

Case Study: Mining Industry

Reducing Total Cost of Ownership for Mining Industry

SUMMARY:

Industry experts in mining know clean instrument air is a premium in mining application areas due to the cost of building and maintaining the air system in remote areas. Instrument air aside, the quality of the environment air in mines is very poor. With most actuators in hard-to-access locations, it is doubly imperative that any system be able to withstand both poor instrument and poor environment air to reduce maintenance cost and system failures.

Easytork actuator complements the mining industry requirements with an actuator that:

- 1) Performs well in extremely poor instrument and environmental air
- 2) Reduces direct cost of ownership over 24 months of over 77%
- 3) Reduces operating cost by using ~30% less air



CHALLENGE:

A gold mine in Canada had challenge maintaining a clean instrument air system. The end-user's compressor is located on the surface, with air lines that run 3,000 to 4,000 feet underground to feed actuators with little filtration. The resulting air lines have extremely poor air quality with extreme moisture and rust. These factors all contribute to high maintenance costs (actuators and filters) and increased actuator turnover.

The initial challenge was to find an actuator with good performance with dirty air to reduce cost of maintenance. The secondary challenge is to reduce operating costs on air systems.

SOLUTION:

Starting in 2015, and continuously since, Easytork actuators were installed at the gold mine for paste fill, mine dewatering, process water feed, among other applications. As of 2017, Easytork actuators have been problem-free. Easytork is considered a low maintenance actuator, which does not require emergency replacement or cleaning of actuator or filter. Easytork also reduces total-cost-of-ownership by consuming ~30% less air.



Easytork actuators installed at Canadian gold mine

RESULTS:

Direct Cost	Easytork	Rack & Pinion	Difference
Price for 1x fail-safe actuator	\$900	\$900	
Cost to change out actuator after 6 months	N/A	\$900	
Labour rate to replace actuator - assume 1 hour @ \$100/hr	N/A	\$100	
Number of actuators required for 24 months	1	4	
Total cost for 24 month in service	\$900	\$3,900	
Direct Total Cost of Ownership Over 24 Months	\$900	\$3,900	4.3x

Operating Cost	Easytork	Rack & Pinion
Cost of compressed air over 24 months	+30% Less	Same