



## KALPATARU PROJECTS INTERNATIONAL LIMITED (Formerly Kalpataru Power Transmission Limited)

### Company Profile

#### 1. Company Profile:

Kalpataru Projects International Limited (KPIL) is one of the largest Engineering and Construction companies listed in India, with a diversified portfolio of projects worldwide, in Power Transmission & Distribution (T&D), Buildings & Factories, Water Supply & Irrigation, Railways, Oil & Gas Pipelines, Urban Mobility (Flyovers & Metro Rail), Highways and Airports in over 75+ countries.

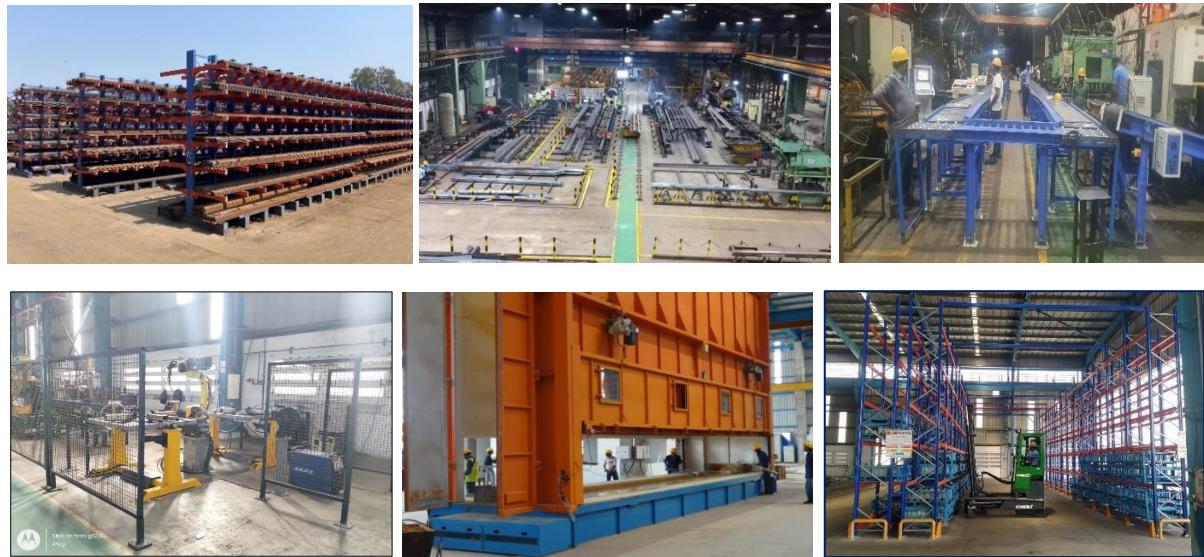


#### 2 Manufacturing Plants

KPIL has one of the largest tower fabrication capabilities in the world, giving it advantages in cost efficiency and economies of scale, with Quality and Reliability built in to the process. The Health, Safety & Environment initiatives of the Company have not only ensured safe

working atmosphere for the staff and workmen but also won accolades from both national and international clients as well as government bodies.

KPIL has two manufacturing plants with a total production capacity of 2,40,000 MT per annum in India, one located at Gandhinagar, Gujarat and second one at Raipur, Chhattisgarh.



