NHK SPRING CO.,LTD.

May 13, 2026

Company Name: NHK SPRING CO., LTD.

Securities Code: 5991 (TSE Prime Market)

NHK SPRING and Daido Steel Develop Two Products to Enhance Traction Motor Performance and Reduce Environmental Impact

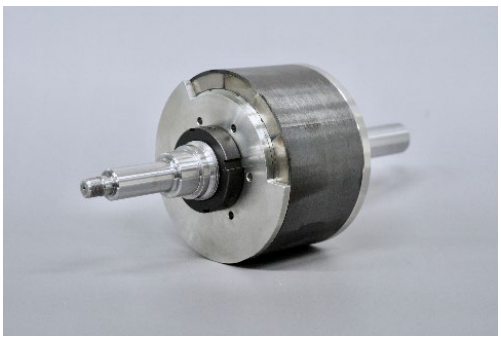
Contributing to the Advancement of Next-Generation Motors through Heavy Rare-Earth-Free Design, High Performance, and Enhanced Recyclability

NHK SPRING CO., LTD. (Head Office: Yokohama; President & COO: Kazuhisa Uemura) and Daido Steel Co., Ltd. (Head Office: Nagoya, Aichi Prefecture; President: Tetsuya Shimizu) have jointly developed two new types of rotors for traction motors used in electric vehicles, achieving both improved performance and reduced environmental impact. The newly developed products are the SPM Rotor and the Spring-Fixed IPM Rotor. Both products were realized through the combination of heavy rare-earth-free* magnets developed by Daido Steel and the Company's proprietary CFRP assembly technology and advanced spring design technology. In addition, the Company and Daido Steel plan to exhibit these products at the Company's booth during the Automotive Engineering Exposition 2026 YOKOHAMA and the Automotive Engineering Exposition 2026 NAGOYA. Visitors are warmly invited to stop by and visit the booth.

Overview of the Developed Products

These products use heavy rare-earth-free hot-deformed magnets manufactured by Daido Steel.

- SPM Rotor
  Magnets are secured using CFRP, enabling rotational speeds more than 1.5 times higher and output approximately 50% greater than those of conventional products. Under equivalent output conditions, the overall motor volume can also be reduced by approximately 50%.
- Spring-Fixed IPM Rotor
  Magnets are secured using leaf springs in a newly developed structure, enabling easy disassembly and excellent recyclability.



1. SPM Rotor (cutaway model)

2. Spring-Fixed IPM Rotor

Under the corporate philosophy of “Key Parts, Driving the World Forward,” the NHK SPRING Group will continue to enhance co-creation with its partners and remain committed to innovation in manufacturing that helps drive society forward.

* Magnets used in traction motors generally contain heavy rare earth elements such as dysprosium and terbium to prevent deterioration of magnetic force in high-temperature environments. The two newly developed products described above use magnets developed by Daido Steel that do not contain heavy rare earth elements. These products are expected to contribute to stable resource procurement with reduced susceptibility to geopolitical risks.

【Contact for inquiries regarding this announcement】
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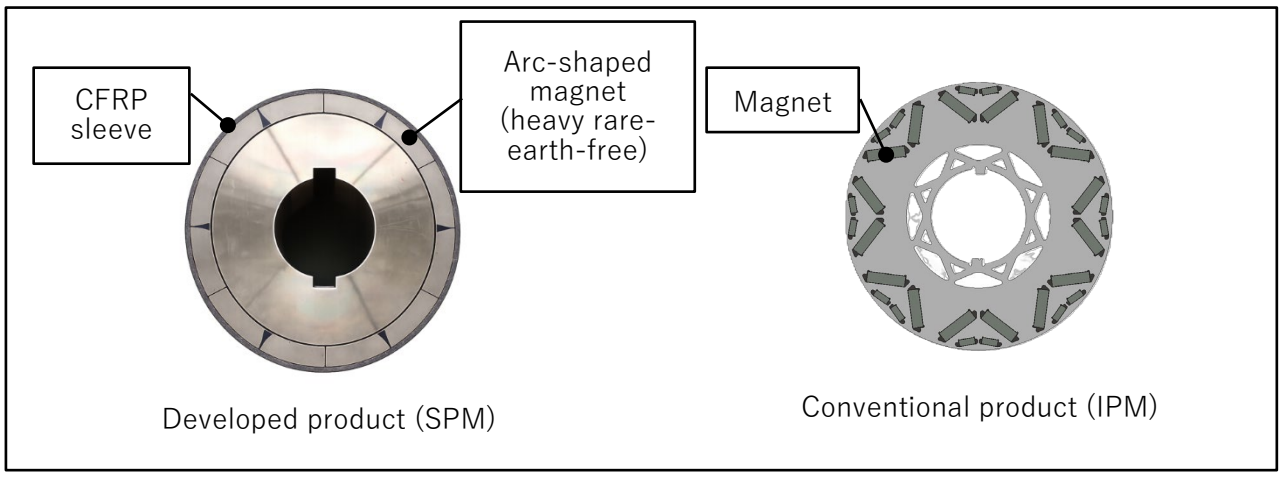
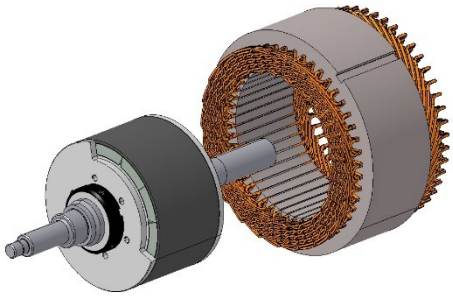
Appendix

