

Current Status of the Aircraft-engine Industry and Next-generation Tatara Co-Creation Center's Efforts

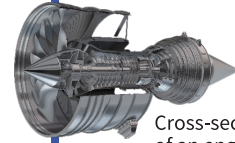
Challenges that the world's aircraft-engine industry are facing

- To optimize advantage from the market expansion (annual growth rate of 5%)
- Materials for aircraft-engines are currently produced predominantly in limited areas (only in Europe and North America)
- Improvement of fuel consumption performance/ reduction of the environmental effects
- Improvement of production efficiency/cost reduction

Industry requirements

- Development of fuel-efficient engines (large-sized, improvement of heat resistance properties)
- Closed-loop recycling of materials (to set up an integrated production system in Asia)

Performance improvement of the heat-resistant alloy is the key to the improvement of fuel efficiency!



Cross-section structure of an engine

Shimane Prefecture's approach

- Development of new materials for jet engines ... Reduction of the effect on the environment
- Development of manufacturing technologies for large parts ... Improvement of performance

R&D in collaboration with Shimane University, University of Oxford, Hitachi Metals, Ltd., and other

- Establishment of integrated production system (from "production of raw materials" to "finishing/machining" and also "recycling")

Technological advancement of companies in the prefecture + To attract companies to improve manufacturing processes

Realization of Asia's first aero-engine cluster for materials manufacturers