## **2.1 Raipur Plant/Factory Profile:**

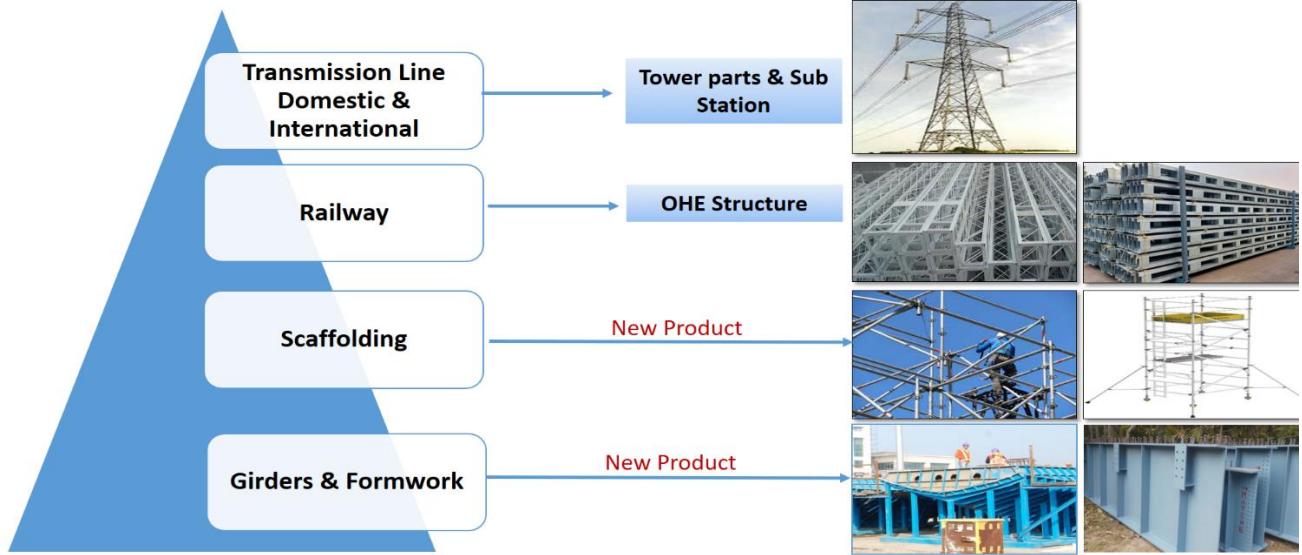
Raipur plant, located at Capital of Chhattisgarh state in India, is one of the largest transmission tower manufacturing plant in this Industry, including in-house galvanizing (and painting if specified,) with a capacity of 144000 MT per annum. The processes and systems are integrated through ERP and other digital mechanisms

Apart from Tower fabrication capability, Plant is now also capable of producing Conventional scaffolding, in its newly created State of the art line, with a capacity of 10000 MT per annum. This line is equipped with state-of-the-art welding machines, presses, sophisticated storage systems, automated conveyors and a world class painting system.

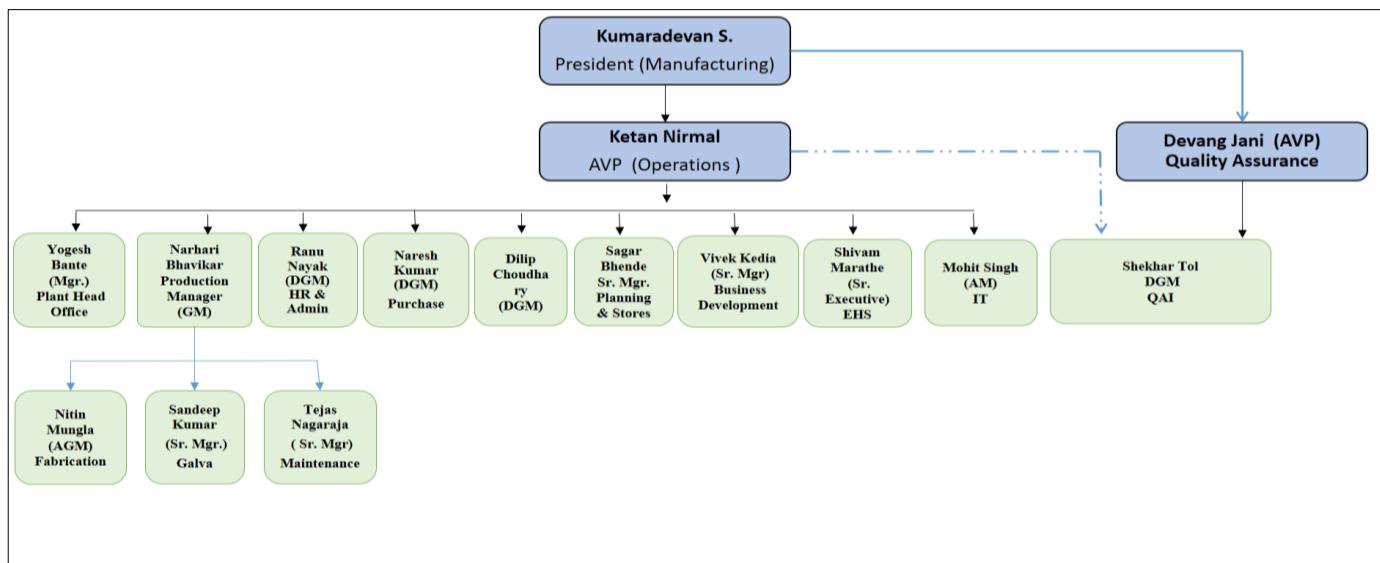
Plant has also now established new 'Heavy girders line' for fabricating Open web girders, composite girders etc required for railway and other similar projects. The line created now can provide output of 10000 MT per annum,

