

Dragline Tub Maintenance Capsule

Ensham Resources

The Problem

Ensham identified the need to conduct regular repairs on its Marion 8050 Dragline tub floor plates. Rather than wait for a major shutdown, the work would need to happen many times during regular maintenance days. Completing this work in a manner which was at an acceptable level of risk to coal mine workers was cost prohibitive and ineffective. The materials cost alone for traditional trench shoring required to protect workers was \$10,000 per maintenance day. Additionally, only outer plates could be changed on short maintenance days as the ancillary equipment used to safely manoeuvre the 450kg plate could not reach far into the trench. Many plate repairs would still wait until a major shutdown. A safe, cost effective solution was required to protect workers and reduce costs.

The Solution

Transforming a redundant 1260W dragline bucket into a safety capsule.

The capsule protects the CMW in the trench eliminating the risk of engulfment. Its solid floor has also improved the work environment allowing other risks to be addressed, such as providing capacity for mechanical aids to reduce manual handling. With tasks involving work above their head and conducting hot work within a confined space, workers have responded very positively to the protected environment the capsule provides.

The capsule is easily installed and removed by heavy plant and is reusable.

All mines operating draglines are affected by the safety and cost risks from tub wear. The benefits of this innovation lie in the combination of risk elimination in a cost effective manner. Given most sites likely have old, redundant buckets that would otherwise be scrap, they have access to this innovation making it highly transferrable across the resources industry. Total cost approx. \$41,000.



Above: Marion 8050 Dragline above trench with capsule



Below: Capsule in place