

Project Profile

Tom Price Dump Truck Tray Scrapping



Client	Rio Tinto
Location	Tom Price, WA
Duration	July 2018 to November 2018
Contract	Lump Sum Construct Only
Cost	\$0.5 million

Project Overview

Rio Tinto's Tom Price high-grade iron ore mine located 260km inland from the port of Dampier produces approximately 33 million tonnes per year. The iron ore deposit at Mount Tom Price is around 1.6km wide at its widest point but averages just over 0.5km. It is 7.5km long and extends to a depth of 250m. The mine site fleet includes 40 mine haul trucks and 12 loading units operating on a 24/7 basis.

In 2018 the trays on the 40 mine haul trucks were decommissioned due to wear and were stored in a laydown area at the mine. McMahon Services through our Metalcom scrap metal recycling business were engaged to cut the trays into smaller sizes for ease of transportation off site and then recycling.

Scope of Work

McMahon Services

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The project was for the scrapping of 40 mine haul truck decommissions trays totalling 1200t of ferrous steel. A key requirement of the works was to dismantle the 30t trays without using manual oxy cutting or other forms of hot works, due to the site there many risks that had the potential to lead to fire incidents and serious line of fire risks.

The project team were able to meet this challenge by mobilising the company's Komatsu PC450 demolition excavator with a Genesis GXT995R shear and a Komatsu PC850 demolition excavator with a Genesis 1555R shear with the capacity to cut through 38mm and 41mm steel plate respectively. The trays had a maximum plate and structural beam thickness of 25mm so the excavators were perfectly suited to the job, despite the steel being high strength. The shears are the largest and most powerful operating in Western Australia and the only shears capable of undertaking the works. The use of demolition excavators also removed the risk of personnel undertaking manual demolition works and removed the need for craneage, eliminating lifting risks.

The demolition excavators cut the trays into smaller sizes so they could easily be carried on large prime movers with flat top trailers capable of carrying 42t of metal. Loading was achieved by a WA600 front end wheel loader with fork attachments capable of moving scrap elements of up to 16t. The large prime movers and flat top trailers were fitted with heavy duty bolsters in a road train configuration to allow for the scrap to be transported to the company's processing facility in Karratha. Once works were complete, the site was swept clean of small steel off cuts using an electro magnet attachment fitted to a PC220 excavator.

Scrap material was transported 580km to the Karratha scrap processing yard where they were unloaded again by the WA600 front end loader. Tray components were cut down again into material export size as per Institute of Scrap Recycling Industries (ISRI) specifications. Once processed, the scrap ferrous metal was loaded loose in bulk container ships for export to steel mills in Asia.

Overall the works required the use of three excavators ranging from 45t to 85t, one wheel loader, four prime movers and two load loaders with a 90t and 260t capacity. All works were self-performed utilising only local personnel and resources. Workforce peaked at six

