

Title (en)
METHOD AND APPARATUS FOR CONTROLLING OPERATION AND POSITION OF A LANCE AND NOZZLE ASSEMBLY IN A MOLTEN METAL BATH IN A VESSEL

Title (de)
VERFAHREN UND VORRICHTUNG ZUR STEUERUNG DES BETRIEBS UND DER POSITION EINER LANZEN- UND DÜSENANORDNUNG IN EINEM METALLSCHMELZBAD IN EINEM GEFÄSS

Title (fr)
MÉTHODE ET APPAREIL POUR LA COMMANDE DU FONCTIONNEMENT ET DE LA POSITION D'UN ENSEMBLE LANCE ET BUSE DANS UN BAIN DE MÉTAL FONDU DANS UN RÉSERVOIR

Publication
EP 3687666 B1 20211027 (EN)

Application
EP 19849785 A 20190819

Priority
• US 201862719277 P 20180817
• US 2019047116 W 20190819

Abstract (en)
[origin: WO2020037327A1] The present invention preferably comprises a system and method for operating and/or positioning a lance and nozzle assembly relative to a molten metal bath in a vessel. Specifically, at least one temperature sensor is provided proximate a tip of the lance and nozzle assembly and at least one temperature sensor is provided on or in the vessel. A processing unit is configured to receive at least one signal from each of the temperature sensors, process the signals to determine the active position of the lance and nozzle assembly relative to the metal bath, and move the lance and nozzle assembly to a preferred position the corresponds to a stage of operation in the vessel.

IPC 8 full level
B01D 53/79 (2006.01); **B05B 7/04** (2006.01); **B05B 7/12** (2006.01); **C21C 5/32** (2006.01); **C21C 5/46** (2006.01); **C21C 5/52** (2006.01); **F27D 3/16** (2006.01); **F27D 21/00** (2006.01)

CPC (source: EP US)
C21C 5/32 (2013.01 - EP US); **C21C 5/462** (2013.01 - US); **C21C 5/4673** (2013.01 - EP US); **F27D 3/16** (2013.01 - EP); **F27D 21/0014** (2013.01 - EP); **C21C 2005/5288** (2013.01 - EP US); **C21C 2300/06** (2013.01 - EP US); **F27D 2003/168** (2013.01 - EP)

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

DOCDB simple family (publication)
WO 2020037327 A1 20200220; CA 3081366 A1 20200220; CA 3081366 C 20210406; EP 3687666 A1 20200805; EP 3687666 A4 20200826; EP 3687666 B1 20211027; ES 2900126 T3 20220315; US 2020354802 A1 20201112

DOCDB simple family (application)
US 2019047116 W 20190819; CA 3081366 A 20190819; EP 19849785 A 20190819; ES 19849785 T 20190819; US 201916760376 A 20190819