Current Status of the Motor Industry and Efforts of Tatara Co-Creation Center

Challenges that the world's motor industry are facing

- To optimize advantage from an expansion of the motor market (EV, household appliances, drones, etc.)
- Reduction of the environmental effects
- Improvement of production efficiency/ reduction of costs

Industry requirements

- Development of high-performance motors (smaller-size, higher output, low-noise, low vibration, etc.)
- Energy saving
- IEnhancement of the general versatility/ reduction of rare earth elements



Motor core

Amorphous metal ribbons

Excellent soft magnetism

- low loss
- high magnetic permeability

low-heat generating ↓ high-efficiency/

high-revolution

small-size/ high-power density



Amorphous metal ribbons

Shimane Prefecture's approach

Mass production of amorphous cores

- Establishment of mass production technologies
- Material improvements of amorphous metal ribbons (thickening processing etc.)

R&D with Shimane University, Kumamoto University, Gifu University, Hitachi Metals, Ltd., University of Oxford, etc.

Formation of unit clusters

Establishment of mass production base for amorphous cores

Cooperation with motor-related companies in the prefecture

To attract motor manufacturers

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Motor production base