## Project for Expansion of Yangon Port in Thilawa Area (Phase I)

【Toyo - JFEE Joint Venture】

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This project, an expansion of Yangon Port Myanmar, is the new construction of container terminal port in river port which is located at Thilawa district from 16 km downstream of Yangon river.

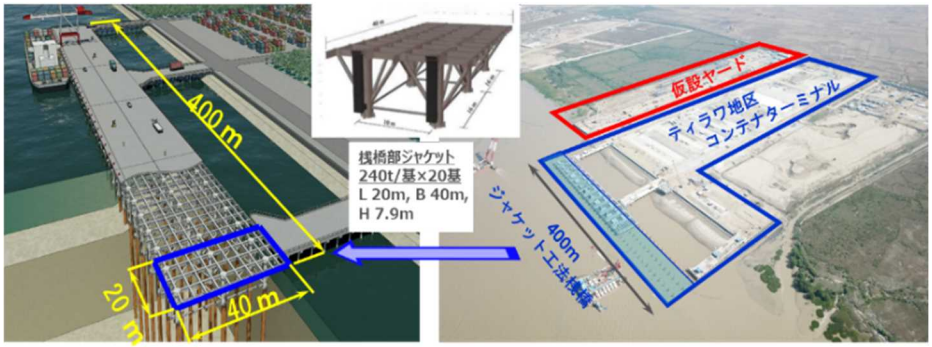
In order to deal with the rapid increase in import and export cargo volume due to economic revitalization, it was decided to develop a yard for containers, etc. at the wharf L = 400m and its hinterland. For the new jetty, a jacket construction method which can shorten the on-site construction period and reduce the number of piles was adopted.
The jacket construction method is three-dimensional truss「Jacket」assembled by welding steel pipes and girders on land, and the jacket is placed over steel pipe piles which is installed on site and fixed. This jacket construction method became the first application in Myanmar to a wharf.

20 Jackets (about 4,800ton) were constructed in this JV. The components were manufactured at factory in Myanmar, delivered to the site by land transportation, assembled three-dimensionally in temporary yard, and the completed jackets were shifted to the riverside by using winches and rails. Furthermore, a method of transporting and installing in the river using a crane vessel was considered, examined, and implemented.
As a result, the rapid construction could be done by simultaneously proceeding with each process of factory production, on-site assembly, and on-site construction. The risk of process delays such as stormy weather in the open ocean could be eliminated in the sea transportation of the finished components which are manufactured at the oversea factory and the construction was completed in a short period of about 2.5 years from the commencement date.

Also, the Engineers and staffs（60 people or more at all time）,manufacturing factory, on-site assembly works（assembling, welding, inspection, painting）, earthwork, concrete work, procurement of heavy equipment, and most of the major works（approximately 70% of construction costs for jacket construction) were adopted from Myanmar.
Although it was a challenge to utilize human resources and companies who have no knowledge or experience of jacket construction method, pre-construction and weekly basic technical education, daily OJT, skill development by Japanese SV, pillar for obtaining of international qualification AWS, sufficient training by implementing Japanese-style safety management education, etc. were done while ensuring quality, process, and safety. This project could not only transfer Japanese technology and management methods but also create the employment opportunities to Myanmar.

The success of this project has been highly evaluated by the Myanmar government and this method is also planned to be adopted in Phase Ⅱ(expansion work) to deal with the further increase in the volume of cargo.

Due to the above outstanding achievements and future developments, this case deserves an award in the field of international contribution.




Jetty Construction（Jacket）and Project Site

Completion Ceremony
(Deputy Minister of Transport and Communications, Myanmar, etc.)

Final Assembly in Temporary Yard

Overview of Completion