Plant has also created capability for designing and producing Customized formwork for Urban Infra projects like Pier, Pier caps, U girders, etc, again with a capacity 10000 MT per annum.





## 2.2 Raipur organization structure:-



## 2.3 Awards & Recognition - Raipur

Raipur manufacturing plant awarded the "Greentech Safety Excellence Award, 2020" from Greentech Foundation

**Silver Award** Integrated Manufacturing Excellence Initiative (IMexl) from Kaizen Hansei in 2020

**Confederation of Indian Industries (CII) Chhattisgarh SHE Award** for Environmental Responsibility, Concern for occupational health and safety of employees and society as whole in 2020-21

**Confederation of Indian Industries (CII) Award** for Hazardous Waste Management in 2021



**Gold Award** Integrated Manufacturing Excellence Initiative (IMexl) from Kaizen Hansei in 2021

**Gold Awards** Quality circle forum of India Bhilai chapter in 2021, 2022, 2023, 2024.

**Silver Awards** in National Lean competition from CII India in 2023.

**Certificate of Significant Achievement for TPM By CII Award** in Oct 2023

## **2.4 Background and Aim of TPM at Raipur Plant**

### **Background**

- Inefficient flow and Fast deterioration of production facilities, resulting consequently in lower equipment availability and Low production.
- Possible opportunities for safety and environmental related incidents
- Dynamic market conditions resulting in non uniform load in the plants thus enhancing cost

### **Aim**

- Potential to elevate the shop floor to excellence through implementation of formal TPM & Lean program
- To reduce losses and increase Improve Overall equipment effectiveness through a structured and comprehensive TPM program
- To adapt and grab new business opportunities, driving the growth and expansion of the plant

## **3. Key to our Manufacturing Excellence**

### **3.1 Need of TPM**

With the continuous increase in the manufacturing complexities consequent to entry in to new markets and customers globally, inefficiencies and losses in the manufacturing line were also on the increasing side. In order to counter these inefficiencies and losses, the need for a structured improvement programme was felt. A proven and Time tested approach became essential to align the company with the evolving business environment. With its inbuilt focus on reducing the losses through its 8 pillar approach, TPM became a conscious choice, for the plant to embrace.

### **3.2 Adopting TPM for Achieving Manufacturing Excellence**

Our company vision is to "To be the foremost global player in all the business verticals we operate in." To align with this vision, we recognize the critical need for TPM, as it will enable us to achieve Three zero's, Enhance employee capabilities, boost productivity, improve customer satisfaction.

### **3.3 TPM Policy and Kick Off**

In order to communicate effectively to all the stake holders about the new initiative and its objectives, management declared the TPM Policy.

