



Case Study:

LOW PROFILE FEEDER™ WITH REDUCED MAINTENANCE DOWNTIME AND INCREASED SAFETY

Location:
Newman,
Western Australia

Operation Type:
Iron Ore

Equipment Solution:
Low Profile Feeder

Year:
2018

Scope of Project:

A mine ore handling facility in the Pilbara region of Western Australia, was undergoing a major upgrade. As part of these upgrades a mobile reclaim hopper was to be installed at the tail end of the operations as an option to recover dead material within the stockyard.

The brief was to design a mobile reclaim hopper that was safe, user friendly, versatile and that didn't require constant supervision and could be operated remotely by controllers situated in Perth, as well as operating in auto, manual and local modes.

The Reclaim Hopper handles up to 2,500tph of iron ore, and is capable of being loaded by WA 1200 front end loaders equipped with 20m³ capacity buckets on opposing hopper side edges at the same time.

The Solution:

Transmin designed, fabricated, assembled and commissioned the reclaim hopper to the clients specifications.

Designed with an incline angle of 18° the Reclaim Hopper is able to easily discharge the ore from the hopper to the existing yard conveyor.

The feedback was the process of changeover of the belt was always difficult which required the personnel to go under the low profile feeder to undo the nut from the bolt as the inner bolts could not be reached with the chain and slats in place especially on wider machines. This process needed confined space procedures in some instances and made the whole process very time consuming.

Transmin adopted the technology "KwiksertPro" (one side fastening system) which aids in the changeover process from the top side of the belt without getting under the machine to undo the nut. The one side fastening

technology uses a large flange splined nut insert arrangement which is inserted from the top through the pre drilled holes in the slats using a special tool. This process is fast therefore keeping the costs low and most importantly safe.

The ProEDGE belt, 2m wide was selected to minimise spillage. The manufacture of the ProEDGE belt, with its hot vulcanised edge strip, increases the bond strength between edge strip and belt which increases wear life and reduces maintenance.

Benefits of the LPF™

- ▶ **Elimination of belt tracking issues**
- ▶ **Elevated discharge can be achieved by the introduction of a bend transition**
- ▶ **Space saving**
- ▶ **Elimination of belt slippage**
- ▶ **Minimal product spillage**
- ▶ **Conventional belt cleaners for ease of cleaning**
- ▶ **Proven industry standard components**



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