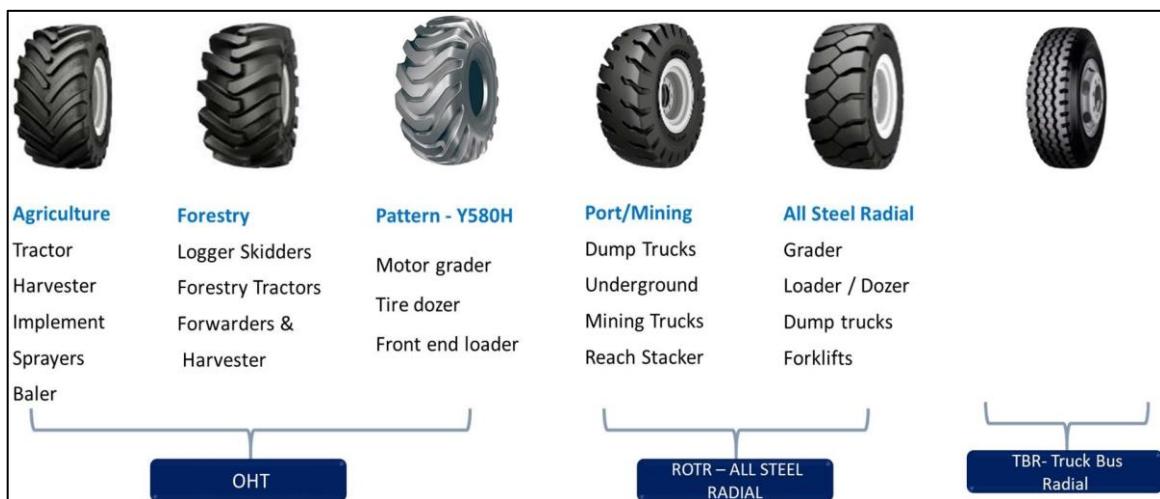


## 1. Company, Plant / Factory Profile:

ATC Tires Private Ltd is a premium and reputed company engaged in design, manufacturing, sales & service of Off- Highway Tires (OHT) used in Agriculture, Mining & Forestry segments. It is a wholly owned company of the Yokohama Rubber Company Ltd (YRC) of Japan. YRC has range of business interests ranging from Passenger Car Tires, Off Highway Tires, and other rubber industrial products. It is a large diversified group having Sales Revenue of 1016285 million Japanese Yen with more than 25000 employees worldwide.

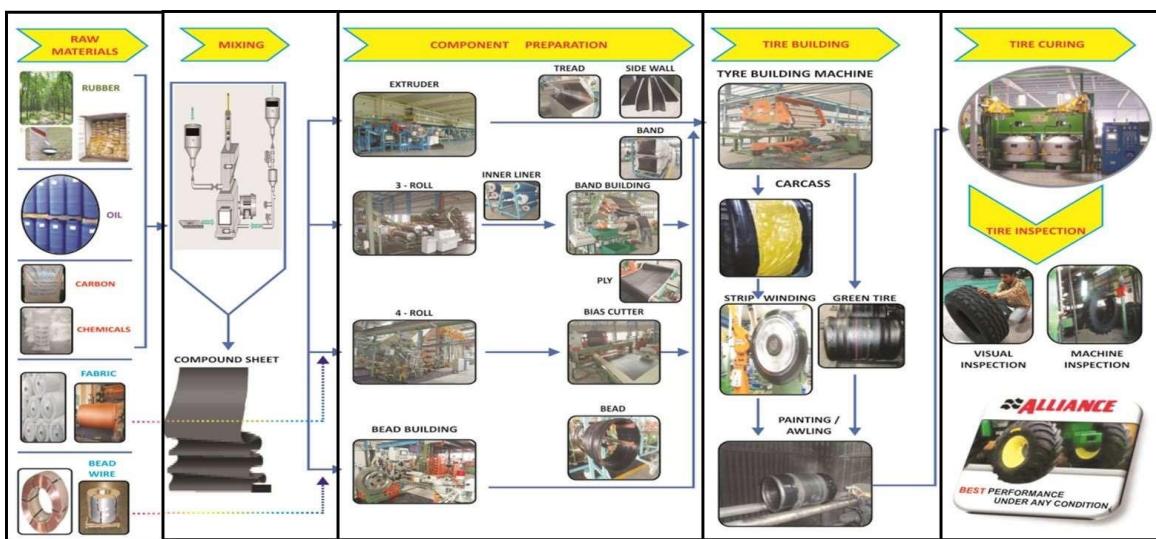
ATC Tires Private Ltd has 3 manufacturing locations in India viz Tirunelveli in Tamil Nadu, Dahej in Gujarat, Visakhapatnam in Andhra Pradesh. Following are the product portfolio:



