Critical review of the existing procedures for the characterisation of the metallurgical properties of blast furnace burden material at conditions of high injection rates

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Critical review of the existing procedures for the characterisation of the metallurgical properties of blast furnace burden material at conditions of high injection rates

From 1999-07-01 to 2002-06-30

Project details

<table>
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<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tr>
<td>EUR 920 500</td>
<td>B - Reduction of iron ores</td>
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<th>EU contribution:</th>
<th>Funding scheme:</th>
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<td>EUR 552 300</td>
<td>CSC - Cost-sharing contracts</td>
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Coordinated in: Germany

Objective

The metallurgical properties of pellets, sinter and lump ore are predominantly described by their disintegration behaviour, their reducibility as well as by high temperature properties like melting and dripping. Under conditions of high injection rates and extended retention time of the burden in the blast furnace, the standardised test procedures, usually applied for the characterisation of burden materials, do not longer correspond to the actual conditions and do not sufficiently describe the quality parameters of the burden. Research work is necessary to define temperature and gas composition profile, at the blast furnace periphery, and at half radius over the furnace height. Research is also necessary to determine the effects on the metallurgical properties. New routine test procedures for the characterisation of the disintegration behaviour and the reducibility are also to be developed.

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