Mining and Heavy Industry

Saving Time, Money and Lives with Distributed Fibre Optic Sensing





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LUNA Innovations

Luna Innovations is proud of our rich tradition of working in close collaboration with customers to develop the products that meet and exceed our clients' needs.

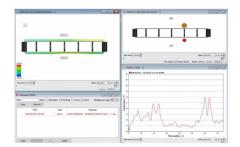




Conveyors

AIM System monitors and alerts to frictional heat throughout the entire conveyance, preventing Fires and Saving Lives. – **ZERO HARM**













Monitors temperature and vibration on drive equipment, preventing costly breakdowns. **– ZERO DOWN TIME**



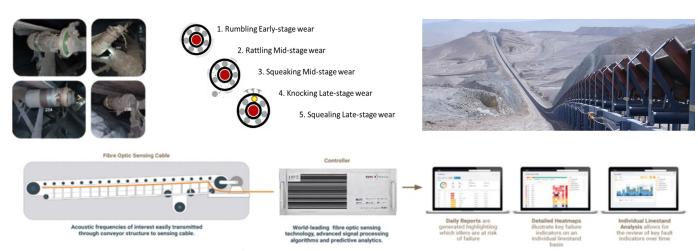






Monitors, diagnoses, tracks and reports on the progressive state of wear of all conveyor rollers throughout the entire conveyance, increasing efficiency and preventing disasters.

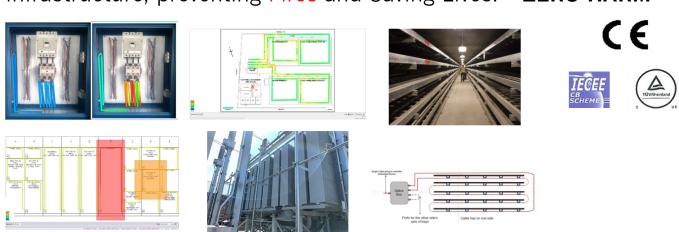
- MAX PRODUCTION



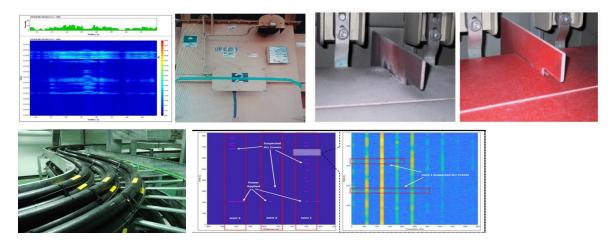


Electrical Infrastructure

Monitors and alerts to heat build up throughout Electrical Infrastructure, preventing Fires and Saving Lives. – **ZERO HARM**



Monitors electrical noise on Transformers, Electrical Connections and Joints, preventing costly breakdowns. **– ZERO DOWN TIME**



RTTR and DOB software calculates the current carrying capacity of the conductors under given conditions of the cable installation, increasing capacity and preventing disasters. **– MAX PRODUCTION**





Pipelines

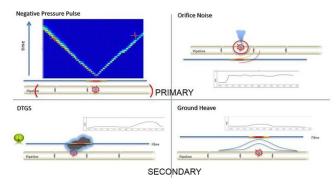
Pipeline monitoring alerts to hazardous activity along the pipeline, such as digging, hot tapping, vehicle movement, large machinery, before contact with the pipe is made. **– ZERO HARM**



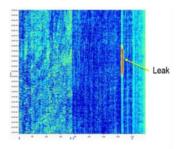




4-Mode™ Leak Detection and LeakFusion™ can detect smaller leaks faster with higher locational accuracy, dramatically reducing repair costs. – **ZERO DOWN TIME**

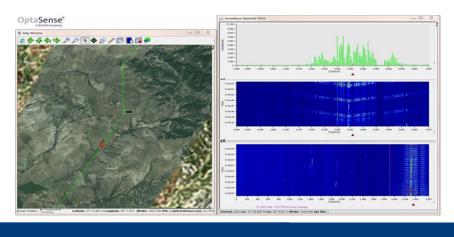






Real time continuous pipeline inspection gauge tracking, gives early warning if the device is stuck. saving time and preventing failures.

