

Scopus

## Document details

[< Back to results](#) | 1 of 1
[Export](#)
[Download](#)
[Print](#)
[E-mail](#)
[Save to PDF](#)
[Add to List](#)
[More... >](#)
[Full Text](#)[View at Publisher](#)

ISIJ International  
Volume 54, Issue 4, 2014, Pages 994-996

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

Abd Rashid, R.Z.<sup>a</sup>, Yunus, N.A.<sup>a</sup>, Mohd Salleh, H.<sup>a</sup>, Ani, M.H.<sup>a</sup>, Akiyama, T.<sup>b</sup>, Purwanto, H.<sup>a</sup> [✉](#) [🔍](#)

<sup>a</sup>Faculty of Engineering, International Islamic University Malaysia, Jalan Gombak, P.O. Box 10, 50728, Kuala Lumpur, Malaysia

<sup>b</sup>Centre for Advanced Research of Energy and Materials, Hokkaido University, Sapporo, 060-8628, Japan

### 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 difference 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 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 heading: Iron ore reduction

### Metrics

0 Citations in Scopus

0 Field-Weighted Citation Impact

### Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)[Set citation feed >](#)

### Related documents

Find more related documents in Scopus based on:

[Authors >](#) [Keywords >](#)