



Coal Handling Preparation Plant

Hydraulic Upgrade

Background

A major coal mine in Queensland contacted Custom Fluidpower with concerns around the longevity of their current hydraulic components at the Train Loadout for its Coal Handling Preparation Plant. Custom Fluidpower advised that the system was outdated and causing premature failure of cylinders due to design issues which would require a full system upgrade solution to resolve.

Train Loadouts at Coal Wash Plants throughout the Bowen Basin all incorporate a similar hydraulic system that sees the cylinders prematurely failing due to being exposed to a vigorous life cycle. General hydraulic component wear is also problematic and over time, leads to system failure. The Engineering and Sales team conducted extensive research into the impact

that the hydraulic system design had on mechanical components associated with hydraulics.

Solution

The team at Custom Fluidpower developed and designed proportional valving together with linear transducers and ALS switches to provide the cylinders with ramping capabilities. The design of the new robust solution prolonged the life cycle of the cylinder along with producing a high rate of repeatability that ensures the loading of wagons to the correct weight consistently for the duration of the train.



Achievements

- Commissioning onsite achieved in one twelve-hour shift
- A self-bunded, air-conditioned storage unit
- Dual pump and motor group
- New filtration and hoses
- New Accumulator frame design and fit-out
- Prefabricated GS HYDRO piping for quick and efficient installation
- Specialised Logic Hydraulic Manifold incorporating a "Fail-Safe" function, designed in-house
- A full engineering QA package and project management service provided by Custom Fluidpower