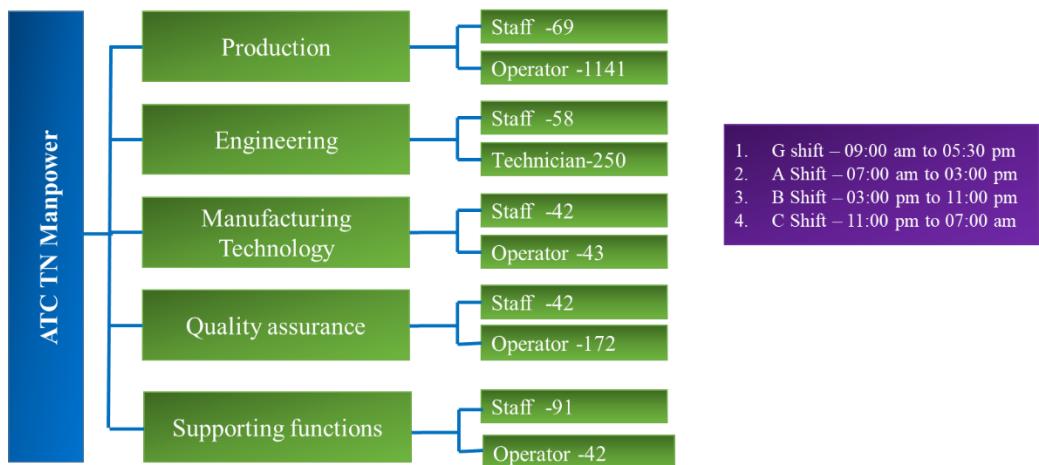
**Note:** Above illustrations are not exhaustive but indicative. There are few more tire products that are not shown above.

The TN Plant is located in Tirunelveli District, Tamil Nadu, in SIPCOT Special Economic Zone. Strategically located; The plant 60 km from Tuticorin port and close (150 km) to the key rubber growing regions (Kerala) in India. The facility produces pneumatic radial tires in agriculture, industrial segments and bias tires in OTR, forestry segments and solid tires. Plant has a Land Size of Square Meter 460K of that 234K Area Square Meter is covered. Current capacity of TN Plant is 99,763 tons p.a. with 1950 Employees.

