

Title (en)
PROCESS AND DEVICE FOR CONTROLLING THE COOLING RATE OF A CONTINUOUS BILLET

Publication
EP 0227596 B1 19900207 (DE)

Application
EP 86810560 A 19861204

Priority
CH 525885 A 19851209

Abstract (en)
[origin: US4756357A] A process for controlling the rate of cooling an ingot emerging from a continuous casting mold, said ingot being cooled by application of a fluid coolant directly onto the ingot surface, comprises continuous measurement of the cooling capacity and influencing the composition and/or the quantity of coolant employed per unit time i.e. in the sense of matching up to the required coolant capacity. As such the measurement of the coolant capacity is performed at least at one place outwith the ingot and using coolant not coming into contact with the ingot. The corresponding continuous casting unit features control elements (6) that act upon the composition and/or the amount of fluid coolant released per unit time and comprises at least one body (1) exhibiting good electrical conductivity; at least one coolant nozzle (2) which is connected to the coolant container (3) and is directed at a measuring point on the body (1); a heating device (4) that acts upon that point on the body (1); at least one temperature sensor (5,5') situated under the surface of the body (1) at the measuring point; and a data processing unit (7) connected up to the temperature sensor (5,5'), heating device (4) and control elements (6).

IPC 1-7
B22D 11/124; **B22D 11/22**

IPC 8 full level
B22D 11/01 (2006.01); **B22D 11/124** (2006.01); **B22D 11/22** (2006.01)

CPC (source: EP US)
B22D 11/049 (2013.01 - EP US); **B22D 11/124** (2013.01 - EP US)

Cited by
WO2017198500A1

Designated contracting state (EPC)
AT BE CH DE ES FR GB IT LI LU NL SE

DOCDB simple family (publication)
EP 0227596 A1 19870701; **EP 0227596 B1 19900207**; AT E50177 T1 19900215; AU 588650 B2 19890921; AU 6576586 A 19870611; CA 1275780 C 19901106; DE 3668811 D1 19900315; ES 2012770 B3 19900416; JP S62137146 A 19870620; NO 166847 B 19910603; NO 166847 C 19910911; NO 864891 D0 19861205; NO 864891 L 19870610; US 4756357 A 19880712; ZA 869250 B 19871125

DOCDB simple family (application)
EP 86810560 A 19861204; AT 86810560 T 19861204; AU 6576586 A 19861127; CA 524672 A 19861205; DE 3668811 T 19861204; ES 86810560 T 19861204; JP 29333486 A 19861209; NO 864891 A 19861205; US 93680886 A 19861202; ZA 869250 A 19861208