



Case Study:

FIVE IDENTICAL LOW PROFILE FEEDERS - THE WIDEST ON THE MARKET

AUSTRALIA

Location:
Newman,
Western Australia

Operation Type:
Iron Ore

Equipment Solution:
Five Low Profile Feeders

Year:
2020

Scope of Project:

With the economic life cycle coming to an end of an existing Pilbara mine, our client had to look into a new processing facility to keep up with supply and demand.

The facility is projected to produce 80 million tonnes per annum of iron ore making it the largest iron ore processing facility ever built in Western Australia.

The Solution:

Transmin had been in discussion with the client for a number of years before the contract was awarded as the Low Profile Feeder (LPF) technology had been identified by the client as

potentially solving their need for a very wide feeder to deliver material onto the new generation of super wide screens (4.3m deck width) used in iron ore. Conventional belt feeders and apron feeders are limited to a maximum width around 3m, so an innovative alternative was required.

Transmin already had experience of supplying LPFs at 4m belt width so the initial brief was to develop a 4m wide LPF to suit iron ore within the lowest vertical envelope which could be achieved, therefore saving height in the scalper screen building.

Additional requirements in the brief included a tail end drive arrangement so that it didn't interfere with the

access and space at the discharge end adjacent the scalper screens and a plough to effectively spread the load across the full width of the feeder for maximum screening efficiency.

Rated to deliver 4000tph per feeder, each machine was driven by a 132kW motor and gearbox which are controlled by VVVF speed units to fine tune the feed to the scalper screens. Each drive is direct shaft mounted with torque arm and sunshades due to the harsh weather conditions on site.

These 4m wide feeders are the widest in service in the iron ore industry and its interesting to note that Transmin is also in the process of developing +5m wide machines to fit beneath the new generation of ultra wide high capacity plate filter presses being used in modern dry tailings plants.

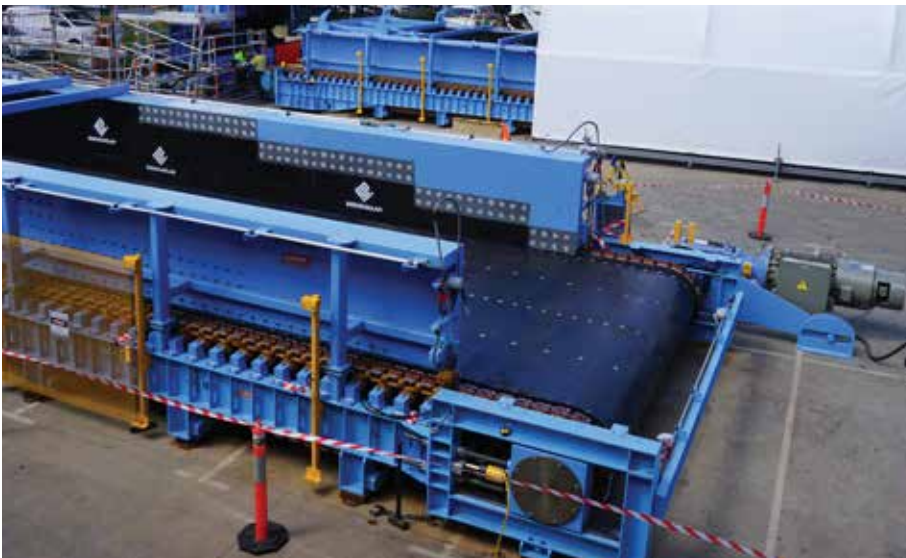
Transmin's Aftermarket conveyor brand, ConveyorPro supplied the 4m strip edge conveyor belt, ProEDGE. The benefit of ProEDGE, is with its hot vulcanised edge strip, the bond strengths between the edge strip and the belt are strengthened, therefore increases wear life, reduces maintenance and product spillage.

Berco D4 SALT (sealed and lubricated) track chain was selected for its robustness and proven track record in this industry. Transmin is also able to support the Berco product effectively due to the fact Transmin is the sole Berco agent in Western Australia.

Transmin's inhouse Quality Control team ensured that the steelwork, fabrication and other components complied to Australian standards and specifications outlined by the client.

Benefits of the LPF™

- ▶ Elimination of belt tracking issues
- ▶ Space saving
- ▶ Elimination of belt slippage
- ▶ Minimal product spillage
- ▶ Conventional belt cleaners for ease of cleaning
- ▶ Proven industry standard components



HEAD OFFICE

Western Australia

Local Call: 1300 127 091

International Call: +61 (0) 8 9270 8555

International Fax: +61 (0) 8 9249 6116

Email: wasales@transmin.com.au

Address: 33-37 Denninup Way Malaga
Perth, Western Australia, 6090

Queensland & Northern Territory

Local Call: 1300 800 609

International Call: +61 (0) 8 9270 8555

International Fax: +61 (0) 7 3636 7355

Email: qldsales@transmin.com.au

Address: 76 Dulacca Street
Acacia Ridge, Brisbane
Queensland, 4110

INTERNATIONAL OFFICES

South America

Email: sales.sa@transmin.com.au

North America

Email: sales.ca@transmin.com.au

India

Email: sales.in@transmin.in