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PRODUCTION OF CALCIUM SILICIDE ALLOY FROM IRAQI RAW MATERIALS USING ELECTRIC-ARC FURNACE

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Abstract

This work includes a method for production of Calcium Silicide alloy from reduction of calcium oxide and silicon oxide by coal. This raw material is available in Iraq in good quality enough to produce the alloy instead of importing. The work also includes the design and manufacturing of electric-arc furnace locally, and the use of the graphite electrodes that made from graphite scrap. The main use of this alloy is to reduce the oxides that formed during the production of steel, and produce steel of high quality.

Keywords: سبيكة كالسيوم سيليساید، مواد أولية عراقية، فرن القوس الكهربائي