Domestic Projects

Civil Engineering

Sendai-Shiogama Port: Sendai, Koyo District Wharf (-14 m) Earthquake Reconstruction Work (Miyagi Prefecture)

This construction project was undertaken to repair the port functions of the Takasago No. 2 wharf that was damaged in the Great East Japan Earthquake. This project rebuilt 300 meters of the total wharf length of 330 meters, recovered hinterland that had sunk by liquefaction due to the earthquake, and performed soil improvement work.

This wharf is a hub of the international distribution network in the Tohoku region. Because its recovery was needed urgently the wharf construction work was performed on a 24 hour basis, which is highly unusual working time for this type of project. Work began in August 2011, and large container ships began docking in January 2012.

Today, more than one year has passed since the earthquake, and recovery and restoration projects are fully underway. Penta-Ocean has already completed the repairs at a number of ports. To fulfill the mission of the construction industry, we will continue to strive with our utmost effort for realizing recovery and restoration to assist the earthquake-ravaged areas.

Immediately After Earthquake

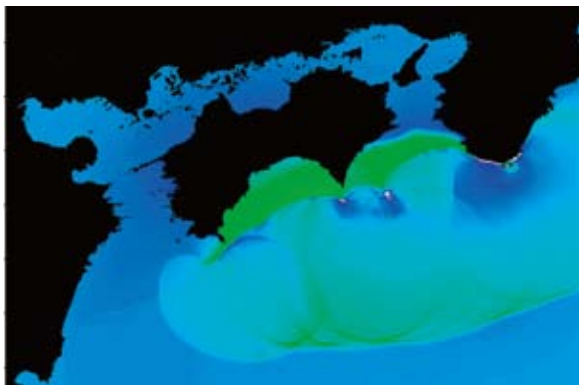
After Completion of Construction Work

Introducing a Technology for Tsunami and Earthquake Protection

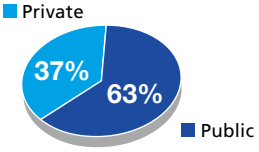
● Tsunami Submersion Simulation

Tsunami submersion simulation is a technology that enables simulation of tsunami damages by setting data of the sea floor, geographical features along the shore, and the scale of the expected earthquake.

After the Great East Japan Earthquake, this simulation has been widely used for the study of disaster preparedness, including disaster prevention plans by local governments and continuity planning (BCP) by companies.



Tsunami Submersion Simulation: Sample Analysis Data



Domestic Civil Engineering:
2012 Orders Received by Sectors (Non-Consolidated)

Orders received for the construction of national and regional government facilities and private-sector civil engineering works both rose, partly on increased orders received for recovery and reconstruction projects related to the Great East Japan earthquake. Orders received for domestic civil engineering works as a whole increased by 14.0% year-on-year.

Building Construction

Makabe Denshokan Museum (Ibaraki Prefecture)

Penta-Ocean completed the construction of a cultural facility in the village of Makabe in Sakuragawa, Ibaraki prefecture, a home to the remnants of an Edo era castle town. The surrounding area of this building is a region with a long and distinguished history, and the town has been designated as an important preservation district for historical buildings in Japan. Built on the former site of a community center that had fallen into disrepair over time, this new building was constructed with a design that blends harmoniously with the surrounding town.

The external appearance features black and white tones to match the surrounding storehouses made of soil and mortar, as well as the stones, and the south and west sides which are exposed to sunlight has cedar board paneling. The building itself has a unique design with three connected wings, and the structure uses steel sheets walls for providing earthquake resistance and also features a distinctive building interior without pillars for enabling a wide range of usage.

This building was awarded the Architectural Institute of Japan (AIJ) Prize for 2012.

Preservation and Restoration of Former Russo-Asiatic Bank Yokohama Branch Building (Kanagawa Prefecture)

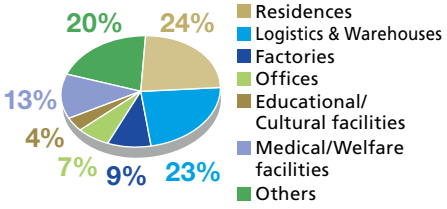
Designated as a tangible cultural property by the city of Yokohama, the Russo-Asiatic Bank Yokohama Branch building was renovated for use as a wedding hall. Built around 1921 and later converted into consulate and business offices, this building withstood the Great Kanto Earthquake and possesses a high architectural and historical value. It combines a highly distinctive design with grace and elegance in appearance, but had aged and deteriorated to the point where it required preservation and restoration.

This construction project aimed to maintain as much of its original building's appearance as possible while providing earthquake reinforcement work and external and internal repairs at the same time.

The building has been newly renovated as a wedding hall. The large marble staircase at the entrance that ascends to the second floor is used as the wedding aisle, and the bank safe is used as the gallery.

Before Restoration

After Restoration



Domestic Building Construction: 2012 Orders Received by Sectors (Non-Consolidated)

Orders received for large-scale redevelopment projects fueled a significant increase in orders received for residential construction. This offset a decline in orders received for non-residential construction, which resulted as orders received for large-scale projects shrank from the previous year. Orders received for domestic building construction overall rose by 12.0% year-on-year.