

# Shijiu Port Second Phase Construction Project (1) (2)

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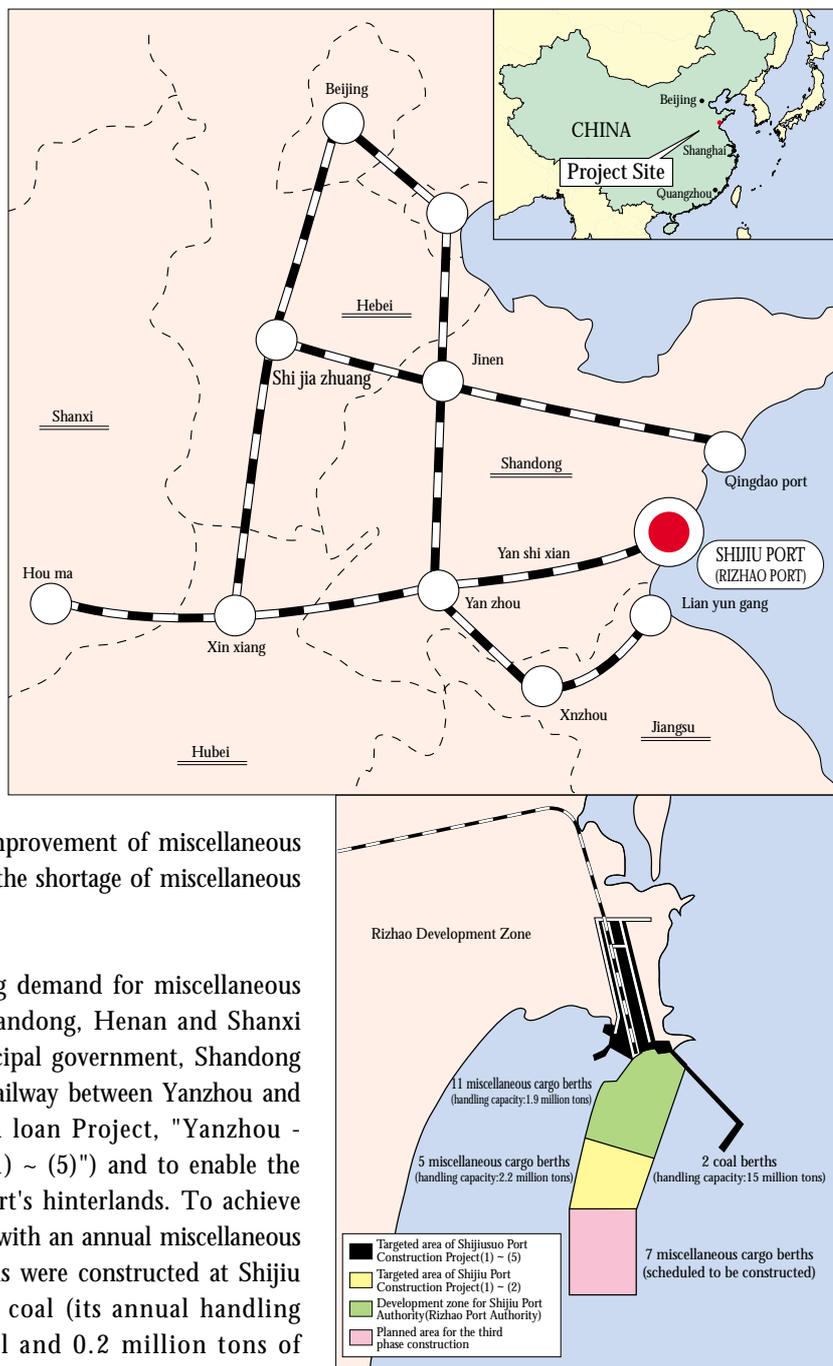
## 1 Project Summary and Japan's ODA Loan

### (1) Background

The rapid economic growth of the project's hinterlands (Shandong, Henan and Shanxi provinces) has produced booming demand for miscellaneous cargo handling at Shijiu Port, which mainly handles steel materials, iron ore and cement. The volume handled was projected to reach 2.45 million tons by 1995. This forecast was based on two considerations. One was the expected shift in the shipping of raw materials and manufactured goods from the steel works, fertilizer industry and mines in the hinterlands to Shijiu Port and away from neighboring Qingdao and Lianyungang ports. This shift was expected because of the construction of related transport facilities. The other was the planned construction of a number of large factories (cement, pulp, glass etc.). In 1991, when the appraisal was made, the annual miscellaneous cargo handling capacity of Shijiu Port was 0.2 million tons, necessitating the construction and improvement of miscellaneous cargo berths under this project to alleviate the shortage of miscellaneous cargo handling capacity.

