CHROME PRE-REDUCTION

Description

The invention relates to a novel process of partial oxidation of un-agglomerated chromite ore in ferrochrome production processes.

The process includes the steps of:

(i) providing a source of un-agglomerated chromite ore;
(ii) subjecting the source of un-agglomerated chromite ore to pre-oxidation at a temperature of 700 °C to 1100°C, both values inclusive;
(iii) controlling the above-mentioned pre-oxidation temperature such that maximum migration of iron (Fe) to the surface of the chromite ore particles takes place and minimum Cr^2O^3 formation takes place; and
(iv) forming a pre-oxidized source of un-agglomerated chromite ore wherein maximum migration of iron (Fe) to the surface of the chromite ore particles takes place, as well as minimum Cr^2O^3 formation takes place.

Benefits

Significant reduction in electricity consumption and costs.

Project status

Patent granted in South Africa

Currently seeking licensees or purchasers for the technology.

Market Opportunity

The process is capable of achieving significant reductions in specific electricity consumption spent during ferrochrome production processes.

This would have a clear effect on the bottom line of smelter operations.

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