

Title (en)  
IMPROVEMENT FOR LADLES TO CAST METAL

Publication  
**EP 0302040 A3 19900307 (FR)**

Application  
**EP 88870124 A 19880715**

Priority  
BE 8700855 A 19870731

Abstract (en)  
[origin: JPH01104462A] PURPOSE: To efficiently cool a fixed plate of a cooler for a ladle by a jet of a cooling fluid by providing an annular chamber partially enclosing an internal nozzle with a hollow member for supplying this fluid and forming many orifices facing the fixing plate of the cooler in the hollow members. CONSTITUTION: The wearing part 12B of the internal nozzle 12 is enclosed by the annular chamber 3 and envelopes the hollow member 5. The member 5 is communicated with a duct 6 for supplying a cooling fluid and is formed with many orifices 7 over the entire length of the member 5 so as to direct the jet of the cooling fluid to the fixed plate 22 enclosing a hole for casting. Then, the jet of the cooling fluid directed toward the fixed plate 22 powerfully cools the fixed plate.

IPC 1-7  
**B22D 41/08**

IPC 8 full level  
**B22D 41/005** (2006.01); **B22D 41/08** (2006.01); **B22D 41/60** (2006.01)

CPC (source: EP US)  
**B22D 41/60** (2013.01 - EP US)

Citation (search report)  
• [A] WO 8603147 A1 19860605 - DESAAR RENE [BE]  
• [A] US 3460609 A 19690812 - OLSSON ERIK ALLAN  
• [A] US 2517931 A 19500808 - IRVING ROSSI  
• [A] US 3596804 A 19710803 - BARROW HENRY, et al

Cited by  
DE3927468A1

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

DOCDB simple family (publication)  
**EP 0302040 A2 19890201**; **EP 0302040 A3 19900307**; **EP 0302040 B1 19920916**; AT E80570 T1 19921015; BE 1000777 A7 19890404; DE 3874648 D1 19921022; JP H01104462 A 19890421; US 4844303 A 19890704

DOCDB simple family (application)  
**EP 88870124 A 19880715**; AT 88870124 T 19880715; BE 8700855 A 19870731; DE 3874648 T 19880715; JP 18706488 A 19880728; US 22641988 A 19880729