### (2) Objectives

This project aimed to meet the increasing demand for miscellaneous cargo handling from the hinterlands (Shandong, Henan and Shanxi provinces) of Shijiu Port in Rizhao municipal government, Shandong province, to promote effective use of the railway between Yanzhou and Shijiu Port (constructed with the ODA loan Project, "Yanzhou - Shijiusuo Railway Construction Project (1) ~ (5)") and to enable the smooth economic development of the port's hinterlands. To achieve those ends, five miscellaneous cargo berths with an annual miscellaneous cargo handling capacity of 2.2 million tons were constructed at Shijiu Port, which previously handled mainly coal (its annual handling capacities were 15 million tons of coal and 0.2 million tons of miscellaneous cargo).



### (3) Project Scope

The ODA loan covered the entire foreign currency portion required for procurement of the equipment, materials and services required for the implementation of the project. The loan agreement was concluded in two parts in FY 1991 and FY 1992.

### (4) Borrower/Executing Agency

Ministry of Foreign Trade and Economic Cooperation, People's Republic of China/Ministry of Communications, People's Republic of China

### (5) Outline of Loan Agreement

	FY1991	FY1992
Loan Amount	¥2,506 million	¥3,583 million
Loan Disbursed Amount	¥2,063 million	¥3,068 million
Date of Exchange of Notes	September 1991	October 1992
Date of Loan Agreement	October 1991	October 1992
Loan Conditions		
Interest Rate	2.6%	2.6%
Repayment Period (Grace Period)	30 years (10 years)	30 years (10 years)
Final Disbursement Date	November 1996	November 1997

## 2 Analysis and Evaluation

### (1) Project Scope

The scope of the work included the harbor civil works required for the construction of the five miscellaneous cargo berths and the preparation of the facilities for cargo handling etc. These works were completed largely as planned, but the study group and the training group were not dispatched as planned under the technical cooperation portion of the project. According to the Shijiu Port Authority (now the Rizhao Port Authority), which is the organization in charge of O&M of the facilities, the relevant training was conducted smoothly through contractor training, leaving little need for technical cooperation according to the terms of the contract, which was therefore abandoned. As the skills required for operation of the project have been transferred as planned, we do not regard the fact that the study and training groups were not dispatched under the ODA loan as a problem.

### (2) Implementation Schedule

With the exception of the completion of the cargo handling facilities (one multi-purpose crane), which was delayed by six months by prolonged contract negotiations, the project was completed as planned. Most of the berths went into operation as planned from January 1996, so the project can be deemed to have been implemented on schedule.

### (3) Project Cost

The final project cost was a cost underrun on the foreign-currency portion and a slight cost overrun on the local currency portion. There was no significant problem with the cost of the project.

### Comparison of Original Plan and Actual

Item	Plan	Actual
<b>1. Project Scope</b>		
Harbor civil works	• Miscellaneous cargo berth × 5	} As planned
Cargo handling facilities	• Multi-purpose crane × 1	
Railway	• Port railway signal facility × 1	} As planned
Buildings	• Lounge, dining hall, control room etc.	
Utilities	• Water supply and drainage facilities, thermal supply facilities etc.	
Procurement of operation boat and vehicles	• Tugboat × 2, Middle-sized bus × 5 etc.	} As planned
Environmental conservation facilities	• Environmental measuring equipment × 1	
Product inspection facilities	• Product inspection equipment × 1	
Technical cooperation	• Dispatch of study and training groups	Not implemented
Others	• Navigation auxiliary facility etc.	As planned
<b>2. Implementation Schedule</b>		
(commencement to completion)	July 1991 to December 1995 (54 months)	July 1991 to June 1996 (60 months)

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<b>3. Project Cost</b>		
Foreign currency	¥6,089 million	¥5,131 million
Local currency	241 million yuan	259 million yuan
Total	¥11,718 million	¥9,850 million
Exchange Rate	1 yuan = ¥23.4 (1992)	1 yuan = ¥18.2 (weighted average between 1992 and 1996)

