

QUEENSLAND MINING INDUSTRY

HEALTH & SAFETY CONFERENCE

2015



New Hope Group Multi Fit Pipe Lifting Attachment

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New Acland Coal Mine

- Located near Acland on the Darling Downs approx. 40 minutes North West of Toowoomba.
- The Current open cut mining operations commenced in 2002. However underground mining has been present in the area since the 1880's.
- It is a thin seam mining operation with approx. 25 different seams of coal mined varying in thickness from 50mm to 1500mm.
- We produce 4.8M Tons of Thermal Coal produced per annum.
- There are 2 CHPP Modules with a combined feed rate of 1300tph.
- The mine directly employees 280 people who predominately live in the local area.
- We are currently in the process of applying for New Acland Stage 3 which, if approved, will extend the life of the mine until 2029.



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The Problem That We Faced.

The level of risk that Maintenance Personnel were exposed to while conducting pipe & pump maintenance in the Washplants due to the following issues:

- Exposure to Suspended Loads - While using endless chains, slings & lifting tackle.
- Manual Handling - Strains and Sprains.
- Working in Congested Areas – Limited room in and under the Washplants.
- Complex Rigging Operations – In regards to raising, lowering & positioning pipework within the plant area.
- Increased Workloads - Leads to time imposed pressures for workers which in turn can lead to shortcuts being taken.



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The Solution That We Came Up With.

The design & manufacture of the Multi Fit Pipe Lifting Attachment that delivers the following solutions & outcomes:

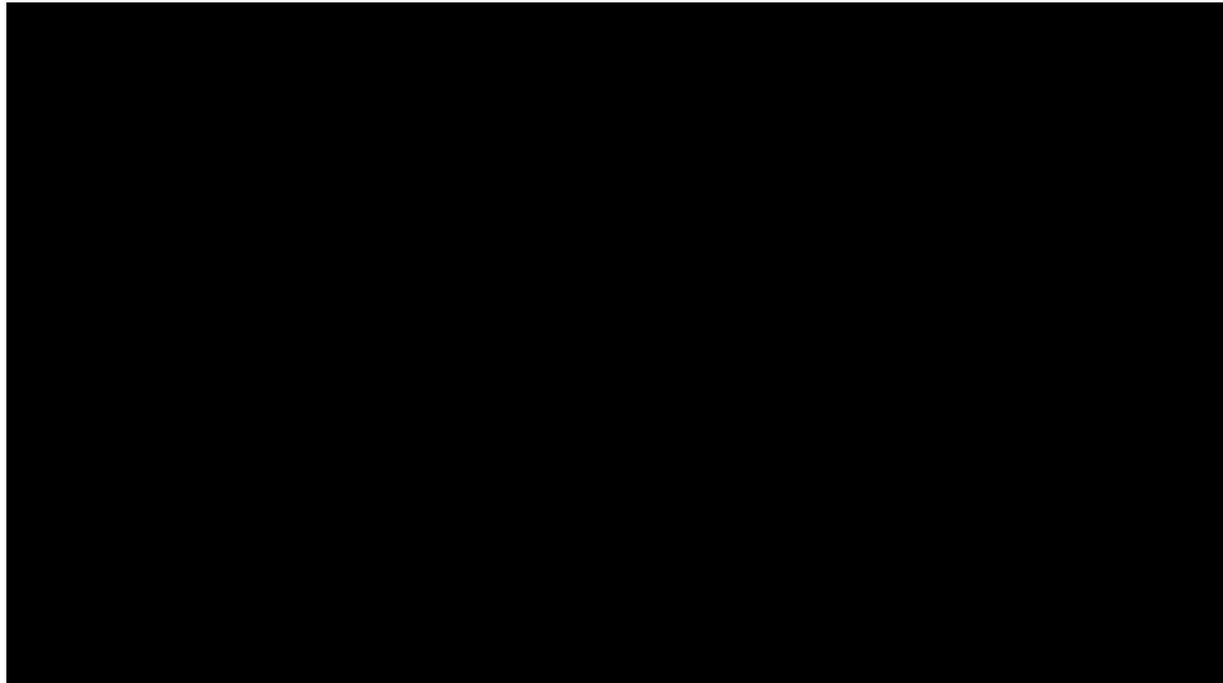
- Removes the need for Personnel to be in the work area while pipes are being removed and installed. This eliminates the hazard posed from suspended loads.
- Reduces the amount of manual handling. No more endless chains etc.
- Fits a wide cross section of pipe spool sizes typically found in the Washplant area.
- Safely & easily operated by anyone with basic maintenance skills.
- Quickly & easily fitted to a standard Franna Crane Rhino Hook.
- Reduced time taken to complete maintenance tasks. Less time pressures on workers.



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Development

- Robert O'Brien, CHPP Maintenance Tradesman developed the initial prototype.
- Prototype subjected to a series of un-official tests to assess it's suitability & load capacities.
- Tried on a maintenance day – Feedback gained from other Maintenance Personnel.
- Local engineering firm, Ireland Eng engaged to draw up plans and supply components.
- Manufacture of the Multi Fit Pipe Lifting Attachment on site.
- Engineer Certification obtained for a S.W.L of 400kg.
- Has now been successfully in use for more than 12 Months.



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Benefits

- Reduced Risk- Maintenance Personnel clear of hazards & reduced manual labor.
- Versatility – Fits a wide variety of pipe designs & sizes.
- Increased Productivity – Jobs take less time.
- Simplicity & Ease of Use.
- Potential to use in other areas of the mine – Mobile Equipment.



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Transferability

Other industries and applications where the MFPLA could be used:

- Oil Refineries
- Mineral Processing Plants
- Power Stations
- Sugar Refineries

Anywhere large diameter vertical pipes are regularly removed and installed.



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Innovation

- We are unaware of any other devices of a similar design for the use on vertical pipes.
- Nothing but positive feedback has been received from all who have used the device.



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Total Cost

**Total Cost of Design, Testing & Manufacture of the
Multi Fit Pipe Lifting Attachment: \$4175.00**

**Paid back many times over in reduced maintenance costs and down time during the last 12
Months.**

The value of the increased level of safety for people?

Priceless.



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Conclusion

We believe that we have a winning Safety Innovation with the Multi Fit Pipe Lifting Attachment because it delivers the following outcomes:

Obvious Benefits & Ease Of Use
=
Worker Acceptance & Utilization
=
Reduced Risk & Increased Productivity
=
Safe Production



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Thank You.

