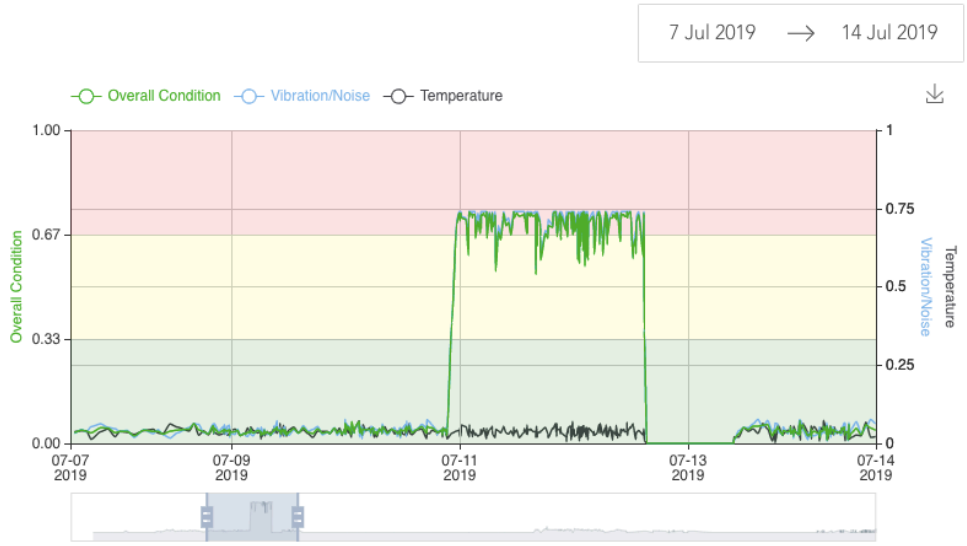
FITMACHINE SUPPORTS ONGOING RELIABILITY

CUSTOMER CASE STUDY
ALUMINA REFINERY



CUSTOMER OUTCOMES

INCREASING SAFETY

The deployment of FitMachine supports our customer's Zero fatalities and serious injuries policy as Condition Monitoring and Inspection personnel no longer need to enter the hazardous area around the pump to assess the condition of this equipment.

ALERT PREVENTS UNPLANNED DOWNTIME

The early warnings from the FitMachine sensors allowed the maintenance team to further investigate the reason behind the big increase in vibration and acoustics. If the MOVUS platform wasn't deployed at this time, the fault could have caused a critical breakdown and a production interruption during a busy period.

PROOF OF VALUE DISPLAYED WITHIN WEEKS

FitMachine detected condition degradation and sent an alert only two weeks after sensors were installed.

DATA-DRIVEN, FAST DECISION-MAKING

The FitMachine monitoring solution provided our customer with crucial historical and real-time condition data of their asset to support their decision of intervening and avoiding a catastrophic failure.

"We praise the recently-deployed technology and services from the MOVUS Customer Success team as helping to indicate early issues with our assets and reduce unplanned downtime during busy periods of the year. Now we are taking advantage of the FitMachine to better plan downtime and maintenance."

Reliability Director

MOVUS

ABOUT OUR CUSTOMER

AL

10
COUNTRIES

15,000+
EMPLOYEES

Founded in the late nineteenth century in the US, our customer is among the top 10 producers of aluminum and bauxite worldwide. It operates in 10 countries and employs over 15,000 people. Known for their values, our customer holds high standards of operational and ethical excellence.

CASE STUDY SNAPSHOT

- Our customer engaged our global partner ALS to deploy MOVUS FitMachine® sensors in one of their alumina refineries.
- In less than two weeks of asset performance monitoring, FitMachine detected high levels of vibration and acoustics on one of their slurry pumps.
- The early warning allowed the maintenance team to do some further testing and eventually diagnose a gland packing failure as the cause.
- FitMachine alert helped prevent unplanned downtime and keep maintenance team out of hazardous areas.

THE SCENARIO

FitMachine was deployed to monitor a number of different equipment including caustic liquor pumps that are critical to refinery operations.

Monitoring developing faults in the pumps is key to keep the plant running. The inspection and monitoring of these pumps are extremely hazardous, specially because gland leaks usually leave slippery slurry around the work area.

Gland failures cause hot, corrosive liquor to spray from the pump seals. Gland failures occur often with little or no warning, risking injury to personnel.

FITMACHINE® IN ACTION

FitMachine sensors were installed at our customer's refinery and gathered the assets performance baseline within a week through the (machine) learning process.

Three weeks later, FitMachine detected a rapid change in behaviour at one of the slurry pumps, with vibration and acoustic levels both increasing. Our Customer Success team immediately notified the maintenance planner, who welcomed the alert, continued monitoring the asset, and sent out a specialist to inspect the asset. No apparent abnormalities were found at that stage.

Within hours, the temperature began to increase, at which point the specialist returned and found a blown packing. Shortly after the pump was repaired and returned to normal operation.