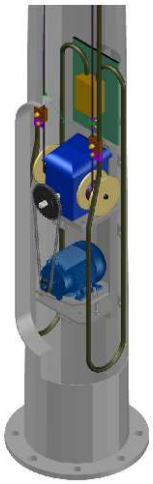
HIGH MAST LIGHTING SYSTEMS



- TRANSRAIL designs and manufacture BEST in class HIGH MAST lighting Systems from **10m to 50m** for India and Global markets widely used in exterior lighting applications in Cities, Industries, Highways, Ports, etc
- Fabricated Masts sections are continuously tapered 16/18/20 sided cross sections for dove-tailed assembly conforming to BS EN 10025, customer specifications and design as per IS 875 pt III 2015, TR7, PLG 07 and other international design standards. WIND TUNNEL tested design and type tested 30m High Mast for full scale loading
- HR Coils are uncoiled, cold cut and sheared by CNC machines for accuracy and no stress in the plate
- Fabricated mast sections are single dip hot dip galvanized in a 14.3m galvanizing bath for galvanization thickness as per BS EN ISO 1461 or customer specification



- Head frame Capping section houses pulley arrangement with guides and stops for safe operation of wire-ropes
- Hot dip galvanized Tubes and MS Channel are used for Lantern carriage designs as per Flood lights quantities and arrangements
- The bottom segment have designed base plates and strengthening gussets as per IS 2062 and IS 226
- Vandal resistant, weather proof lockable access door at the mast base for parts like Winch, electrical Motor, internal Trailing Cable, Control Switch
- LM6 alloy pulley system with special self-lubricated bush-bearings on SS shafts
- Wire-ropes (GI or SS) of required lengths are with copper alloy talurits and steel thimbles for ease of assembly
- Heavy duty single/double drum WINCH, powered ELECTRIC MOTOR
- EPR/PCP sheathed copper trailing cable with plug-socket arrangement designed (Optional Telecom and Power Cable combination and arrangement available)



- Quality accessories viz. Foundation bolts, anchor plates, etc by TRANSRAIL ensures safe installation
- Specially designed additional accessories used to avoid entanglement between wire ropes and cables

Applications:

- Exterior Areas
- Security Lighting
- Airport Apron Lighting
- Sea Port Lighting
- Container & Railway Yards,
- METRO Depots, CAR Parking
- City Junctions & Flyovers on
- Highways & Expressways, etc

LATCHING SYSTEM FEATURES

- Docking and self locking system of Lantern Carriage with Flood lights on HIGH MAST TOP
- Centering System ensures smooth raising and lowering of Flood light Lantern Carriage assembly without jerks, elimination of hanging of Lantern Carriage with Flood lights on HIGH MAST TOP and slippage/snapping of wire ropes post installation
- NO sway and other movements of Flood light Lantern Carriage post installation due to WIND
- Increased performance life of mechanical parts i.e WIRE ROPES and WINCH due to lower material fatigue, wear and tear
- Lower and reduced need for maintenance cost for installed High Mast lighting system

NON INTEGRAL POWER TOOL

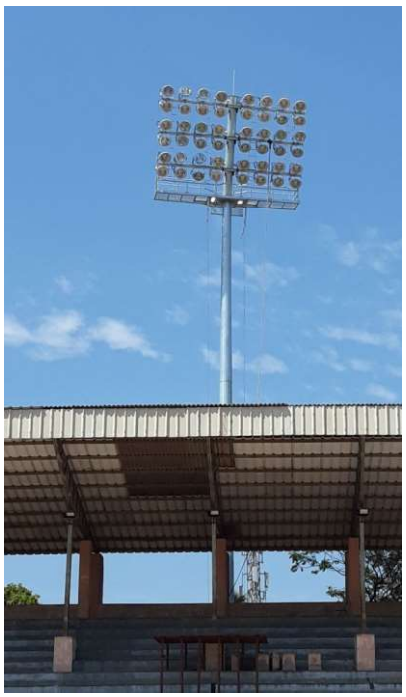
- Motorized hand held or trolley mounted power tool for raising and lowering of HIGH MAST lantern carriage
- Elimination of individual electric Motors inside each HIGH MASTS
- Ideally suited for installations having large number of HIGH MASTS like Ports, Airports, Tank farms and other large open area lighting

