



India

An Indian multi-national steel making company based in Jamshedpur, Jharkhand, and headquartered in Mumbai. Tata Steel is among the top steel producing companies worldwide, and the second largest in India, with an annual crude steel capacity of 34 million tonnes per annum.



2023
Business Improvement
Award Winner

PROBLEM

Fuel consumption within the truck operator cohort was recorded at up to 40% over target, with high unloading engine RPM. Mileage (Km/Liter) was being affected by operators driving at high speeds and incorrect retarder use, causing premature wear to trucks.

Shovel operators were recording fill factors as low as 70%, with high load times of up to 60 seconds. Significant wastage was noted within the 75th percentile ROM time.

SOLUTION

Immersive Technologies Managed Services worked with site training staff to better integrate simulation with site systems and processes, and develop standardized assessments. Shovel targets included improved instantaneous and production dig rates, cycle times and bucket fill factors. Truck training goals included correct unloading engine RPM, accelerator pedal position and retarder use.

Operators were benchmarked at project commencement to provide baseline data. All operators then received 3 hours of

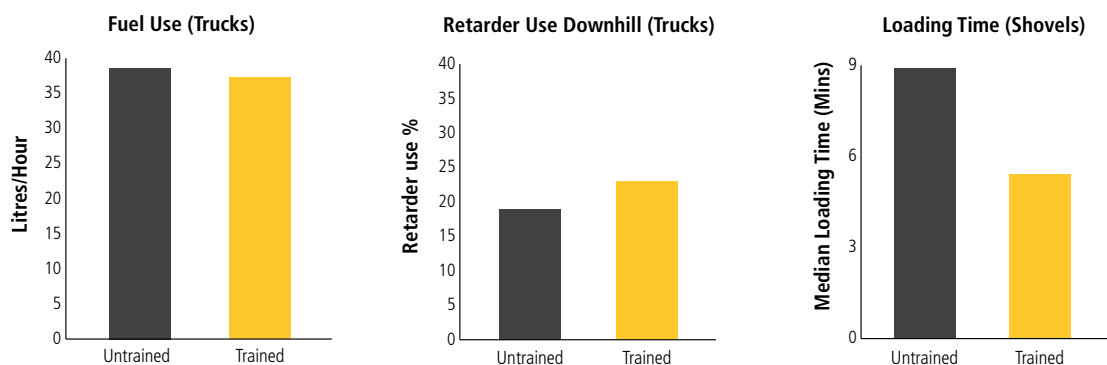
targeted simulator training with site training staff. Operators were then reassessed against project targets.

RESULTS

- 3.63% reduction in fuel use, equivalent to USD 248,550 saving per annum
- 4% increase in overall retarder utilization
- 39.33% reduction in mean loading times (shovels)
- Reduced variability among truck operators

PRODUCTS IN USE

- PRO3-B Advanced Equipment Simulator
- Conversion Kit® for Hitachi EX1200-5D Excavators
- Conversion Kit for Komatsu HD785-7 Trucks
- Managed Services
- Continuous Improvement Projects



"We saw reductions in loading time and now the excavators are more productive hence the diesel consumption per load cycle was reduced. Because of the success of this project, Tata Steel is replicating the Immersive Continuous Improvement Program in other iron ore mines also."

Atul Kumar Bhatnagar
General Manager, Ore Mines and Quarries, Tata Steel

