

Title (en)
APPARATUS FOR MAKING MATRIX COATINGS

Publication
EP 0304607 A3 19891102 (EN)

Application
EP 88111414 A 19841106

Priority
• US 54965283 A 19831107
• US 54965383 A 19831107
• US 54975283 A 19831107

Abstract (en)
[origin: EP0304607A2] An apparatus for making fusion-bonded matrix coatings on endless, flexible metallic casting belts for continuous casting machines is described. The fusion-bonded matrix coating comprises a nonmetallic refractory material interspersed substantially uniformly throughout a matrix of heat-resistant metal or metal alloy, for example nickel or nickel alloy. The coating is applied to a revolving belt (10,20) being supported and driven by pulleys (34,36) in a machine by thermally spraying a powdered mixture directly onto the roughened casting surface of the belt. The machine holds the revolving belt under tension and applies cooling to the rear surface of the revolving belt (10,12) opposite to the region where the thermal spray gun (66) is applying the coating to the belt (10,20), and causes the thermal spray gun (66) to traverse uniformly transversely across the belt. The result is to insulate and protect the underlying belt from intimate molten metal contact. The life of the coated belts is dramatically increased, and the surface quality and properties of the cast product are significantly improved.

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B05B 13/0473 (2013.01 - EP); **B22D 11/06** (2013.01 - KR); **B22D 11/0671** (2013.01 - EP)

Citation (search report)
• [Y] DE 2511839 A1 19760212 - ALUSUISSE
• [Y] EP 0092844 A1 19831102 - HAZELETT STRIP CASTING CORP [US]
• [A] AT 336827 B 19770525 - METALLGESELLSCHAFT AG [DE]
• [A] DE 2510041 A1 19750925 - METALLURGIE HOBOKEN
• [AD] US 2904860 A 19590922 - RICHARD HAZELETT SAMUEL, et al
• [AD] US 4298053 A 19811103 - DOMPAS JOHN, et al
• [A] DE 2353853 A1 19740509 - TAMIC INTERNAT PROPRIETARY LTD
• [AD] US 3871905 A 19750318 - PETRY CHARLES J

Cited by
EP0412428A1; US6178713B1

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EP 0304607 A2 19890301; **EP 0304607 A3 19891102**; **EP 0304607 B1 19930811**; AU 3487084 A 19850516; AU 572907 B2 19880519; BR 8405652 A 19850910; CA 1235565 A 19880426; CA 1255875 C 19890620; DE 144769 T1 19860522; DE 3484051 D1 19910307; DE 3486201 D1 19930916; EP 0144769 A1 19850619; EP 0144769 B1 19910130; ES 537411 A0 19860601; ES 547015 A0 19861216; ES 8608056 A1 19860601; ES 8702179 A1 19861216; FI 844352 A0 19841106; FI 844352 L 19850508; KR 850004030 A 19850701; KR 930002544 B1 19930403; NO 168995 B 19920120; NO 168995 C 19920429; NO 844412 L 19850508; PL 250296 A1 19850716; ZM 6984 A1 19860528

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EP 88111414 A 19841106; AU 3487084 A 19841031; BR 8405652 A 19841106; CA 466417 A 19841026; DE 3484051 T 19841106; DE 3486201 T 19841106; DE 84113365 T 19841106; EP 84113365 A 19841106; ES 537411 A 19841106; ES 547015 A 19850916; FI 844352 A 19841106; KR 840006977 A 19841107; NO 844412 A 19841106; PL 25029684 A 19841105; ZM 6984 A 19841107