

MachineMax integral to Imerys' effort to reduce CO2 and fuel consumption



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Imerys had a challenge in gaining full visibility of their fleet, aware of this, Mining Director, Matthew Jones stated that; "We don't come from a history of having a strong mindset of data capture in our mine environments, so we're not giving ourselves the right information to challenge the way we're working so we're not really measuring. We are therefore not managing our operations as well as they could be." With no consolidated view of the fleet, it is often the case that equipment operates sub-optimally, resulting in unnecessary costs, project delays, and a detrimental impact on the environment. An

obvious solution for Imerys was to use live machine data to highlight inefficiencies, as and when they are happening, so that they can be actioned immediately.

"Before MachineMax we would have with each manufacturer or supplier a different telemetry system providing reports sometimes on a daily/ scheduled frequency. But never live and one thing that MachineMax has done is provide a portal where all information is presented in one screen in one place and one format. No matter who supplies the equipment or who it's made by." Alfie Jones – Mobile Plant Supervisor

Establishing the partnership in 2020, MachineMax embarked on an ambitious project to connect 100% of Imerys fleet across all their mines, with the main goals being efficiency and sustainability. Almost 2 years down the line, the project is paying dividends with significant savings and a reduction in carbon emissions.

The metrics providing the biggest initial impact for Imerys included utilisation, idling time and location. These metrics have been used to identify patterns in operational inefficiencies including: too much equipment onsite resulting in under-utilisation;

incorrect equipment used for the job resulting in lower productivity; ineffective site layout resulting in excessive idling and travelling, and suboptimal operator behaviour resulting in inefficient utilisation.

This was supported by Ed Buscombe – Mobile Plant Manager who said: “Benefits include a reduction in idling time which we really notice and that brings other benefits so reduced fuel burn which helps our CSR targets as well that it brings benefits for our CO2 emissions. So really some excellent benefits from the system.” Furthermore, they were able to measure a 3-10% reduction in CO2 across their sites for implementing the data brought from the MachineMax technology.

Working with Imerys, MachineMax has further developed ways to highlight idling periods of more than 5 minutes, focusing on the larger idling periods

first and identifying where and when they are happening in real time. This approach allows onsite teams to understand where there are bottlenecks, process inefficiencies and the biggest opportunities to improve.

In the future the data will allow Imerys to compare different OEM’s performance, identify anomalies which may suggest imminent equipment failure, highlight potential fuel theft, and identify opportunities to improve and quantify operator performance.

The mining industry can collectively benefit by implementing this simple and scalable approach to collecting and using machine data.

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