

Title (en)
ANTI-VEINING ADDITIVE FOR SILICA SAND MOLD

Title (de)
ANTIMELIERUNGZUSATZ FÜR KIESELSÄURESANDFORM

Title (fr)
ADDITIF ANTI-GERCE POUR MOULE EN SABLE DE SILICE

Publication
EP 3290130 A1 20180307 (EN)

Application
EP 17185130 A 20170807

Priority
US 201615250690 A 20160829

Abstract (en)
This invention relates generally to a composition for silica sand cores and molds suitable for use in the casting of metals. The sand core composition contains a binder and a uniformly dispersed anti-veining additive. The mixed metal oxides collapse into a visco-plastic state when the foundry mold/core is heated by the molten metal during casting. A change in state of the MMOx from solid to a visco-plastic at the casting high temperatures provides space and lubricity within the foundry shape sufficient to compensate for the thermally-induced physical expansion of the silica grains. Thereby avoiding the mechanical forces which cause cracks and fissures in the mold or core that produce veins and other surface imperfections associated with the high coefficient of thermal expansion of silica sand.

IPC 8 full level
B22C 1/02 (2006.01); **B22C 1/22** (2006.01); **B22C 9/02** (2006.01)

CPC (source: EP US)
B22C 1/02 (2013.01 - EP US); **B22C 1/20** (2013.01 - EP US); **B22C 1/2273** (2013.01 - EP US); **B22C 9/02** (2013.01 - EP US)

Citation (applicant)
• US 2009095439 A1 20090416 - STOTZEL REINHARD [DE], et al
• US 5983984 A 19991116 - AUDERHEIDE RONALD C [US], et al
• US 8122936 B2 20120228 - ATTRIDGE JON H [US], et al
• US 7938169 B2 20110510 - ATTRIDGE JON H [US], et al
• US 2008099180 A1 20080501 - WEICKER GUNTER [DE], et al
• US 5911269 A 19990615 - BRANDER JOHN J [US], et al

Citation (search report)
• [XD] US 2009095439 A1 20090416 - STOTZEL REINHARD [DE], et al
• [XDA] US 8122936 B2 20120228 - ATTRIDGE JON H [US], et al
• [XDA] US 2008099180 A1 20080501 - WEICKER GUNTER [DE], et al
• [XDA] US 5911269 A 19990615 - BRANDER JOHN J [US], et al
• [XA] US 7165600 B2 20070123 - GRASSI JOHN R [US], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3290130 A1 20180307; US 2018056373 A1 20180301

DOCDB simple family (application)
EP 17185130 A 20170807; US 201615250690 A 20160829