

Title (en)  
PLASMA TUNDISH HEATING

Publication  
**EP 0453188 A3 19930428 (EN)**

Application  
**EP 91303238 A 19910411**

Priority  
GB 9008833 A 19900419

Abstract (en)  
[origin: EP0453188A2] A method of heating molten material in a tundish employs a plasma torch. The plasma comprises a mixture of argon and one or more of nitrogen, hydrogen, neon and helium. A mixture of argon and helium including from 10 to 20% by volume of helium is useful for heating steel. For an arc of given length, a higher voltage is obtainable than when pure argon is used as the plasma gas. The torch is preferably engaged by a horizontal support arm which is pivotally mounted on an extensible support so as to facilitate location of the torch in a limited space above the tundish. <IMAGE>

IPC 1-7  
**B22D 11/10**

IPC 8 full level  
**B22D 11/10** (2006.01); **B22D 11/11** (2006.01); **B22D 41/015** (2006.01); **H05H 1/32** (2006.01)

CPC (source: EP KR)  
**B22D 11/10** (2013.01 - KR); **B22D 11/11** (2013.01 - EP)

Citation (search report)

- [Y] EP 0232961 A1 19870819 - PLASMA ENERGY CORP [US]
- [Y] EP 0216398 A1 19870401 - METALLURGIE HOBOKEN [BE]
- [XE] PATENT ABSTRACTS OF JAPAN vol. 16, no. 34 (M-1204)28 January 1992 & JP-A-32 43 254 ( NKK CORP ) 30 October 1991
- [Y] STEEL TIMES INTERNATIONAL - INCORPORATING IRON & STEEL INTERNATIONAL vol. 13, no. 2, May 1989, ENGLAND GB pages 44 - 46 , XP46437 C.MOORE 'plasma tundish heating as an integral part of continuous casting'
- [Y] PATENT ABSTRACTS OF JAPAN vol. 9, no. 138 (C-286)13 June 1985 & JP-A-60 024 333 ( DAIDO TOKUSHUKO KK ) 7 February 1985
- [A] DATABASE WPI Section Ch, Week 7820, Derwent Publications Ltd., London, GB; Class M22, AN 78-35386A

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**EP 91303238 A 19910411**; AU 7500291 A 19910415; CN 91103226 A 19910419; GB 9008833 A 19900419; JP 8839691 A 19910419; KR 910006187 A 19910418; ZA 912855 A 19910419