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REVIEW OF Nd-Fe-B PERMANENT MAGNETS

A. S. Kim

Crucible Research Center

P. O. Box 88

Pittsburgh, PA 15230

Since NdFeB magnets were introduced in 1983, the market has grown from nothing to 350 million dollars in 1991, and is expected to exceed 2 billion dollars in 2000. This rapid growth is mainly due to the high energy products and relatively low cost compared to Sm-Co magnet. These advantages have created the opportunity for the development of imaginative and novel products which make use of the materials outstanding magnetic properties. For example, the NdFeB magnet has made posssible the development of devices such as 2½ inches disk drives, notebook size computers, and high power magnetic separators, etc. Although the growth of NdFeB has been rapid, its applications are still limited due to problems with temperature stability, environment stability, and cost. The progress with regard to the improvement of the performance and stability of the magnet will be reviewed.