

MMG Dugald River Mine Installation

MMG Limited is a mid-tier global resources company that mines, explores and develops projects around the world. Based on one of the world's highest-grade known zinc deposits, Dugald River Mine is located approximately 65km north-west of Cloncurry in Queensland, Australia. Dugald River is a top-10 global zinc mine.

On 1 May 2018, Dugald River successfully achieved commercial production status, the mine is expected to produce 120,000 to 140,000 tonnes of zinc in zinc concentrate in 2018.



Current vibration monitoring is via OEM fitted vibration sensors which provide basic overall vibration levels for the plant distributed control system.

A six-weekly route-based vibration data collection program is also undertaken. This program requires the vibration technicians to visit each fan location in turn, collecting data from multiple vibration points.

MMG were interested in improving the data quality, (receiving dynamic spectral data as opposed to basic overall values), improving the frequency of data collection and reducing the total time taken to collect this data.

The Vibe Port Ethernet System was chosen to monitor these three critical Vent Fans. It was chosen from the many systems available because of its unique ability to communicate with the existing on-site vibration system, which meant no additional software or training was required.

It is designed to routinely capture valuable dynamic vibration data and temperature. Data collection times may be scheduled, or requested on demand, allowing data to be collected at any time of the day or night and regardless of any inclement weather conditions.



The installation at each Vent Fan was simple and straightforward. Accelerometers were mounted on the Fan motor and cabled back to the 8 channel Vibe Port Transmitter SS Enclosure. Communications to the Transmitter is simply by connecting an Ethernet cable to the site wide LAN allowing access to these remote Fans from the Vibration Tech's office.

Data is recorded as per the pre-determined schedule, digitised and transmitted to a central server location. Using the Vibe Port Receiver and accessing the site LAN, the data is returned to an analogue signal and played directly into a vibration analyser where it is transferred into the site vibration platform ready to analyse.

The Vibe Port System achieved the correct outcome for MMG, efficiently capturing their data at a higher frequency than their route-based model. This dynamic data (TWF & FFT) provides more information about the health of the Fan than the OEM overall system. Most importantly, the Vibe Port has freed up the Vibration Technicians valuable time, ensuring they are focused on analysing and fault finding, where there time is considered most valuable to MMG.

The Vibe Port is a unique remote vibration and temperature monitoring system that can communicate wirelessly, across the ethernet / internet or the mobile phone network. It supports any brand of vibration analyser and any existing accelerometer. It requires no proprietary Software and all data is downloaded into your existing vibration platform for analysis.

