

Hokkirigawa· T. Yamaguchi Laboratory, Graduate School of Engineering, Tohoku University

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Contact: Takeshi Yamaguchi (Assistant Professor)

At a Glance

Status: University.

*Date of foundation:*1907

Employees: 600

Main Activity

The Hokkirigawa· T. Yamaguchi Laboratory, Graduate School of Engineering, Tohoku University main activities are:

- Research & development in the field of tribology, such as friction and wear of materials;
- Development of new carbon materials from rice by-products and their application as tribo-materials.
- Dry linear sliding bearings which can be used without lubricants
- Dry chain using resin composites using RB ceramics powder as filler
- Light driving unit for electrical wheel chair using rubber/RB ceramics composites
- High slip-resistant shoe soles
- Friction and wear testing apparatus

Company Strengths

HIGH END PRODUCTS: Carbon materials made from rice by-products, Dry linear sliding bearing, Dry chain, Light driving unit for electrical wheel chair, high slip-resistant shoe sole materials, etc.

PATENTS/LICENSES/TRADE MARKS/QUALITY CERTIFICATIONS: About 62 patents in Japan and about 60 international patents

INNOVATIVE PROCESSES/SERVICES/PRODUCTS: RB ceramics and RH ceramics which are made from rice bran and rice husk, respectively

NETWORKING: Sendai-city, Miyagi prefecture, local companies in Japan.

R&D: New carbon materials from rice by-products and their application to tribo-elements such as sliding bearings, etc.

EXPERTISE: : Tribology (related to friction, wear, lubrication), carbon materials, etc.

Sector

NANOTECHNOLOGY

- Composites
- Fundamental research
- Inorganic

Type of Cooperation

- DEVELOPMENT OF NEW PRODUCTS

PARTNERSHIP PROPOSAL

The university have developed new hard porous carbon materials RB ceramics which are made from rice bran, i.e. the by-products of rice, and have clarified that they show low friction and low wear without lubricants in air. It has also developed dry linear sliding bearings and high slip-resistant shoe soles by use of the RB ceramics through collaboration with local companies in Japan.