

Tata Steel – Delivering Real Results in Training

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Tata Steel's Noamundi Iron Mine in Jharkhand, India recently achieved significant load and haul efficiencies from a continuous improvement project supported by Immersive Technologies and Vareli Tecnac (VTPL). The project objectives stemmed from analysis of Wenco Fleet Management System (FMS) data which identified operational trends linked to specific operator behaviors. The analysis also showed variability in how operators were performing tasks, especially around machine care, productivity and fuel efficiency.

To reduce the performance variability, a targeted workforce upskilling program was conducted at Tata's training center located at Joda East Iron Mine. The simulator training was conducted by an [Immersive Technologies embedded trainer](#) with support from VTPL, and focused on a [Komatsu HD785-7 truck](#) and [Hitachi EX1200-5D Face Shovel](#). To measure the effectiveness of the solution, mining data was measured before and after training.

Quantified Operational Improvements:

Hitachi EX1200-5D

- **In-Pit (Real Results)**
 - » 40% improvement in mean loading time with an estimated 5 liters of High-Speed Diesel (HSD) saved per loading cycle
- **Simulator Results**
 - » Average Loading Time per Truck value improved by 2%
 - » Instantaneous Dig Rate average improved by 6%
 - » Average Fill Factor improved by 7%
 - » Overall operator competency improved by 57%

Komatsu HD785-7

- **In-Pit (Real Results)**: 4% fuel consumption improvement.
- **Simulator Results**: Operator Fuel Efficiency behaviors improved by 79%.



Video: **Atul Kumar Bhatnagar**, General Manager - Ore Mine and Quarries – TATA Steel

<https://www.youtube.com/watch?v=HRsETNW3IYE>



Simulator for Hitachi EX1200-5D Hydraulic Shovels

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About Tata Steel

Tata Steel group is among the top global steel companies with an annual crude steel capacity of 34 million tons per annum. It is one of the world's most geographically diverse steel producers, with operations and commercial presence across the world. The group recorded a consolidated turnover of US \$21.06 billion in the financial year ending March 31, 2021.

About Vareli Tecnac & Immersive Technologies' Partnership:

Vareli Tecnac (VTPL) formed a partnership with Immersive Technologies in July 2017 to market and support Immersive Technologies in India. VTPL is a leading system integrator providing a single window solution in the mining industry from mine planning, production optimization, energy optimization, safety, and mobility alongside open pit mining technology.

About Immersive Technologies

Immersive Technologies is the world's largest, proven and tested supplier of surface and underground Advanced Equipment Simulators to the global mining industry. The company has achieved this unique position by focusing on its mission to increase Customer profitability by optimizing the safety and productivity of their operators. Immersive Technologies' Advanced Equipment Simulators are helping hundreds of mining companies around the world to increase their equipment operators' safety and site profitability through effective simulation training.

With advanced simulator modules deployed in 47 countries, Immersive Technologies is dedicated to provide outstanding service. To deliver on this commitment the company has customer sales and support offices located close to its customers in Perth and Brisbane Australia, Salt Lake City and Tucson USA, Fort McMurray, Vancouver Canada, Estado de México Mexico, Lima Peru, Santiago Chile, Belo Horizonte Brazil, Bochum Germany, Johannesburg South Africa, Jakarta Indonesia, Kolkata India and Moscow Russia.

Immersive has the global mining experience, innovative technology, product range, industry endorsement, proven support commitment and industry vision to partner with you to ensure your simulator training solution delivers the significant results you expect.

For more information and associated media please contact:

Andres Arevalo

Global Marketing Promotions Manager

Immersive Technologies

aarevalo@ImmersiveTechnologies.com | Tel: +61 (8) 9347 9011

www.ImmersiveTechnologies.com