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## HPW – High Performance Weld

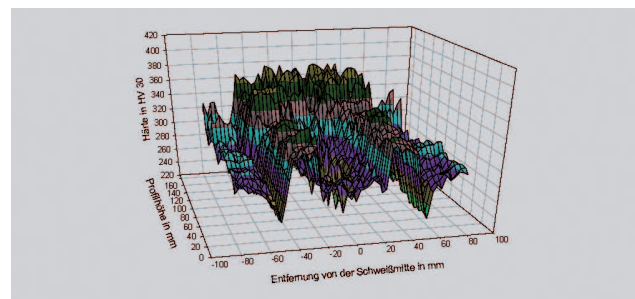
The HPW welding process (High Performance Weld) is a new and innovative aluminothermic welding process. A special alloying concept is applied for this process and allows a unique, simplified and cost-saving logistic for the customer.

As basis for this innovative principle serves a standard welding process that can be used for the aluminothermic welding of Vignole rails of grade R260. A special plug with a container filled with alloying elements is additionally used if head hardened rails must be welded (e.g. R350HT, R370HT or R400HT)

Thus the HPW process offers a concept that allows the usage of only one grade of Thermit portion. Adjusting the desired hardness in the head of the weld is solely reached by using different HPW plugs. Special mixtures of alloying elements that are filled in the container of the HPW plug are used to adjust the required hardness of the weld metal based on the corresponding rail grade.

The special properties of the HPW weld make the process suitable for heavy haul applications and the welding of head-hardened rails. The welding process is available for all rail grades and several rail profiles.

The specialty of the HPW process is the container filled with alloying elements. During the welding process the container is dissolved and the alloying elements effect a selective alloying of the head of the weld.



### The HPW weld is therefore characterized by

- = a hard, wear-resistant running surface.
- = a ductile web and foot.



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