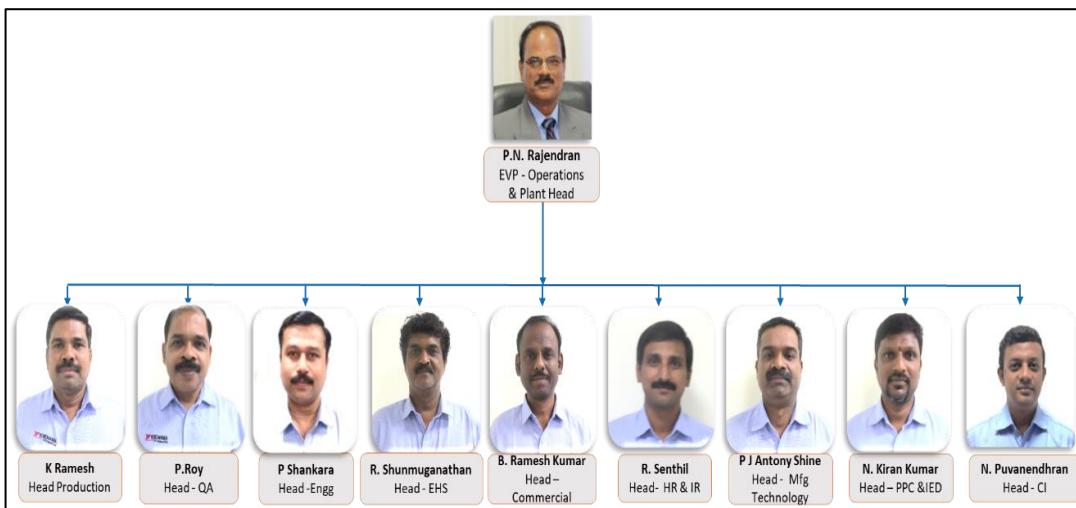
Tires manufacturing process is a combination of Bulk Process manufacturing in upstream stock preparation and is discreet manufacturing downstream. Components of Tires are manufactured and thereafter assembled in Tire Building machines. Detailed process is as follows:



Following is the staffing structure at ATC TN plant:



Management organization for ATC TN plant is as follows:





## **2. Milestone on the journey of manufacturing excellence:**

Yokohama Off-Highway Tires ranks among top three global leaders in Off-Highway tire segment.

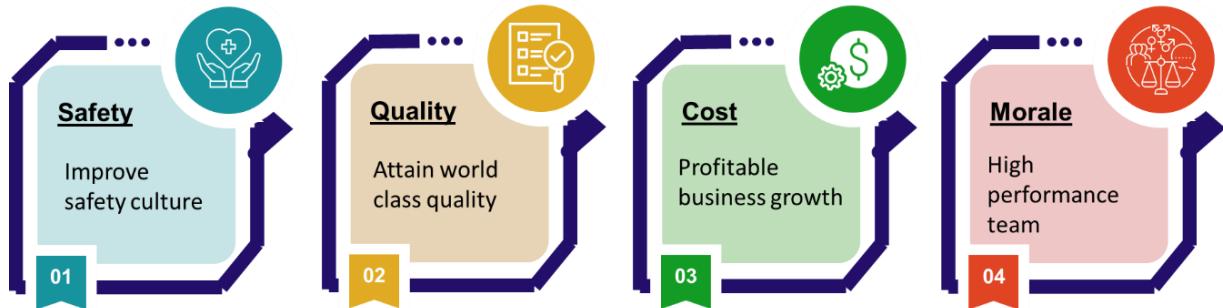


We have adopted TPM approach to attain world class manufacturing standards. Our major focus is in following areas to enable us to attain our ambition:

