

KAWASAKI STEEL TECHNICAL REPORT

No.43 (October 2000)

Automotive Materials and Instrumentation
and Process Control

Core Materials for Motors in Automobiles and Evaluation Method

Atsuhito Honda, Masayoshi Ishida, Kazuo Shimada

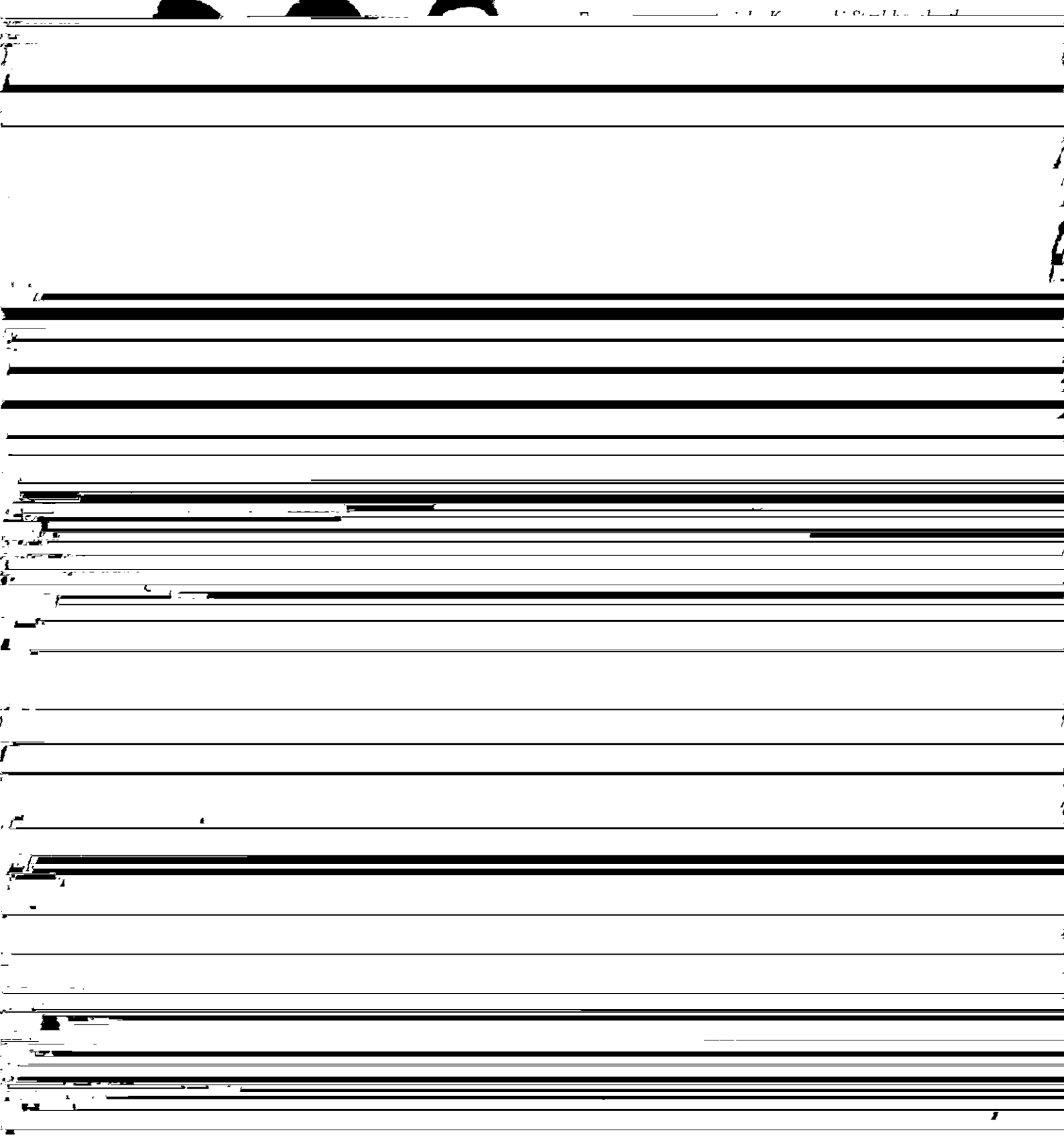
Synopsis :

For motor core materials, Kawasaki Steel has developed new products such as 35RM200 for low iron loss, the RP series for high induction, the RMHE series for low iron loss and high induction, the RMHF series for low iron loss at high frequency, and the B-type self-adhesive type organic coating, by controlling the metallurgical factors in an optimum condition. In order to improve the brushless DC motor efficiency and torque, a decrease in high frequency iron loss and increase in flux density in the core material were found to be effective, respectively. Localized iron loss measurement in the rotating motor proved that a high iron loss occurred in the teeth.

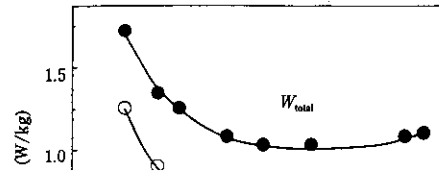
(c)JFE Steel Corporation, 2003

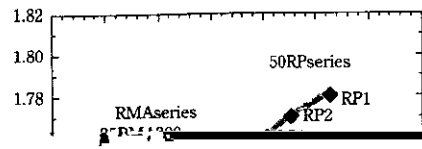
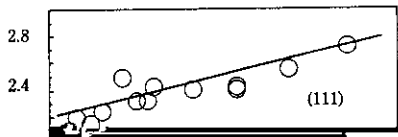
Core Materials for Motors in Automobiles and Evaluation Method*

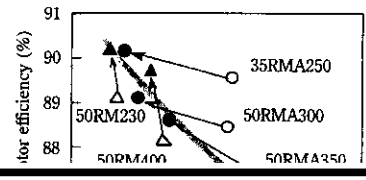
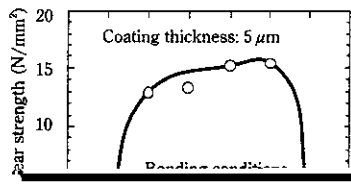
Synopsis:

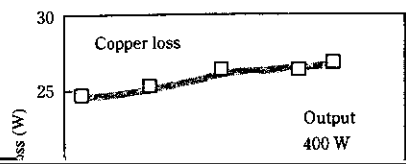
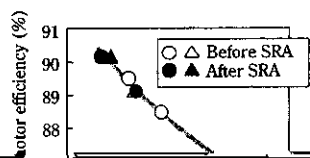


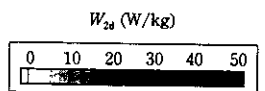
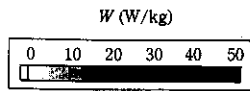
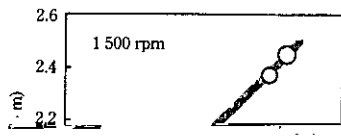
The production of electrical steel at Kawasaki Steel began with hot rolled Si steel in the early 1930s. Since then, a stable supply system for both quality and quantity has been established for the wide range and grade of products. The present paper describes the controlling factors of the properties of these non-oriented electrical











4 Conclusions

- Shimazaki: *National Tech. Rep.*, 33(1987), 617
5) K. Matsumura and B. Fukuda: *IEEE Trans. Mag.* MAG-20
(1984)5, 1533
6) K. Matsumura, B. Fukuda, K. Kinoshita, T. Imai, Y. Ohata