STADIUM LIGHTING MASTS

TRANSRAIL Structural and Design teams have domain knowledge, expertise and decades professional experience for Standard Monopole SPORTS LIGHTING MASTS and custom designs to integrate with Stadium Architecture is the hall mark of TRANSRAIL SPORTS LIGHTING HIGH MAST systems for Small, Medium size Sports field and Professional Sports Stadium and Complexes

FEATURES

- Mast sections-heavy duty type, Polygonal hot dip galvanized, with stress fit or flange plate design up to **65m**
- Masts are fabricated from the best quality HR Coils conforming to BS EN 10025 and customer specifications and structural design meeting IS 875 pt III 2015, Tr7, PLG 07 and International design standards
- HR Coils are uncoiled, cold cut and sheared by CNC machines for accuracy and no stress in the plate
- Fabricated mast sections are single dip hot dip galvanized in a 14.3m galvanizing bath for galvanization thickness as per BS EN ISO 1461 or customer specification



HEAD FRAME

- Raising lowering, fixed straight/tilted with operator platform for Sports Light installations as per Lighting design

MAINTENANCE ACCESS OPTIONS

- Step bolt arrangement for Mast heights up to 15m
- Monkey ladders with safety cage up to 30m
- Motorized Man rider carriage lift Indian and Imported design up to 70m

Contact TRANSRAIL representative for technical design and project support

FLAG MAST

- Flag masts are sign of national pride and identity and TRANSRAIL has a complete system offering up to 70m (higher heights on request)
- Typical flag mast consists of Mast, raising and lowering arrangement, National Flag, LED flood lights for night time flag Illumination
- Flag mast can be installed on standard foundation or Concrete piles to ensure shorter installation time and enable easier restoration of the area
- Structural design comply to PLG 07/ANSI/NAAMM FP1001-07/IS 800/ IS 875 and customized to projects specifications and requirements

RAILWAY & METRO OVER HEAD LINE STRUCTURES

- TRANSRAIL inhouse capabilties and expertise in developing pre-engineered and fabricated hot dip galvanized customized railway power line Structures and Portals is a good replacement of imported systems

- Use globally accepted design Softwares viz. PLS_Pole, PLS_CADD, STAAD PRO CE and inhouse developed calculation and validation tools adopting design procedure to RDSO compliant, BSEN 50119, other national and international codes and Calculation of wind pressure IS 875 Part 3 and other related international standards

METRO PORTALS

- Conical tubular Portal structures are Sleek in appearance, aerodynamic in design with no human reach on TOP of the PORTALS, Resting and nesting of Birds not possible

- Small footprint of conical Tubular portals w.r.t LATTICE design ideal for BRIDGES and ELEVATED Railway/METRO lines

- Vertical Conical Pole (Mast) manufactured using high tensile sheets of ASTM A572-Gr.65 or Equivalent material grade (Yield Strength-450MPa) having single longitudinal weld using specially developed in house fabrication techniques

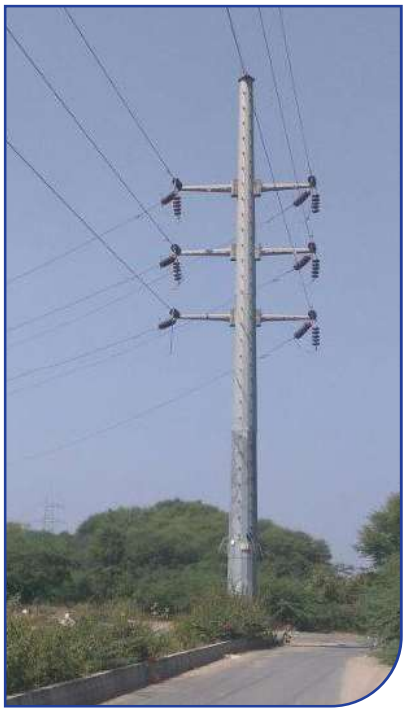
- Precision design and engineering for Boom of Portal manufacture of sufficient material thickness ensure perfect fitment, meeting critical design loads and other project requirements of Railway / Metro over head line requirements

RAILWAY OVER HEAD LINE STRUCTURES

- Standard LATTICE GIRDER Designs as per IS 800:2007 for Angles and Bracing with material specifications as per IS 2062, hot dip Galvanized of required heights and booms are fabricated to meet users and project requirements