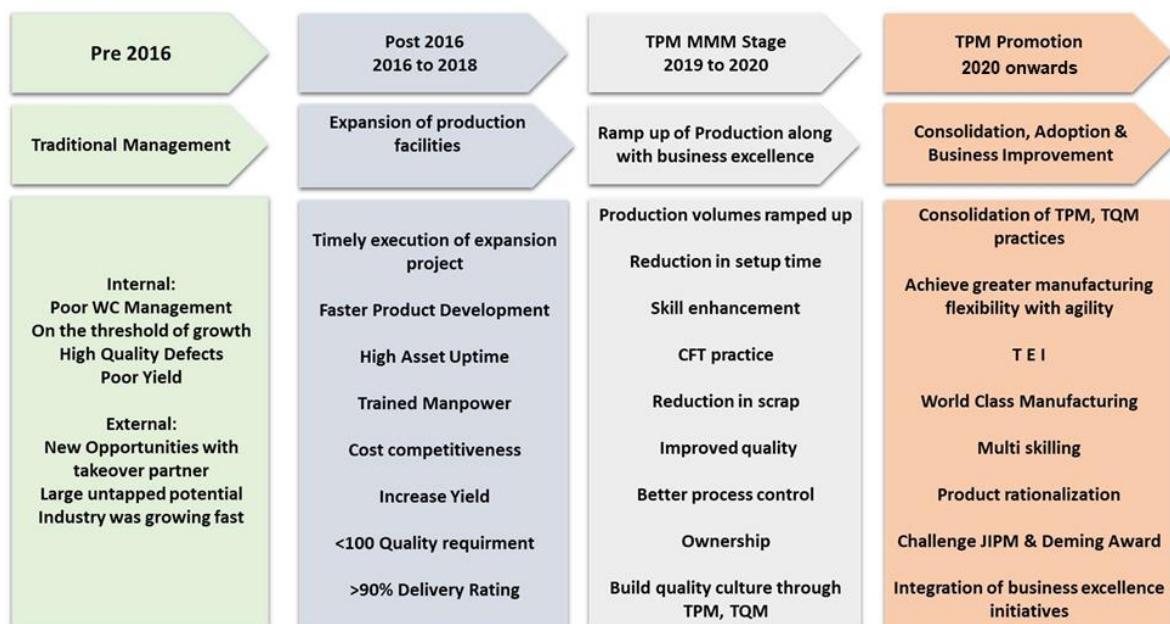
1. OHT business is highly quality sensitive, hence our product quality must be of the highest order.
2. The nature of our business is such that we have multiple SKU's & production runs are relatively of small lot size. Hence we have multiple Set-up Changeovers & losses related to it. Loss elimination is key to improve our internal efficiencies which can be addressed through Kobetsu Kaizen pillar of TPM
3. We have a very young and energetic workforce, and we need to keep them engaged for optimum utilization & long term career progression. Hence providing a platform for innovation and continual improvement is required which was possible through TPM.
4. Cost competitiveness is essential ingredient in winning amongst competition. Hence creating an atmosphere of innovation and introducing new improved processes and new products is important. Through KK & DM pillar of TPM, it is possible.
5. Plant & machinery get deteriorated leading to breakdowns, accidents & defects. Maintaining in basic condition will be possible through Jishu Hozen pillar hence TPM is essential for ATC TN plant.



From the above business requirements, following are our key management indices:



At various stages of organization maturity, we have rolled out right manufacturing excellence initiatives in phased manner. 2019 to 2020, we practiced TPM on Model Machines and then from early 2020 we have commenced plant wide TPM activities for all 8 pillars.



### 3. Benefits achieved till date:

Tangible:

- Safety – Around 88% reduction in Major accident since baseline
- Breakdown - 30% reduction since baseline
- Plant OEE – 16 % since baseline
- Delivery Performance – 19% since baseline
- Customer complaint elimination - 93% reduction since baseline
- Employee Morale – Kaizen increase by 103 %



Intangible:

- Better product appearance
- Improved employee engagement
- Better adherence to systems & SOP's by operators
- Improved stakeholder relationships
- Better & safe workplace environment
- Improved communication flow

#### **4. Key activities of our manufacturing excellence:**

While we are implementing step wise TPM activities, we aim to challenge TPM Excellence Award and further challenge for JIPM Award for Consistent TPM Commitment & further to Special Award by 2028. To go to these levels, we intend to further improve through following initiatives:

1. Digitization of all TPM processes for better data management
2. Create pool of skilled worker – teachers to percolate TPM concepts to last employee
3. Develop DOJO for more skilled operations to enhance skill levels
4. Further develop multi – skilling amongst operators such that they can work one process up as well as down
5. Develop problem solving approach through use of advanced tools like PM analysis, Makigami Analysis, VSM, Process Point Analysis, advanced statistical tools
6. Start Kaizen activity for improving flow of manufacturing processes through VSM
7. Benchmark our excellence processes vis-à-vis best in class TPM practices in other companies and develop roadmap to improve their levels
8. Complete Step 4, 5 and move to Step 6 & 7 of JH.
9. Roll out QFD approach under DM pillar through VOC in developing new products



