Port of Wakkainai

2018-2019

The Northern Breakwater Dome (former Port of Wakkainai Roofed Breakwater)

The Northern Breakwater Dome, which measures 427 meters in length and 13.8 meters in height, is a half-arched breakwater supported by 70 columns. This unique structure is reminiscent of a Roman-style cloister.

A 5.5-meter high breakwater had been planned at first. However, since a more solid facility was actually needed to protect passengers and cargo from high waves and strong winds at the ferry landing place of the Karadito Route, the dome-shaped breakwater was constructed. It was designed by Minori Tashiya, who was a 26-year-old engineer at that time. The construction took five years and was completed in 1938. A half century later, a three-year period of repair work began in 1976 to solve a safety problem due to aging, and the former grand structure was rebuilt. Moreover, in order to conform to new earthquake-resistant design methods, a three-year project to perform advanced retrofitting of columns and reinforcement of other defective sections of the dome was begun in 1996, and in 2016, measures to prevent aging and other deterioration were implemented under a preventative maintenance plan, all of which further enhanced the safety of the structure.

The Northern Breakwater Dome has now achieved nationwide name recognition not only as a breakwater but also as a landmark of the Port of Wakkainai and a tourist spot. The dome is used as a multipurpose space where various events and exchange programs for local residents are held. It is popular among tourists and locals alike as a symbol of Wakkainai.

The breakwater was selected as a Hokkaido Heritage in October 2014. A structure that stands out among the seascape of the Port of Wakkainai and the Karadito Route, it was also designated as a Civil Engineering Heritage by the Japan Society of Civil Engineers (JSCE) in November 2003 for its unique structure and the technology used at the time of its construction.
Wakkanai, which is Japan’s northernmost city, is rich in marine and land resources and boasts attractive natural surroundings such as the vast Soya Hills. dakon on the opposite shore is just 43 km away. Wakkanai has long been Japan’s northernmost traffic hub and port city.

The Port of Wakkanai was first developed in the late 18th century, when it acted as a place for the transportation of seafood in concert with the development of the fishing industry. In the Meiji era (1868 – 1912), the port made a significant contribution to the development of northern Hokkaido as the gateway to the region. When Japan occupied southern Karafuto (present-day southern Sakhalin) after the Japanese–Russie War, Wakkanai Port attracted attention and traffic as the base for the shortest sea route to Karafuto. A liner route was established between Wakkanai and Odoromari (present-day Korsakov) in 1911, and a Wakkanai–Odoromari liner route, which is connected to direct train services between Hakodate and Wakkanai, was established in 1923. This formed a route connecting Honshu (mainland Japan), Hokkaido and Karafuto, and further increased the significance of the port for Walcanai as a traffic hub.

The Northern Breakwater Dome has supported distribution activities as a departure and arrival place for ferry routes to Rishiri and Rebun Islands. When the areas were designated as Rishiri-Rebun-Sarobetsu National Park in 1974, the number of visitors using the facility increased partially because of the introduction of longer ferry boats. Repair work on the dome began in 1978, and then Shirases Promenade, a revetment integrated with the dome, was completed. It is popular with people as a symbol that passes down the history of the region and the Port of Wakkanai.

The Port of Wakkanai is now being improved under the Wakkanai Marine Town Project, which is conducted in conjunction with city redevelopment, with the aim of forming an international exchange hub and especially contributing to the exchange of people and goods with Sakhalin. In Sakhalin, large-scale oil and natural gas development is underway. Using its geographical advantage, the Port of Wakkanai acts as an intermediate port and hosts vessels involved with the Sakhalin Project at Suo-hiro Wharf.

In addition to the port’s conventional role as a base for fishing and importing oil-related products, the Port of Wakkanai also plays a vital role as a marine gateway that connects the Soya area and elsewhere in Japan and the world, providing an interim storage place of materials for the Sakhalin Project and a place for importing fresh seafood. Further, in 2017, business continuity planning (BCP) was implemented to reduce possible damage from tsunamis and earthquakes, making more stable use of the Port of Wakkanai possible.

**Location and geographical features**

The Port of Wakkanai is located at the northern tip of Hokkaido (45°27'N, 141°33'E), and faces Sakhalin across the Soya Strait. Wakkanai City consists of the hill zones that extend north to south and low-lying areas around the hills, and the urban district spreads out like an open fan toward the south.

**Port area**

The Port of Wakkanai covers the marine area (1,800 ha) enclosed by the line drawn from Cape Nosappu to Cape Kostob in Wakkanai and the coast (Announcement No. 550) by the Hokkaido Government, Mar. 31, 1953.

**Weather**

Wakkanai has a marine climate, and the annual average temperature is approximately 6°C. A record high of 31.3°C was observed in August 1946, while a record low of minus 16.4°C was marked in January and February 1944. Winds blow from the south-southwest throughout the year, and strong winds with a velocity of 10 m/s or more blow in from the northwest to north during winter. Northeast winds blow during rainy season and other periods affected by high-pressure systems in the Sea of Okhotsk. Snow falls for almost five months from late November to early April. The Port of Wakkanai does not freeze, but when the force of drift ice is strong, it is a difficult period for ships to enter the Sea of Okhotsk from the Sea of Japan and remains in the waters offshore from the port for three or four days.