



## Using UT to inspect coal bin wear at a coal processing facility in Australia

In a collaborative project with a major Australian inspection services provider, Invert Robotics developed a custom M-serie robotic platform to take ultra-sonic wall thickness measurements without entering the confined space of a coal distribution hopper.

Coal processing facilities utilise coal bins to manage the distribution of coal around there processing plants. The coal flows into the top of the vessel and is 'spread' via a rotating shoot to ensure an even build up inside the conical container.

The walls of the conical vessel are lined with 10 – 12 mm thick protective stainless-steel panels. These panels undergo the impacts of a continuous flow of coal.



### Measuring wear and tear

The site manager at one such facility was concerned about the wear of the panels and commissioned a major Australian inspection services provider to devise a method to determine and localise any signs of wear.

Invert Robotics was subsequently sub-contracted to carry out the challenging robotic UT inspections of the panels, while the main contractor performed a precision 3D laser scan via the manway entry.

### Bespoke solution

Invert Robotics' rapid response team designed a custom magnetic crawler capable of holding the required prototype UT payload, and capable of moving within the confines of the conical vessel.

Interested to learn how we can help you using our unique robotic crawler? Contact our nearest sales representative!

### Technical Information

Vessel type	Storage
Vessel size	10x15 m
Vessel material	Steel with stainless steel cladding
Robotic platform	Customised M-serie
NDT method	Visual & UT
Video format	Full HD @ 30fps