

KINOSHITA Lab.

[Energy, Mineral and Foods from Sea]

<http://ketch.iis.u-tokyo.ac.jp/home/>

Department of Systems Innovation

Marine Hydrodynamics

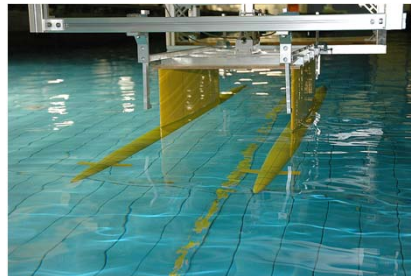
Freak Wave, Marine Energy and Offshore Aquaculture

Clarifying the mechanism of Freak Wave which is one of the main causes of disaster at sea even now, we are developing the way to avoid them. Ocean renewable energy like Ocean Wind Power and Wave Energy is one of the promising resources for low carbon dioxide society. Dynamic Positioning System is a key technology for mining from the deep sea bottom. Animal protein is vital for human survival in addition to energy. Offshore aquaculture is inevitable when considering amount of area and contamination of sea water on this millennium.

- ◆ Clarifying the mechanism of Freak Wave and developing the way to avoid a disaster
- ◆ Ocean renewable energy utilization, including development of comfortable boats with wave energy absorption suspension
- ◆ Developing resonant-free ocean going high speed container ships
- ◆ Offshore aquaculture system with automatic feeding and developing floating breakwaters
- ◆ Highly accurate Dynamic Positioning System utilizing slow-motion maneuvering derivative in heavy seas
- ◆ Studies on Marine Sports



Comfortable boat
with wave energy absorption suspension



resonant-free ocean going high speed container ships



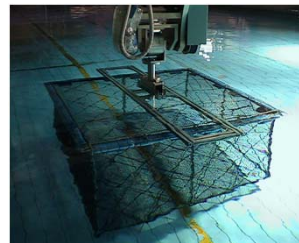
floating breakwater



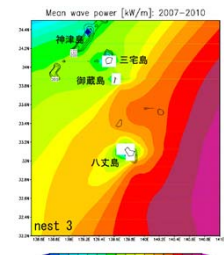
TWIN DUCKS



Test of slow-motion maneuvering
derivative in heavy seas



Offshore aquaculture system



Wave power around Izu Islands



Freak Wave



Study on rowing gear and technics