

Title (en)
METHOD AND APPARATUS FOR MEASURING LIQUID METAL HEIGHT AND THE THICKNESS OF A SLAG LAYER IN A METALLURGICAL VESSEL

Title (de)
VERFAHREN UND VORRICHTUNG ZUM MESSEN DES FLÜSSIGMETALLPEGELS UND DER DICKE EINER SCHLACKENSCHICHT IN EIN METALLURGISCHEN GEFÄSS

Title (fr)
PROCÉDÉ ET APPAREIL POUR MESURER LE NIVEAU DU MÉTAL LIQUIDE ET L'ÉPAISSEUR D'UNE COUCHE DE LAITIER DANS UN RÉCIPIENT MÉTALLURGIQUE

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EP 2737285 A1 20140604 (EN)

Application
EP 12740176 A 20120727

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Abstract (en)
[origin: WO2013014271A1] A method and apparatus for measuring the liquid metal height and/or the thickness of a slag layer floating on the liquid metal in an electric arc furnace or a ladle furnace by means of an elongated and electrically conductive probe, wherein the probe has a proximal end electrically connected to measuring means, and a distal end, wherein the probe is movable from above the slag layer through the slag layer into the liquid metal, the method comprising the steps of: a) lowering the distal end of the probe through the slag layer into the liquid metal; b) measuring the electrical potential over the probe during the lowering of the distal end through the slag layer into the liquid metal; c) comparing the measured electrical potential to a reference potential; d) relating the change in electrical potential to the vertical position of the distal end of the probe; e) determining the vertical position of the upper slag level and the vertical position of the upper level of the liquid metal, where the movable probe is one or more of the melting or heating electrodes in the electric arc furnace or ladle furnace.

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