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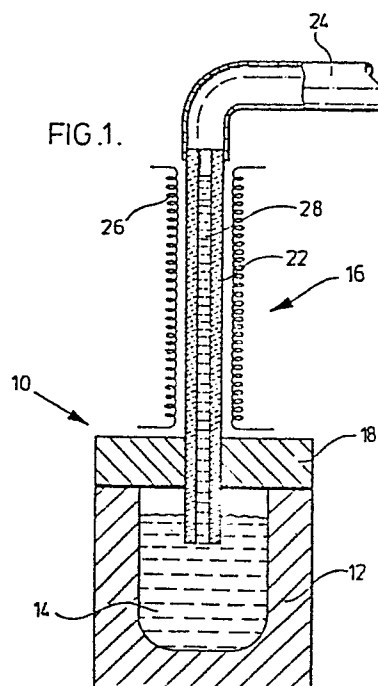
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54 **Vacuum treating steels.**

57 Molten steel or other electroconductive metal is treated with vacuum to remove dissolved gases therefrom. A rod (28) of molten steel is drawn from a bath (14) by applying vacuum to a vertical tube (22) dipping into the molten bath (14). An electrical coil (26) surrounding the tube (22) applies an intense magnetic field to the steel rod by the passage of high frequency alternating current through the coil (26). The rod (28) is compressed radially inwardly by the magnetic field exposing the whole of the external surface of the rod (28) to vacuum. At the same time, the induced eddy currents superheat the steel rod. The large surface area of application of vacuum combined with the narrow dimension through which the gas must travel ensure rapid and efficient removal of the gases. The procedure is repeated until all the steel in the bath has been treated. Lack of contact of the steel rod (28) with the tube surface eliminates loss of heat by convection and the superheating of the steel rod by the eddy currents ensures that the overall heat losses are minimal during processing of the molten metal bath.





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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
A	AT-B- 138 020 (BERNDORFER METALLWARENFABRIK ARTHUR KRUPP)		C 21 C 7/10
A	DE-C-1 147 714 (VACUUMSCHMELZE)		
A	US-A-3 347 538 (SIECKMAN)		
A	US-A-4 298 376 (NARITA et al.)		
A	DE-A-1 508 214 (KLÖCKNER-WERKE)		
A	DE-B-1 268 790 (OLSSON)		TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
A	DE-C-1 154 130 (DORTMUND-HÖRDER HÜTTENUNION)		C 21 C 7/10
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 28-02-1986	SUTOR W Examiner
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			