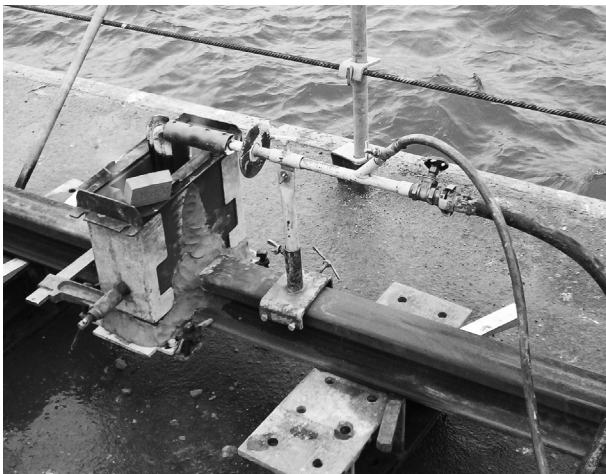




Aluminothermic welding is a welding process for the joining of rails. The aluminothermic compound is a mixture of metal oxides, alloying elements and special additives. These react to form the metal, simultaneously creating an exothermic reaction to produce superheated molten steel which forms the weld.

The rails to be joined together are aligned leaving a prescribed gap between their ends. Preformed refractory moulds are fitted around the gap formed at the junction of the two rails. The updated process uses a one-shot crucible.



Preheat

Using a specially designed burner, the moulds and the enclosed rail ends are pre-heated for a time, dependent upon the rail section, to achieve the correct welding temperature.

Ignition

When the correct degree of preheat has been achieved reaction is initiated in the crucible using a special igniter. Superheated molten steel is produced by an aluminothermic reaction.



Welding

At the correct time the tapping system at the base of the crucible discharges the superheated molten steel into moulds via the pouring cup.



RAILS WELDING

Aluminothermic welding



Hydraulic shearing with flat blades



Pneumatic shearing

Rail shearing

Shearing is performed when the weld has set long enough and before it has become cold.

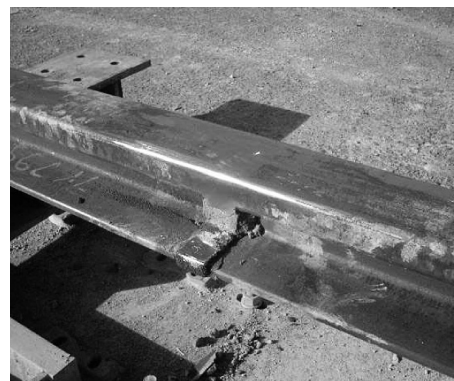
The shearing operation is done on running surface, rail head sides and risers.

Rail grinding

Immediately after shearing, a rough grinding is performed on the rail head.

Following an appropriate cooling period, the rail head is ground to precise profile dimensions.

Finally the rail is aligned and fastened.



We reserve the right to discontinue or change specifications or design at any time without prior notice and without incurring any obligation whatsoever.



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