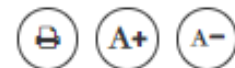


Vedanta invests in automation to stay relevant in the metal industry

The multi-billion group is betting big on Industry 4.0 and digital technologies to stay ahead of the game.

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Avijit Deb, CDO, Vedanta Ltd - Aluminium & Power Business

As the global population grows, demand for metals continues to rise. Aluminium is the second most important metal in the world and the [metal industry](#) plans to invest substantially in digital operation solutions over the next five years across the globe. This investment is translating into an increasingly advanced level of [digitalization](#) and integration, resulting in substantial operational cost savings, safety, and sustainability of the business as well as social inclusiveness.

Apart from [digital technologies](#), companies in the metal industry are relying on [Industry 4.0](#). The technology allows manufacturing heightened connectivity and [automation](#) to add value to operations and products and to develop new kinds of offerings to address their markets, which is the need of the hour for the aluminium sector in India to sustain and re-invent itself.

[Vedanta Ltd - Aluminium & Power](#) is one of the India's largest Aluminum producers which can never go out of business and has to ensure operational continuity even during the lockdown. The company has put industry 4.0 and other automation technologies as a priority in their business tech strategy.

"We were already well into our journey of automating and digitizing our operations and the **pandemic** really accelerated the deployment and more importantly, adoption by users. Technology deployed at our plants links various stages of supply chain into a robust IT-enabled ecosystem. Our Industry 4.0 setup allows the manufacturing operations to gather and analyse data from across a wide range of activities and from partners, suppliers, collaborators, end-users and end-customers in ways that enable faster, more flexible processes to produce higher-quality output, sometimes highly customized at reduced costs," Avijit Deb, CDO, Vedanta Ltd - Aluminium & Power Business said.

The framework which includes cyber-physical systems (OT-IT), industrial internet of things (IIOT), cloud computing, cognitive computing, and artificial intelligence has moved from being a 'nice to have' or augmenting capability for the aluminium industry to something that is now vitally important for differentiation and is becoming a disruptive force. It is delivering supply chain agility, deeper process understanding, and higher production utilization.

The Aluminum producer is collaborating with premier educational institutes, global R&D organisations and start-up companies to incubate and co-develop Intelligent Automation and Industry 4.0 Solutions. It has developed technology Innovation Centres in the plants to democratize innovation across rank and file and fuel more initiatives across the organisation.

"The digitalization, integration and automation opportunities have enabled us to collaborate both internally and across value chains in ways that can provide a step-change in productivity as well as design and quality. And these are the opportunities that are increasingly important as our industry seeks to stay relevant as the era of digitally-connected smart infrastructure develops," Deb added.

Plant automation for operational efficiency and safety

The company has already embarked on the journey of Intelligent Automation and Digitalisation with a laser focus on cost optimisation, efficiency improvements and operations sustainability at best in class benchmarks.

"In these times, we are pushed to think of disruptive technology operational models and deployment agility for purposeful adoption. Intelligent Automation & Digitalisation is a way of life in Vedanta Aluminium & Power. Vedanta has been sustaining the plant operations due to its sustained investment in intelligent automation over the past 2-3 years with minimum manpower," Deb emphasised.

The plant operations' critical parameters are available second by second on mobile phones with deviation alerts. Collaboration platforms are now used to connect employees working from home, remote service providers and plant sites anytime. The collaboration platforms help employees to share video and image content and critical operation parameters with all the stakeholders for sustaining the operations 24x7.

Logistics Automation has enabled a totally paperless process from mine to plant and within the plants to capture all operational parameters ensuring there is minimum physical proximity. Temperature sensors and AI-enabled video-surveillance monitor all entry points. RFID sensors are installed at each operational point to capture critical parameters within the plant.

"Implementation of SAP & MES in plants process fully automated plant operations and enable visibility and decision making remotely. Thus our employees are able to maintain social distancing and while fulfilling their activities at the plant floors. Drones with cameras are used to keep close eye on the compliances of COVID 19," Deb said.

Data for health and safety

Currently, amid the pandemic also, the company has deployed a smart combination of high-end technology and in-house innovations to ensure health and safety of employees while maintaining continuity of business operations.

"We have established a digital Emergency Control & Command Center for monitoring movement inside plant premises, keeping a tab on collective health status at plant and township, and keeping employees and families updated with information and government guidelines as well as report medical emergencies or seek help. Telemedicine facility has been enabled in the Vedanta township-based hospital for patients to phone-in for consultation with doctors instead of physical visits. Additionally, a 24x7 medical helpline and home-delivery of medicines has also been initiated. A multi-level virtual war-room has been created to monitor the evolving COVID situation daily and take decisions accordingly," Deb highlighted.

Even to manage footfall and social distancing at township stores selling vegetables, milk, groceries etc., an online time slot-booking portal has been developed in-house to regulate the number of people and timings during which they can go to the neighborhood shops to buy essentials.

“The metal industry is at an inflection point and disruptive factors, like new processes and smarter technologies provide this sector the opportunity to change its course. Heightened connectivity and automation have given us the opportunity to not only add more value to our products, but more importantly, develop focused and customized products to cater to various target markets. We are looking forward to more technology investments and digital driven innovations which will add value to top and bottom lines of our business,” Deb said.