Developed Product (1): High-Speed, High-Output SPM Rotor

Rotors with a surface permanent magnet (SPM) structure, which achieve high output density by placing magnets on the rotor surface, have traditionally faced the challenge of magnet scattering caused by centrifugal force during high-speed rotation. For this reason, interior permanent magnet (IPM) structures have been the mainstream design for conventional traction motors. However, the newly developed product adopts a structure in which the magnets are firmly secured circumferentially using CFRP, leveraging the Company’s proprietary CFRP assembly technology cultivated through the development of FRP springs and golf shafts. As a result, the product achieves approximately 50% higher output and rotational speeds more than 1.5 times those of conventional products. In addition, under equivalent output conditions, the overall motor volume can be reduced by approximately 50%, thereby enabling greater design flexibility and improved power efficiency in electric vehicles.



Structural comparison between IPM and SPM

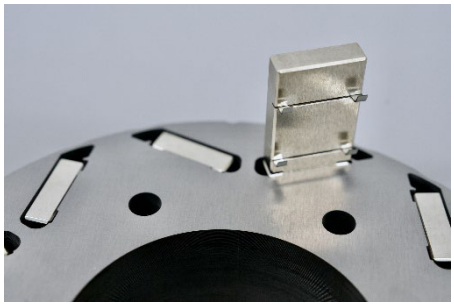


SPM Rotor (left) and Stator (right)

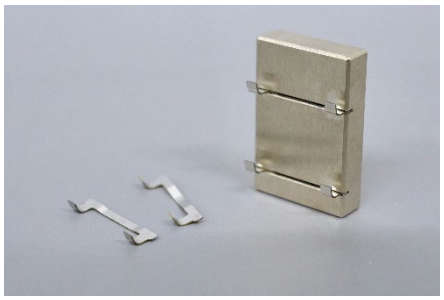
Developed Product (2): Spring-Fixed IPM Rotor

An interior permanent magnet (IPM) rotor features a structure in which magnets are embedded within the rotor. In general, the inserted magnets are bonded with resin, requiring a heating step to remove the resin during recycling, which has posed various environmental challenges, including CO_2 emissions. The newly developed product adopts a structure in which the magnets are secured by the elastic force of leaf springs. This enables magnets to be easily removed at the time of disposal, thereby significantly improving the recyclability of IPM rotors.

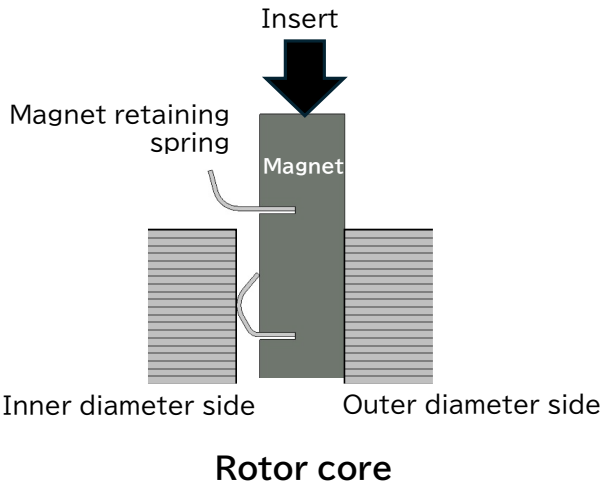
The leaf springs were designed and processed using the Company's spring design and processing technologies cultivated over many years. In addition, the magnets used to attach the leaf springs are grooved during Daido Steel's highly flexible hot-working process, eliminating the need for additional machining. Through the development of this product, the Company expects to help reduce the environmental impact of traction motors used in next-generation electric vehicles.



New structure for inserting magnets with leaf springs into the IPM Rotor



Leaf springs (single units, left) and a magnet equipped with leaf springs



Leaf spring bends to secure the magnet (cross-sectional view)