TRANSMISSION & DISTRIBUTION MONOPOLES

Product range includes Low voltage, Medium voltage upto 33kV and High voltage up to 220kV (higher ratings on request)



FEATURES AND ADVANTAGES

- Consists of hot dip galvanized Polygonal continuously tapered cross sections having polygonal cross arms, with Longitudinal welding
- Structures fabricated in Polygonal cross sections continuously tapered available in many sections upto 55m. Section assembly by means of stress fit telescopic joints or flanged plate arrangement.
- Designs achieved with reduced and lower base makes it ideal for power transmission in URBAN and INDUSTRIAL applications with improved flexibility in power line routing
- Quick and easy installation at site
- TRANSRAIL Structural design team use globally accepted design Softwares viz. PLS_Pole, PLS_CADD, STAAD PRO CE and inhouse developed calculation and validation tools adopting Design procedure to CEI/IEC 60826, ASCE 48-11, other national and international codes and Calculation of wind pressure IS 802 Part 3 – 1987 and other related international standards

In house Structural Design and NABL certified Testing facility

TELECOM ANTENNA MONOPOLES

- Telecommunications hot dip galvanized monopoles are alternative to conventional telecom towers and widely aodpted and used in GSM/Microwave communication antenna
- Structural design comply to ANSI/TIA -222-G and customized to projects specifications and requirements

TRAFFIC SIGNAL POLES

- Hot dip galvanized poles in round, octagonal, 16 to 20 sided cross sections with extended bracket or Cantilever design arms to accommodate needs of junctions, intersections and through traffic on Minor, Major and Highways roads are ideal choice for meetings today's ever growing traffic needs
- Manufactured and built to the exact specifications of local bodies and traffic department needs, easy to install SIGNAL LIGHTS with optional provision for IOT and Smart City devices
- Structural design comply to AASHTO/IS 800/IS 875 and customized to projects specifications and requirements

SIGNAGE GANTRIES

- Gantries and cantilever structures for signages can be designed, fabricated & installed as per the requirement of the client. These structures are designed by our structural engineer and made of flanged, high tensile galvanized polygonal pole sections bolted together giving a high quality aesthetic view and very high durability over other type of structures. TRANSRAIL LIGHTING has designed, manufactured, supplied and installed one of the largest gantry (110 m) in India.
- Structural design comply to AASHTO/IS 800/IS 875 and customized to projects specifications and requirements

SURVEILLANCE/CCTV POLES

- Security and surveillance poles are precisely designed and fabricated poles meeting stringent standards as performance of Cameras and other surveillance depends on the deflection criteria and flexibility provided on these poles. They are generally used in areas that require safety and monitoring of a certain location or position. Standard pole heights are 4.0m to 15.0m depending on customer's requirements.
- TRANSRAIL capabilities also exists in special designs for Security lights and Defense installations
- Structural design comply to PLG 07/IS 800/IS 875 and customized to projects specifications and requirements

GI ENGINEERED STRUCTURES

- Our structural engineered welding line is capable of taking up custom made jobs which require accurate engineering, high quality galvanization and testing. GI structures like flare stacks, solar-panel structures etc. can be undertaken by our capable team on a design, engineering, manufacturing and supply basis. Our sales representatives will be happy to contact you for any enquiries.

SUNDRY GALVANISATION

- Our world class galvanization plant has 14.3m galvanising bath with automated PID temperature controllers, fluxing control and high velocity burners. Quenching operation is done at automatically controlled temperatures with special dichromatic solution. Pretreatment is done in 7 (+3) tanks of 14.3m length with automated maintenance of ph levels. Specialised forced cooled drying oven is used to ensure good finish.

CUSTOMERS-INFRA, EPC, O&G, UTILITIES, RAILWAYS, INDUSTRIES, PORTS, SPORTS

CORPORATE OFFICE

Transrail Lighting Limited
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Tel: +91-22-6197 9600 | Fax: +91-22-6197 9666 | Email: enquiry@transraillighting.com | Web: www.transrail.in

MANUFACTURING UNIT

Silvassa Plant (Poles)
Survey No. 227/1, 227/2, 227/3, 227/4, 227/5, Khanvel, Talasari Road, Opp HPCL,
Kherdi Village, Silvassa - 396 230 .
Tel: +91-260 2641 666 | Fax: +91-260 2631 666