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(54) **PREPARATION OF RARE EARTH PERMANENT MAGNET MATERIAL**(75) Inventors: **Hajime Nakamura**, Echizen (JP); **Koichi Hirota**, Echizen (JP); **Takehisa Minowa**, Echizen (JP)(73) Assignee: **Shin-Etsu Chemical Co., Ltd.**, Tokyo (JP)

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(52) **U.S. Cl. 148/122; 148/101; 148/302; 252/62.55**(58) **Field of Classification Search 252/62.54–62.58; 148/101, 122, 302**

See application file for complete search history.

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(57)

ABSTRACT

A method for preparing a rare earth permanent magnet material comprises the steps of: disposing a powder comprising one or more members selected from an oxide of R^2 , a fluoride of R^3 , and an oxyfluoride of R^4 wherein R^2 , R^3 and R^4 each are one or more elements selected from among rare earth elements inclusive of Y and Sc on a sintered magnet form of a R^1 —Fe—B composition wherein R^1 is one or more elements selected from among rare earth elements inclusive of Y and Sc, and then heat treating the magnet form and the powder at a temperature equal to or below the sintering temperature of the magnet in vacuum or in an inert gas. The result high performance, compact or thin permanent magnet has a high remanence and coercivity at a high productivity.

16 Claims, 3 Drawing Sheets

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