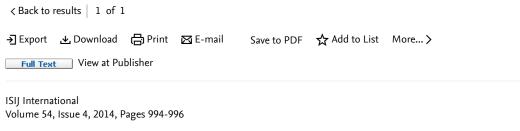
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Enhancement of magnetic properties of Malaysian iron ore by reduction roasting using oil palm empty fruit bunch (Article)

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Abstract

The demand for iron ore in Malaysia has increased steadily over the years. Malaysia has abundant low grade iron ore which has not been utilized as raw materials in iron making. There is a commercial potential to utilize local iron ore in blast furnace process of iron making, since a mini blast furnace with capacity of 0.5 million tons/year was constructed in 2012. A mass flow controller was used to control the flow rate of the gas at 100 ml/min. For each experiment, the weight loss of each pellet was measured before and after heating. The fractional reduction was estimated based on the different between initial and final weight of pellet as detailed elsewhere. The iron ore before and after reduction tests were crushed prior to magnetization test using vibrating sample magnetometer (VSM) to characterize the magnetic properties of the sample by applying elevated magnetic field on the sample.

Author keywords Empty fruit bunch Iron making Iron ore Magnetic properties Reduction roasting Indexed keywords Engineering Blast furnaces Calcination Fruits Iron Iron ores Magnetic properties Palm oil controlled terms: Pelletizing Blast furnace process

Engineering controlled terms:

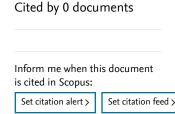
Blast furnaces Calcination Fruits Iron Iron ores Magnetic properties Palm oil Pelletizing

Blast furnace process
Commercial potential
Empty fruit bunches
Iron making
Mass flow controller
Oil palm empty fruit bunch
Reduction roasting
Vibrating sample magnetometer

Engineering main leading:

Iron ore reduction





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