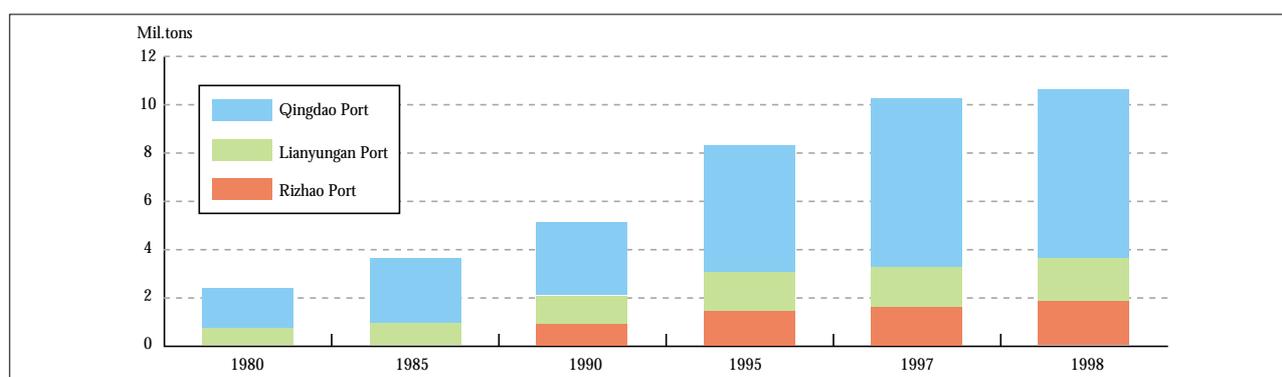
#### (4) Project Implementation Scheme

As for implementation scheme, the Ministry of Communications entrusted the monitoring and execution of the project to the Shijiu Port Authority, which employed contractors to carry out the construction works. The procurement of equipment and materials was handled by the China National Technology Import and Export Corporation. This method of subcontracting the supply of equipment and materials is standard practice in ODA loan projects to China, and it functioned effectively to achieve its objectives.

#### (5) Operations and Maintenance

The operations and maintenance (O&M) after the completion of the project has been carried out as planned by the No.2 Cargo Handling Corporation of the Shijiu Port Authority (now the Rizhao Port Authority). The Corporation obtains an adequate budget for the O&M of this project, and it carries out its work smoothly. It uses a manual to improve the quality of its work, and it replenishes its operation and maintenance materials in response to demand in order to cut costs. These efforts indicate an extraordinarily good O&M scheme. Workers are trained regularly to raise the level of expertise in cargo handling. The annual volume of cargo handled by Shijiu Port (which will be referred to below as Rizhao Port due to a name change) is growing steadily (the combined total for coal and miscellaneous cargo in 1999 was 20.033 million tons). The increase was due to the growth of shipping demand from the hinterlands and the greater convenience of shipping it via Rizhao Port, given the construction of related transport facilities. At present the miscellaneous cargo berths mainly handle cement, iron ore and chemical fertilizers. In particular, the iron ores and steel materials passing through the port are carried to the hinterlands along the Yanzhou - Shijiu Railways (the Yanzhou-Shijiu Line) which was built with the ODA loan. This is an effective arrangement that makes use of the empty freight cars returning after delivering coal to Rizhao Port.

#### Movements in Volumes Handled at Nearby Ports



Source: China Statistical Yearbook 1999

#### (6) Project Effects and Impacts

##### (i) Quantitative Effects

When EIRR (economic internal rate of return) and FIRR (financial internal rate of return) for the project were recalculated using the same items of benefit <sup>1</sup> and cost <sup>2</sup> used at the time of the appraisal, the results were as shown in the table below. The economic effects of this project have been fully realized.

	EIRR	FIRR
Calculated at the time of appraisal (FY1992)	10.1%	3.9%
Recalculated	9.9%	8.1%

<sup>1</sup> EIRR took into account the saving in vessel waiting time when using a berth, and the savings in time and financial costs for overland freight transport. FIRR took into account the income from cargo handling, income from warehousing, income from port management and other income.

<sup>2</sup> Both EIRR and FIRR include construction costs, personnel costs, maintenance costs and repair costs.

(ii) Qualitative Effects

The positive impacts of this project include economic development of Rizhao municipal government (the Rizhao development zone) and improved transport convenience for the hinterlands (Shandong, Henan and Shanxi provinces). The following developments can be observed in Rizhao municipal government:

- Expanded production (GDP per-capita in Rizhao municipal government increased approximately threefold between 1993 and 1998).
- Changes in industrial structures (since this project was completed in 1996, the proportion of secondary and tertiary industry has been increasing considerably).
- Creation of employment opportunities (the workforce of the Rizhao Port Authority more than doubled from 2,845 in 1991 to 5,820 in 1998).

With regard to the development of hinterlands the transport facilities which ship goods through Rizhao port have been made more convenient, and the volume they handled in 1998 reached 17.24 million tons (the volumes handled by neighboring ports in the same year were 70.18 million tons through Qingdao Port and 17.76 million tons through Lianyungang Port).

The Chinese side erected a monument within the port to mark the fact that Rizhao Port was built with Japanese assistance, and the project appears to have been effective in improving Sino-Japanese relations.



A Miscellaneous Cargo Berth



A Portable Crane financed by the ODA loan



A Multi-purpose Crane financed by the ODA loan