

BUILDING ENGINES BETTER

Tata Motors adopts smarter assembly

IMPACT

- Kicked off digitalisation of plant
- Ensured complete data traceability
- Achieved a quality product



ABOUT THE CUSTOMER

Part of the Tata Group, Tata Motors is a leading global automobile manufacturer of cars, utility vehicles, pick-ups, trucks and buses. Tata Motors is India's market leader in commercial vehicles and among the top three in the passenger vehicles market. Tata prioritises human centricity with technological prowess and engineering excellence to make cargo and passenger mobility safer, smarter and greener.

Because machine-related mechanical poka-yokes (safeguards) were not in place, some station operations were skipped before passing the part on to subsequent stations, leading to incorrect assembly down the line. At the quality gate, when a defect was identified, it led to line stoppages and high recovery time, reducing overall equipment effectiveness (OEE) and first time through rates (FTTR).

THE PROBLEM

At its manufacturing facility in Pune, vehicles and engines were still being manually assembled the traditional way. Therefore, process security and data traceability were two of the major challenges the customer was facing. Standard operating procedures weren't always followed, especially by operators performing manual operations.

CUSTOMER GOALS

Tata Motors wanted to:

- Start their digitalisation journey
- Make the Pune plant smarter
- Achieve a quality product
- Ensure complete data traceability for the whole plant



SMARTER ASSEMBLY

Implementing the ODIN Workstation solution has made Tata Motors' engine assembly line smarter, with all the required mechanical poka-yokes and safety systems provided.

This digital solution provides step-by-step, visual guidance to ensure that operators follow the correct assembly sequence.

Because it does not allow the part to move on to subsequent stations if steps have been skipped or incorrectly performed, it ensures complete process security and compliance in building a safety critical product.

Full data traceability for every product that comes off the line also means that if there is a problem, it can be rapidly traced and solved with minimal downtime.

A real-time analysis of the overall line also allows the production management team to see where any problem areas may lie and take corrective action.

MEASURING SUCCESS

- 100% traceability achieved
- 20% reduction in defects

CONCLUSION

Jendamarck's flagship Industry 4.0 solution, ODIN Workstation, has helped Tata Motors in Pune to start their digitalisation journey.

As both a worker guidance and process security solution, with deep hardware integration capabilities, it ensures that Tata Motors delivers a well-built, quality end-product with full data traceability for added peace of mind.



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