

## Relation between Sea Ice Period and Meteorological Conditions in Coastal Region of Sea of Okhotsk around Shiretoko Peninsula

# Tomofumi Kosugi[1]; Shuhei Takahashi[2]; Akira Hori[3]

[1] Civil Engineering, Kitami Institute of Technology; [2] Kitami Institute of Technology; [3] KIT

Shiretoko Peninsula was registered as UNESCO world natural heritage in July, 2005. This main reason is the western coast of Shiretoko Peninsula is the southernmost sea ice area in the Northern Hemisphere, and the characteristic natural environment brought by the sea ice.

The sea ice extent tends to decrease by recent warming in this year. The sea ice flow along the eastern coast of Sakhalin is barricaded by Shiretoko Peninsula, and the sea ice period at Utoro in Shiretoko Peninsula is the longest in the coast of the Sea of Okhotsk, Hokkaido.

Sea ice period obtained from 'sea ice reports map' by Japan Coast Guard, is compared with meteorological conditions in the southwestern area of the Sea of Okhotsk, especially at Utoro area.

The conclusions were as follows.

- 1) Sea ice period increases as closing to Shiretoko Peninsula along the coast of Hokkaido.
- 2) Relation between sea ice period and the average temperature show high correlation of minus at every point of Hokkaido. The correlation coefficient was large around Shieretoko Peninsula.
- 3) When average temperature risen to above  $3.3^{\circ}\text{C}$  in Utoro, sea ice does not flow in the coast.
- 4) At Utoro, sea ice approaching was influence by longer the northwest wind, sea ice leaving was influenced by, the southeast wind or the southwest wind or the temperature rising.
- 5) Sea ice concentration does not so much change temperature or wind, when sea ice distribution was strong.