

Title (en)  
POLYPHASE POWER SUPPLY FOR CONTINUOUS LEVITATION CASTING

Publication  
**EP 0294913 A3 19890809 (EN)**

Application  
**EP 88301503 A 19880223**

Priority  
US 6090087 A 19870612

Abstract (en)  
[origin: EP0294913A2] An apparatus (50) for supplying polyphase power to an induction coil (62) for magnetically levitating metal to be cast comprises an input (52) for connecting the apparatus to a source of polyphase AC power and a polyphase rectifier (54) for rectifying the AC power. A first controller (56) selectably varies the magnitude of RMS current supplied to the induction coil by controlling the electrical phasing of the rectifier. A polyphase inverter (58) operatively associated with the rectifier converts the rectified AC power to polyphase AC power and supplies the polyphase AC power to the induction coil at a preselected frequency. A second controller (60), independent of the first controller, controls the frequency of the AC power supplied to the induction coil by controlling the electrical phasing of the inverter. The induction coil has a plurality of sections (01 to- O3), each section being wound to provide a phase rotation of a magnetic force vector over substantially the entire length of the coil to produce a continuous magnetic levitation force.

IPC 1-7  
**H05B 6/32**

IPC 8 full level  
**B22D 11/01** (2006.01); **H05B 6/32** (2006.01)

CPC (source: EP)  
**H05B 6/32** (2013.01)

Citation (search report)  
• [YD] US 4414285 A 19831108 - LOWRY HUGH R [US], et al  
• [A] US 4578552 A 19860325 - MORTIMER JOHN H [US]  
• [Y] CGEE ALSTHOM: "VARIAL C" September 1986, LEVALLOIS-PERRET  
• [A] ELEKTROWARME INTERNATIONAL vol. 34, no. B4, August 1976, ESSEN page 198 - 202; KENTNER: "BETRIEBSERFAHRUNGEN MIT SCHWINGKREISUMRICHTERN FUR MF-INDUKTIONSSCHMELZANLAGEN"

Cited by  
FR2799335A1; GB2389645A; GB2389645B; WO0126424A1

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

DOCDB simple family (publication)  
**EP 0294913 A2 19881214; EP 0294913 A3 19890809; JP S63317238 A 19881226**

DOCDB simple family (application)  
**EP 88301503 A 19880223; JP 14066188 A 19880609**