

Monalco Mining Problem Statement[Alok Kumar]

How can Monalco Mining company reduce ore crusher annual maintenance expenditure by at least 20% for the next year by reducing manufacturer's maintenance costs.

1 Context

Monalco Mining is one of the world's largest iron ore mining companies. recently upgraded its ore crushers to new models with high maintenance costs. Due to high iron supply, the price of iron has dropped from \$110 to \$55 per ton which is close to the break-even value of \$50/ton. Management has requested cutting the annual maintenance cost to accommodate this price drop. Preventing excess wear on ore crushers and reducing the number of required maintenance orders can cut costs by at least 20%.

2 Criteria for success

Reduce the ore crusher maintenance cost by 20 % from 2019

3 Scope of solution space

The number of maintenance events by the equipment manufacturer will be reduced to drop the maintenance cost by 20%. Specifically, excess wear to ore crushers will be prevented to reduce the frequency of required maintenance by the manufacturer.

4 Constraints within solution space

The engineering team will might resist for the reliability . Additionally maintenance events can't cut more than the recommended OEM limit of one maintenance event at every 50,000 tons of iron ore processed.

5 Stakeholders to provide key insight

Chanel Adams – Reliability Engineer
Jonas Richards – Asset Integrity Manager
Bruce Banner – Maintenance SME
Jane Steere - Principal Maintenance
Fargo Williams – Change Manager
Tara Starr - Maintenance SME

6 Key data sources

Data Historian -information about tonnes of Iron Ore we have processed.
Ellipse - This includes information on the old work orders that used to be raised for our equipment
SAP - This is the most up-to-date information source on our equipment logs and work order requests that have been raise.