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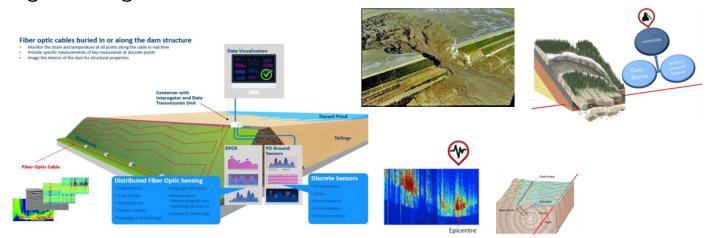




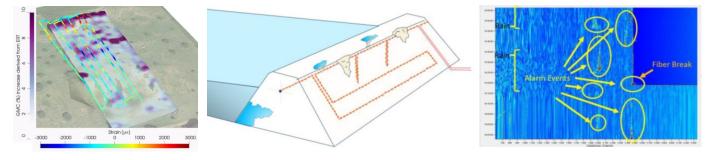


Tailings and High Walls

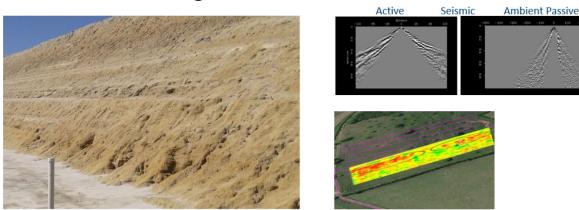
AIM System enables emergency warning in the event of sudden and significant ground movement. **– ZERO HARM**



Providing high sensitivity strain and temperature measurements, to deliver insights into the performance of the structure over time, enabling rehabilitation before failure. **– ZERO DOWN TIME**

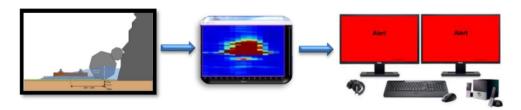


Looking deeper into the structure using passive and active micro seismic techniques to image the soil properties with depth over time, effective management **– MAX PRODUCTION**



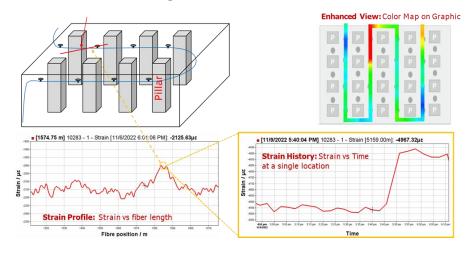
Strata Stability

AIM System enables emergency warning in the event of sudden and significant strata movement. **– ZERO HARM**





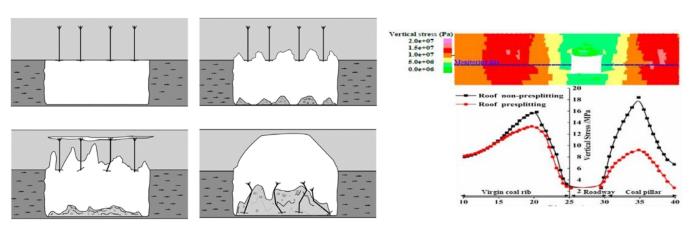
Providing high sensitivity strain, temperature and micro seismic measurements, to continually monitor the integrity of the roof strata, enabling rehabilitation before failure. **– ZERO DOWN TIME**





Evaluating the absolute and cumulative strain profiling to image the strata properties degradation over time, effective management

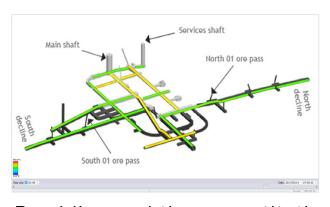
– MAX PRODUCTION





Mine Ventilation

Mine wide temperature monitoring, to detect the exact location, speed, temperature and direction of fires in underground mines, enabling rapid detection and response – **ZERO HARM**





