

Title (en)  
DEVICE FOR ALUMINOTHERMIC WELDING OF TWO ENDS OF A RAIL

Title (de)  
VORRICHTUNG ZUR ALUMINOTHERMISCHEN VERSCHWEISSUNG ZWEIER SCHIENENENDEN

Title (fr)  
DISPOSITIF DE SOUDAGE ALUMINOTHERMIQUE DE DEUX EXTREMITES DE RAILS

Publication  
**EP 1274533 A1 20030115 (DE)**

Application  
**EP 01929498 A 20010404**

Priority  
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• EP 0103801 W 20010404

Abstract (en)  
[origin: WO0178936A1] A device for aluminothermic welding of two ends of a rail, i.e. a casting mould (4) which is open on the upper side thereof, provided with a central casting area which is defined by the ends of the rails which are distanced from each other by a welding groove (3) and defined by the walls of said casting mould (4), in addition to comprising at least one riser to the side of the casting area, said riser being permeably connected to the casting chamber exclusively in the region of the foot (11) of the rail, wherein a reaction pot (1) is provided on the bottom thereof with an outflow device causing the steel melt to flow out of the reaction pot (1) into the casting mould (4). In order to avoid turbulent flow conditions inside the casting mould and to homogenize the solidification of an intermediate cast structure between the ends of the rails, the device is embodied in such a way that the steel flowing out of the reaction pot (1), upon termination of an aluminothermic reaction and after separation of the steel and slag, enters the casting chamber directly in the form of a falling stream and enters the at least one riser (13) in the form of a rising stream. The above-mentioned measures result in a better welded product in terms of quality in comparison with prior art, said product being devoid of welding errors and structural errors.

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