

Client:
OneSteel Ltd

Project:
Project Magnet

Project Location:
Whyalla, South Australia

Project Value:
\$250m

Services:

- Engineering and Design
- Procurement
- Commissioning

1. Project Overview

ProMet has completed design engineering and supplied assistance for the commissioning and ramp up of production for OneSteel's Steelwork operations in Whyalla, South Australia. Together with our 50/50 joint owners Theiss Pty Ltd, ProMet was part of an EPC contract to deliver Project Magnet for OneSteel.

Whyalla was built to operate with hematite ore from its tied mines, Iron Duke, Iron Duchess and Iron Baron, but with just 34 Mt of hematite reserves was facing closure after 2020.

Project Magnet involves the conversion of the Whyalla Steelworks to produce steel from magnetite which holds a number of key value added benefits to the client.

2. Scope of Work

The scope for Project Magnet consisted of:

- Extending the life of the steelworks to at least 2027
- Providing additional revenue streams
- Lowering the cost of producing steel
- Offering environmental improvements

Prior to Project Magnet the hematite ore mining operations produced 3 Mtpa of ore.

- Of this 1 Mtpa goes by ship to Bluescope Steel at Port Kembla
- 2 Mtpa of pellets and lump ore for its blast furnace and shipment to the Newcastle mills

Project Magnet now produces 9.5 Mtpa of both magnetite and hematite ore produced at less than 32mm size, with crushing and screening at the mine site.

The works are located at the South Middleback Range (SMR) mine site approximately 60km from Whyalla.

Project Magnet process plant included the following:

- Brownfield tie-ins
- Ore handling
- High Pressure Grinding Rolls (HPGR's); Wet screening
- Ball milling
- Cyclone plant
- Intermediate magnetic separation (DIMS)
- Concentrate storage
- Cleaner magnetic separation (CMS)
- Concentrate thickener
- Tailings thickener
- Positive displacement pumping station
- Coarse tailings
- Fine tailings
- Utilities

3. Project Schedule

- Project approval June 05
- Site establishment Feb 06
- Mechanical completion April 07
- Start commissioning of all plant units June 07