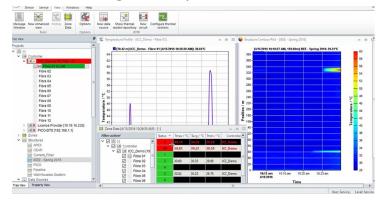






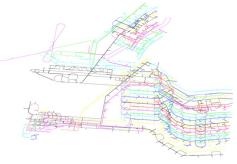


Providing real time quantitative temperature assessment to determine the efficiency of ventilation throughout the mine, Heat Stress Monitoring for a productive work environment. **– ZERO DOWN TIME**

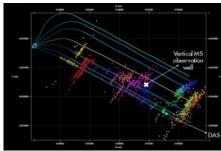




Cumulative acoustic flow measurement and temperature profiling enables reliable ventilation efficiency mapping throughout the mine, supports ventilation planning **– MAX PRODUCTION**

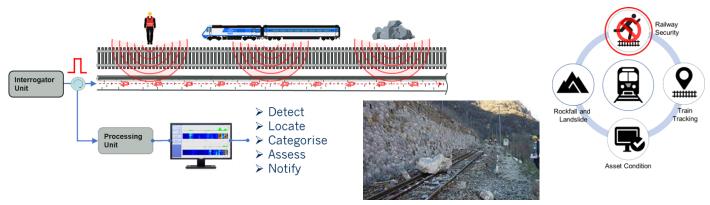




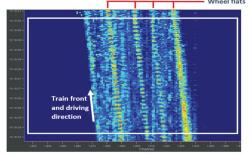


Rail and Security

AIM System detects, locates and assesses track side disturbances such as third-party intrusion, cable theft, rockfalls and landslides, alerts to these risks, Preventing disasters. **– ZERO HARM**



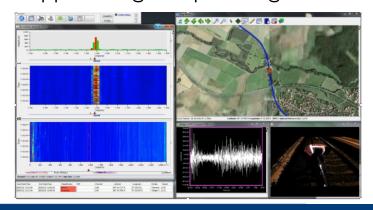
Real-time detection of rolling stock and track anomalies such as wheel flats, rail breaks, rail head condition and dragging equipment, Enabling corrective maintenance. **– ZERO DOWN TIME**







Real-time train tracking for surface and underground applications, with accurate location, speed and configuration information, Supports logistic planning – MAX PRODUCTION

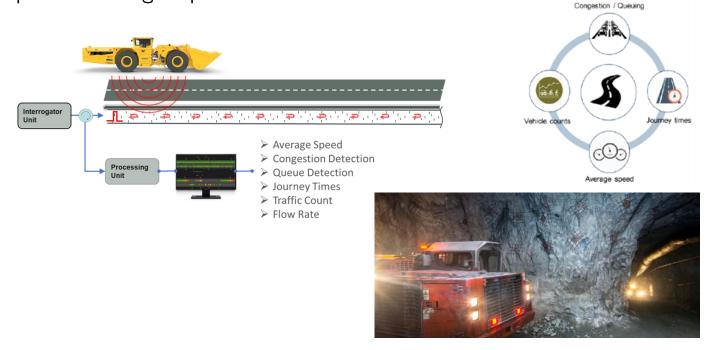




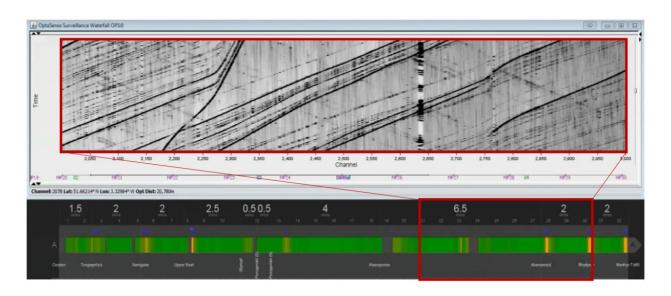


Traffic Monitoring

Monitors the average speed, position of mobile traceless machinery every second, in addition the automated congestion detection supports alerting of potential risk areas. **– ZERO HARM**



AIM Systems automated queue detection measures traffic slow-downs and the travel time along each segment, real time production information. **– MAX PRODUCTION**



Contact Information

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