

ARCHITECTURAL BUILDING WORKS

Project for Upgrade of Wharf for Domestic Transport (Tonga)

Construction work has been completed on the Project for Upgrade of Wharf for Domestic Transport in the Kingdom of Tonga. Nuku'alofa Port, where this project was carried out, had no wharfs dedicated to large domestic inter-island ships, so ships had to share berths with large international cargo ships, causing congested conditions. To resolve this problem, the construction work for this project was carried out through Grant Aid assistance from the Japanese government, with the aim of separating international and domestic cargo by turning a different wharf that had been used for small ships into a dedicated domestic wharf that

was capable of also docking large ships, in addition to improving passenger and harbor safety. Furthermore, the new terminal building that was constructed through this project was designed to be environmentally friendly, with electric power being generated by solar panels mounted on the roof, and rain on the roof being collected in underground pits and reused for such purposes as flushing toilets. Earthquakes frequently occur in the Kingdom of Tonga, and in consideration of tsunamis generated by earthquakes, the terminal building has been equipped to serve as a tsunami countermeasure by

functioning as a wave dissipating seawall and an evacuation facility.



Thai Binh Thermal Power Plant Project (Vietnam)

Civil engineering and construction work has been completed on the Thai Binh Thermal Power Plant in Thai Binh Province in the Socialist Republic of Vietnam. As the site of this construction work is on an estuary, the ground is made up of soft soil. Before construction work of the plant itself could begin, it was necessary to first carry out ground improvement work (execution of work), which was accomplished by the Company based on the long years of knowledge

and experience it had accumulated in improving soft ground in that area. Following the ground improvement work, work on the main structures comprising a building for the turbine and the foundation for the boiler (construction work), an offshore pier (design and construction) as well as appurtenant facilities were carried out. This power plant is expected to contribute greatly to solving the shortage of electric power that is plaguing Vietnam, a country

enjoying phenomenal economic growth.



Cool Japan CLK Vietnam New Cold Storage Warehouse (Vietnam)

This construction work is the first stage of the Asia Cold Chain business (cold storage logistics), which is financed and carried forward by Cool Japan Fund. This project establishes the first full-scale cold storage warehouse in Vietnam, with the purpose of expanding distribution of high quality Japanese foodstuff throughout Southeast Asia.



Urban Redevelopment Project (Niigata, Japan)

Construction work on the Category 1 Urban Redevelopment Project in the West Area of Otedori, Omotemachi in Niigata prefecture was completed. The building was designed using colors that took into consideration the surrounding city blocks, and incorporated streetscapes reminiscent of a castle town and designs of buildings from long ago. The structure is a multipurpose building that houses such facilities as a social welfare center, a private pay nursing home, condominiums, a private preparatory school, and a dental clinic, and serves as a social services base that supports the daily life of the inhabitants of the city.



Newly Completed Project

Bali Culture Hall Construction Project

The Bali Culture Hall Construction Project was completed in Bali Province in the Republic of Indonesia. This was the first project ever ordered by the government of a local region in the Republic of Indonesia to have a foreign company participate in the construction work. Toa Corporation was responsible for all aspects of the building construction, including construction of a multipurpose theater facility with three floors above ground and one floor below ground, as well as building utilities, stage mechanisms, lighting, and acoustics on the same site occupied by the local government's office building. The Bali Culture Hall has become a new symbol of the revitalization of this region.



- **Client** Ministry of Public Works, Spatial Planning Section of Badung District, Bali Province
- **Construction period** December 2017 to August 2019
- **Project outline** Building use: Theater
Structure and size: Theater-RC structure; Roof-Steel structure;
Three floors above ground: One floor below ground
- **Site of construction** Bali Province, Republic of Indonesia

New Construction Work for Toyo Suisan Ishikari Distribution Center

New construction work on the Toyo Suisan Ishikari Distribution Center (provisional name) was completed in Hokkaido. A state-of-the-art cold storage warehouse with a storage capacity of approximately 44,000 tons was constructed at Ishikari Bay New Port, which has among the largest concentration of cold storage warehouses in Hokkaido. In the construction of this warehouse, the RCS construction method, a construction method that was jointly developed by Toa Corporation, was adopted. This hybrid structure construction method involved the use of RC components, which have a high degree of compressive strength, for the columns, and the use of S components, which have superior bend and shearing strength and are also lightweight, for the beams, making it possible to achieve large spans and large open spaces. To date, Toa Corporation has undertaken the construction of a number of cold storage warehouses, both in Japan as well

as overseas, and it is a field where the Company has great expertise.



- **Client** Toyo Suisan Kaisha, Ltd.
- **Construction period** February 1, 2019 to April 2020
- **Project outline** Building use: Cold storage warehouse
Structure and size: RCS structure (hybrid structure construction method using RC-columns and S-beams); Four floors above ground
Building area: 10,296.30 m²
Total floor space: 27,899.04 m²
- **Site of construction** Otaru City, Hokkaido