

# Cast Steel Products

Our business has developed and evolved to supply to a global market with light rail and heavy rail systems (railway crossings), mining shoes and security bollards. We have extensive in-house capabilities, including specialised metal production, heat treatment and x-ray capabilities, which all contribute to us being at the forefront of our market sector.

## CAST CROSSINGS

- Cast Crossings for Mainline, Light Rail, Dockyard and Tram Systems
- Austenitic Manganese Steel (AMS) Monobloc and Centre Block Crossings (frogs)
- Rail Bound Manganese Crossings
- AMS Tram Point Bodies and Point Tongues

## HEAVY HAUL HIGH STRENGTH SWING NOSE CROSSING CRADLES

- Castings for Heavy Haul Mining Railway Systems
- Process: Explosively Depth Hardened (EDH)
- In-Street / Urban and Light Rail Systems

## MINING EQUIPMENT

- Track Shoes and General Engineering

## SECURITY SOLUTIONS

- Manganese Security Bollards

## WHY CHOOSE PROGRESS RAIL SERVICES UK FOR CAST STEEL PRODUCTS?

- Our cast steel products are produced in a state-of-the-art, world-class facility (opened 2008) employing lean production methods, reducing process wastes and achieving highest levels of quality.
- Austenitic Manganese Steel (AMS) monoblocs and centre blocks up to 12.5m in length, supplied both flash butt welded to rolled rail or fishplated, produced in accordance with National specifications and Rail Authority specifications.
- Explosively Depth Hardened (EDH) AMS crossings routinely manufactured to European and US hardness requirements for faster speed and reduced cost of ownership.
- AOD refined Bainitic steel for specialised rail and crossing use.\*
- Cast Steel Security Bollards manufactured in compliance with British Standard PAS 68 for protection against vehicle attacks.
- Mining equipment produced through AOD Refined through hardened low alloy Nickel, Chrome, Molybdenum track/ crawler shoes up to 3 tonne finish weight.

\* AOD (Argon Oxygen Decarburisation) ensures the integrity of our steel. Within Europe we are one of the few steel foundries to undertake secondary steel making using our 5 – 10 tonne AOD vessel, which is used to refine our arc furnace melted steel. Our AOD removes all the dissolved gases (nitrogen and hydrogen) picked up during arc furnace melting and lowers the sulphur to very low levels in our lean alloy Ni Cr Mo steels, which allows us to produce castings with a high base hardness (typically 415 BHN), but still with high impact properties at -40 °C. Additionally our AOD is routinely used to produce our low carbon (0.03 max), ultra clean stainless steel rails used to flash butt weld (FBW) our cast austenitic manganese crossings to rolled carbon rails.

