

Title (en)

Bottom pour electroslag refining systems with controlled electric current path

Title (de)

Elektro-Schlacke-Umschmelzsysteme mit Bodenausguss und kontrolliertem Elektrostrompfad

Title (fr)

Systèmes de fusion sous laitier électroconducteur à orifice de coulée au fond et circulation contrôlée du courant électrique

Publication

EP 1136576 B1 20041229 (EN)

Application

EP 00302292 A 20000321

Priority

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Abstract (en)

[origin: EP1136576A1] A bottom pour electroslag refining system (50) refines raw material into refined liquid metal. The bottom pour electroslag refining system (50) comprises an electroslag refining crucible (18); a slag (14); a bottom pour structure (12) that comprises an orifice (13) from which refined liquid metal from the electroslag refining crucible (18) can flow as a stream (25) of refined liquid metal; and a current path (27). The current path (27) is defined in the bottom pour electroslag refining system (50) for applying current to the raw material for melting and refining the raw material. The melted and refined raw material forms a refined liquid metal pool (15) in the electroslag refining crucible (18). The current that is applied by the current path is sufficient to provide the refined liquid metal in the refined liquid metal pool (15) with a viscosity under which the refined liquid metal can flow through the orifice (13) under its own viscosity. The electroslag refining crucible may comprise a split-crucible with electrical insulation between an upper and lower split-crucible portion, wherein the current path comprises the upper-split crucible portion, the slag and the lower split-crucible portion. <IMAGE>

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IPC 8 full level

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