



HPW (High Performance Weld)

Aluminothermic welding process for heavy haul and head hardened rail

Features:

- Weld metal in the rail head has hardness to match the parent metal for low wear
- Weld metal in the weld foot is less alloyed to provide increased ductility and fracture toughness
- Mould is shaped to guide the molten metal into the weld cavity while the alloy plug melts and diffuses into the weld metal
- Uses standard SkV-Elite equipment and consumables therefore reducing cost
- Meets the requirements of AS1085.20-2006 for the welding of steel rail

Benefits:

- Selective and controlled alloying of the head of the rail to provide optimum hardness on the running surface while maintaining maximum ductility and toughness in the foot
- Welding process is suitable for heavy haul applications and welding of head hardened rails, all rail grades and profiles
- Specialised plug with alloying elements available for head hardened rails (R350HT, R370HT or R400HT)
- Only one grade of Thermit portion is required with desired hardness reached by using different HPW plugs