

KAWASAKI STEEL TECHNICAL REPORT

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"Environment-friendly Steel Products" and  
"Environment Preservation Technology"

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Development of Environment-Friendly Steel Products at Kawasaki Steel

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Synopsis :

This paper describes the research and development of environmentally harmonized steel products. Dealing with environmental problems is one of the biggest issues facing corporate businesses in the 21st century. Kawasaki Steel has vigorously been promoting both (1) energy conservation and (2) recycling of resources, through its steel production processes. In recent years, Kawasaki Steel has been engaged in developing steel products effective to the following three environmental issues; (1) energy conservation and reduction of CO<sub>2</sub> emissions, (2) recycling and reduction of wastes, and (3) environmental protection.

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The body can be viewed from the next page.

## Development of Environmentally Harmonized Steel Products

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Takashi Okano



Yukiko Muraoka

Automobiles and ships

- Pb-free steel sheet for fuel tanks

Automobiles

- Ultra high  $\sigma$  value cold rolled steel sheet

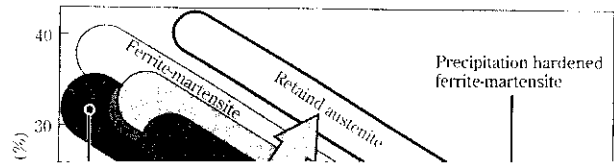
Improvement in electric applications efficiency

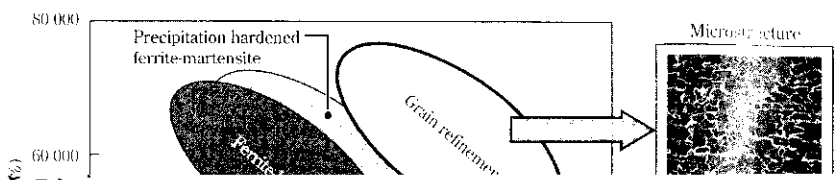


the Japan Society of Metal Science in the last five years are listed below.

(1) Year 2000

“Development of the concept of new steel manufacturing process (TPCP) by integration of uniform





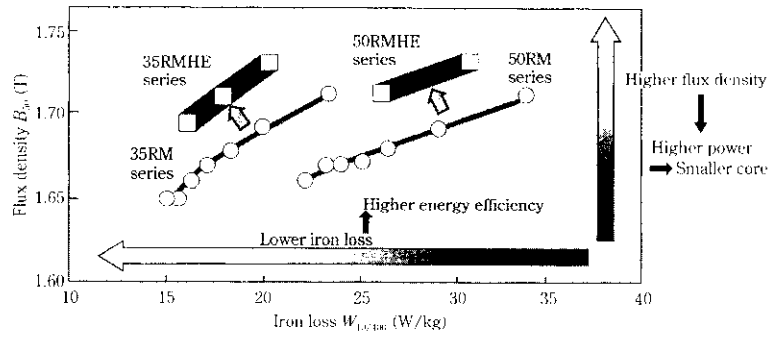
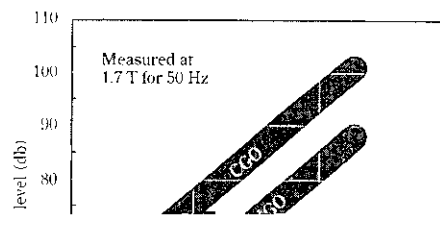
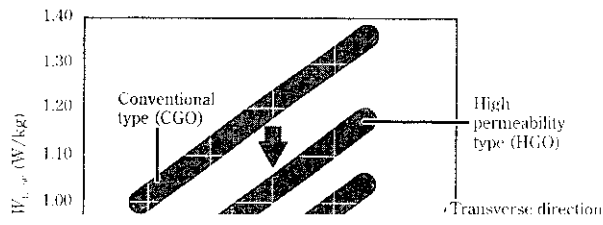


Fig. 6 Iron loss at 1.0 T, 400 Hz and flux density at 5 000 A/m of RM and RMHE series

Kawasaki Steel can also supply material for exhaust ity.



Quench and temper process

TPCP: Thermo mechanical Precipitation Control Process

Slab  
ingot

Reheating

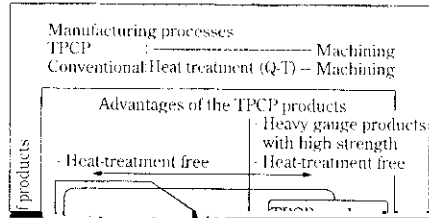
Controlled rolling

Air cooling

Shipping



(a)



(b)

