Title (en)

SÖDERBERG ELECTRODE FOR MAKING SILICON ALLOYS AND SILICON METAL

Title (de)

SÖDERBERGELEKTRODE ZUR HERSTELLUNG VON SILIZIUM UND SILIZIUMLEGIERUNGEN

Title (fr)

ELECTRODE DE TYPE SÖDERBERG DESTINEE A LA FABRICATION D'ALLIAGES DE SILICIUM ET DE METAUX A BASE DE SILICIUM

Publication

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Application

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Abstract (en)

[origin: WO9851129A1] The self-baking electrode suitable for use in an electric arc furnace comprises an elongated open ended electrically conductive casing for extending generally vertically within the furnace. A central core made of a heat conductive material is disposed within and spaced from the casing. A framework within is securing the central core to an inner surface of the casing for holding centrally the central core within the casing and for preventing an extrusion of the central core downward. The central core is surrounded by a carbonaceous electrode paste devised to cure into a solid electrode upon heating and to bond to the central core. This self-baking electrode allows the production of silicon metal in a Söderberg-type furnace without any modification to the usual slipping system or addition of another slipping system. An electrode according to the invention allows the same furnace to produce both FeSi of any grade and Si metal without any downtime between the gradual change from one product to the other and each time at the lowest electrode cost.

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