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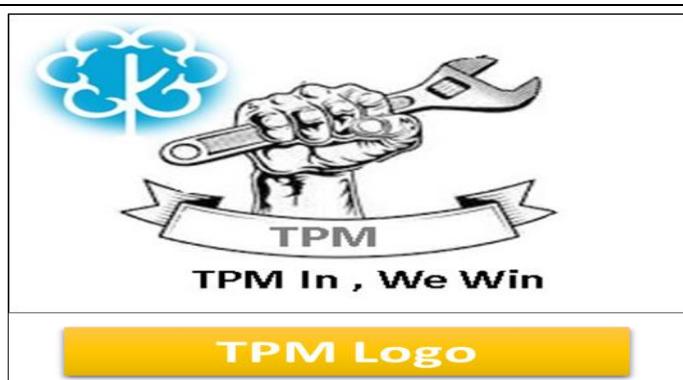
**TPM Policy**

We at Kalpataru Projects International Limited are committed to implement and sustain "Total Productive maintenance" by...

- Continual improvement of productivity and reduction in cost.
- Aiming zero defects, zero breakdown, zero accident & zero losses.
- Safe, Clean and pleasant working environment for high employee morale.
- Improve customer satisfaction by delivering quality product and service on time.
- Upgrading knowledge & skills of employee by training and encouraging kaizen activity.

**Kumaradevan Srinivasan**  
President  
(Manufacturing)

Date: 21.02.2022



**TPM Kick Off:** Based on the results achieved in MMM, the plant "kicked-off" the program. President of the division along with Plant head, other Management team members and Business partners officially kicked off the program for deployment of all eight pillars on 26<sup>th</sup> May 2022.



Achieving 'Optimal Production system'—with Zero breakdowns, Zero defects, and Zero harm—appeared like an unattainable goal earlier. However, the Total Productive Maintenance (TPM) approach is steadily bringing our plant's vision closer to reality. By deeply understanding and embracing TPM in its true spirit, and by consistently applying its principles in our daily operations, we've seen substantial improvements in our work culture, system orientation, analytical mind set, and flexibility.

#### Key outcomes from implementing TPM include:

- Enhanced Teamwork:** Fostering collaboration across all levels of the organization, from top management to frontline employees.
- Improved Machine Reliability:** Ensuring that machines consistently perform at high reliability and efficiency.
- Maximized Machine Availability:** Reducing downtime and eliminating major losses, as defined by TPM principles, to increase overall equipment effectiveness.
- Boosted Employee Morale:** Strengthening the engagement and morale of team members, particularly those on the frontline.
- Operator Empowerment:** Providing TPM training and support to empower operators to take ownership of and pride in maintaining their equipment.
- Focus on Self-Development:** Offering ongoing training to promote continuous learning and personal growth among our employees.
- Leadership Development:** Identifying and nurturing future leaders through dedicated leadership development programs.

Through TPM, we are making continuous stride towards a culture of excellence, where operational performance is optimized, and every team member contributes to our collective success.

**Below are the tangible benefits achieved after implementation of TPM –**

<b><u>TPM Award Assessment Achievement Sheet</u></b>				
Company & plant name	Kalpataru Projects International Limited - Raipur Plant			
TPM Slogan/Objectives	TPM In, we Win			
Category	Index	Unit	BM (TPM Started or last time awarded)	Actual Status
		Enter the year →		FY 21-22 TPM Started Upto Nov-24
S	Number of work-related accidents requiring days off work	Cases/ year	0	0
S	Number of work-related accidents not requiring days off work	Cases/ year	34	8
P	Productivity (Tower & Railways)	MT/MAN/MONTH	8.69	9.47
P	OEE	%	58%	71%
P	Availability	%	78%	85%
P	Performance Rate	%	75%	84%
P	Quality Products Rate	%	99.80%	99.84%
P	Number of breakdowns	Breakdowns/ year	4068	1445
P	MTBF	Hour	204.81	378.64
P	MTTR	Hour	1.23	1.03
Q	Number of customer complaints	Number/year	9	3
Q	In-line defect rate (scrap)	%	0.152%	0.135%
Q	In-line defect rate (rework)	%	0.056%	0.044%
C	Cost index	Cost/MT	7807	7739
D	Production Lead time	Days	14	13
D	Delivery performance	%	77	87
S	Frequency rate	Number of occupational accidents with leave for 1 000 000 worked hours	0	0
M	Number of Employee Suggestions	Number/year	175	381