## 5. Achievement Sheet:

TPM Award Assessment Achievement Sheet					
Company & plant name	ATC Tires Private Limited, Tirunelveli, Tamil Nadu				
TPM Slogan/Objectives	TPM-Innovation beyond Experience				
▼ Please fill in the range of data you are collecting ▼					
Category	Index	Unit	Kick off	Actual Status	Target
	Enter the year →		2020	2024	2025
S	Number of work-related accidents requiring days off work	Cases/ year	8	1	0
S	Number of work-related accidents not requiring days off work	Cases/ year	60	47	35
P	Productivity for main products	Parts/Operator hours	0.21	0.21	0.26
P	OEE (or Overall Plant Efficiency)	%	72.4	80.3	88.4
P	Availability	%	85.1	89.9	94
P	Performance Rate	%	93.5	95.7	99
P	Quality Products Rate	%	78.3	90.88	95
P	Number of breakdowns	Breakdowns/ year	1780	1250	1100
P	MTBF	Hour	280	480	500
P	MTTR	Hour	1.89	1.1	1.05
Q	Number of customer complaints	Number/year	13	1	0
Q	In-line defect rate (scrap)	%	2.08	0.62	0.5
Q	In-line defect rate (rework)	%	21.7	9.12	5
C	Cost index	Cost/Unit Cost/Kilogram	27544	35722	32444
D	Production Lead time	Days	2.13	2.02	1.88
D	Delivery performance	%	80	92	95
S	Frequency rate	Number of occupational accidents with leave for 1 000 000 worked hours	1.19	0.17	0
M	Number of Employee Suggestions	Number/year	2488	5044	6136

Others:

### 1. Do you have a program where all employees can participate in TPM?

We have created multiple forums where all employees are encouraged to participate in TPM activities through TPM Circles. We have around 94 Circles across the plant where all employees participate in TPM. Various avenues like TPM Quiz, TPM Circle Competition, OPL Competition, Why Why competition, Kaizen Competition, are held which motivate employees.

### 2. Do you have a program allowing employees to be recognized for their achievements?

Yes, we have a detailed manual for reward and recognition, which has around 29 avenues for employees to participate as group as well as individual. Which comprises of Individual awards such as Best Employee of the year (FY), Best Safety Ambassador FY, Best Quality Ambassador FY, Best One Point Lesson developed, Best Suggestion Generated and implemented etc. Similarly to encourage small group / Cross Function Team we have avenues such as Best TPM Circle



Competition every quarter, Internal QCC Competition once in 6 month, Kaizen Competition in the name of Monthly Kaizen Kyoso, Best 5S Zone for the quarter. All the avenues have pre-defined evaluation criteria to judge to reward accordingly.

We participate in State level, National Level and International level competitions / conventions conducted by various forums such as CII - TPM Club India, QCFI, ABK-AOTS from 2018 onwards we are participating in both modes virtual and physical. We have received 190 Awards in external competitions between 2021 to till Nov'24 participated for various avenues such as TPM Circle competition, OPL Competition, Pillar competition, QC Circle competition, Kaizen competition, SMED, POKA – YOKE competition, 5S competitions etc.

**3. Are top management involved in the audit/verification of completion of TPM pillar steps?**

In JH, all step 3<sup>rd</sup> level audit was certified by Plant Head along with Pillar Chairmen & TPM Secretariat. Daily Management Gemba Rounds are conducted by all Leadership team in various circles for verification and motivation for Circle activities. Top Management reviews Pillar level activities & overall program in TPM Steering Committee meeting

**4. Are all pillar activity boards displayed and reviewed by top management?**

Every Circle has TPM Activity Board which are used for reviewing circle performance on daily basis. Pillar Chairmen reviews TPM Pillar Activity at Circle level on these boards at a frequency of once every week. Plant Head reviews monthly all KMI at Obeya Room.