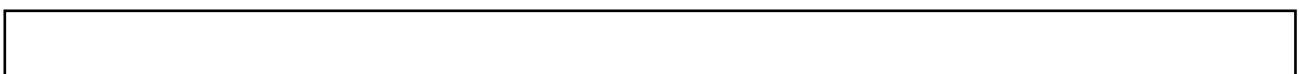




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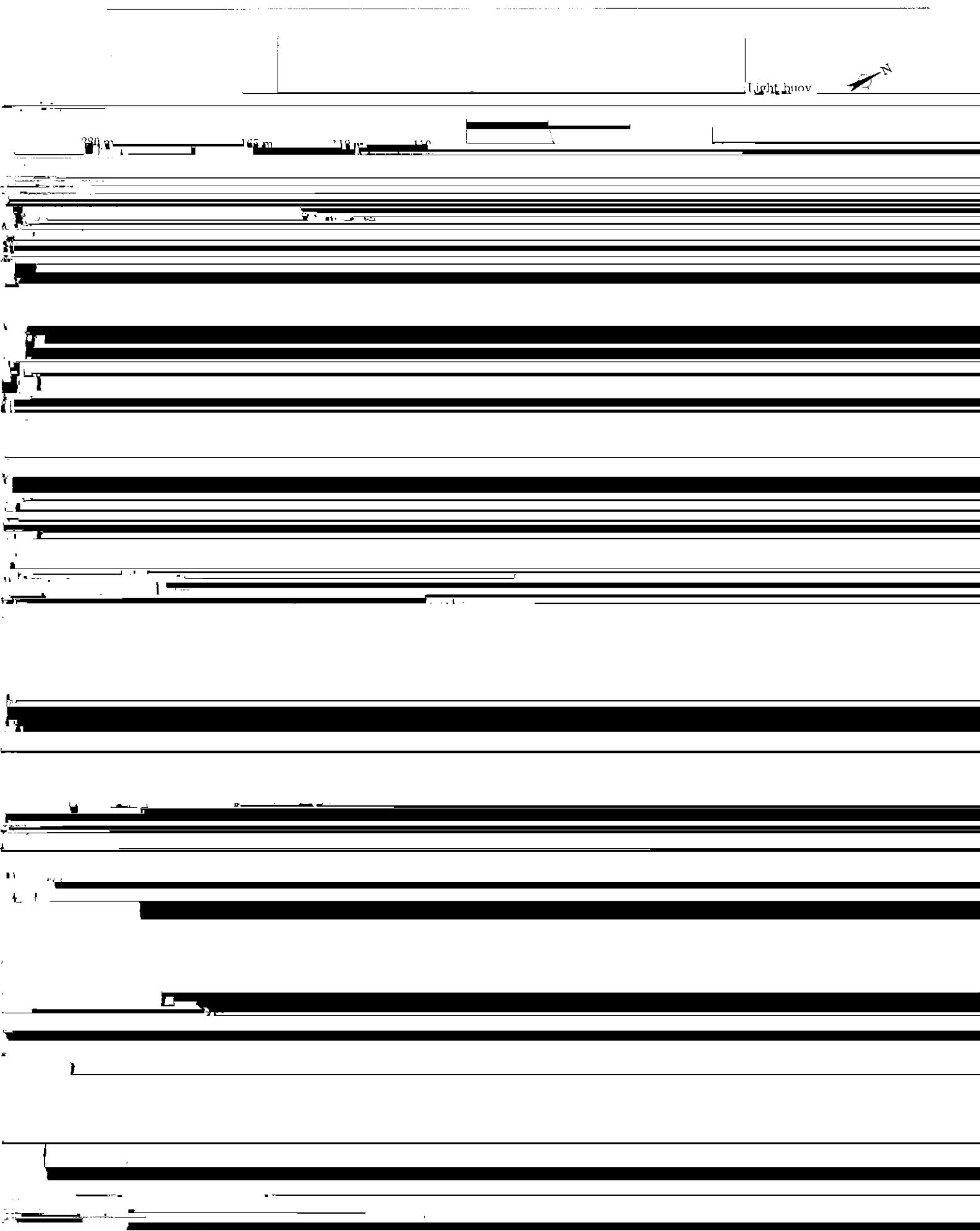
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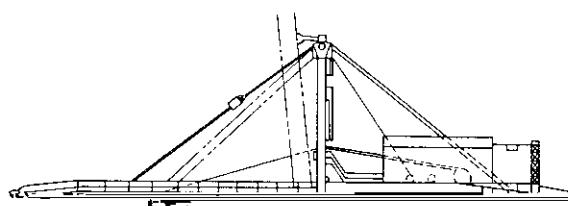
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設計，施工<sup>\*1</sup>

Industrial Port Development at Leyte in the Philippines





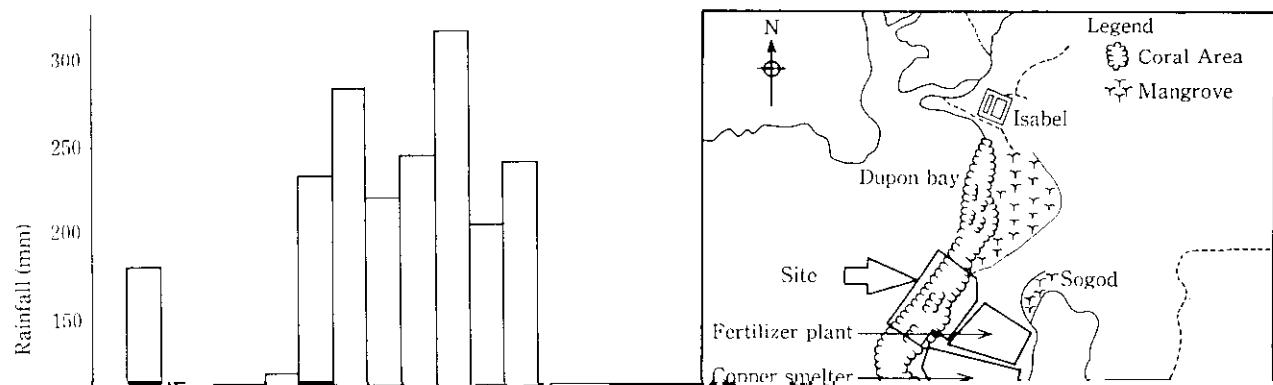




Table 2 Quantities of major items of wharf construction

Location	Description	Quantity	Remarks
Berth No. 1	Interlocked steel pipe pile	210 pcs	$\phi 1200, t 14, L=23.0-33.0\text{ m}$
	Steel pipe pile	116 pcs	$\phi 318.5, \phi 500, \phi 800; L=23.5-30.0\text{ m}$
	Steel sheet pile	893 pcs	KSP II, KSP VA, KSP VL; $L=5.0-19.0\text{ m}$
	Concrete	6 470 $\text{m}^3$	
Berth No. 2	Interlocked steel pipe pile	151	1200, 1100, 800, 600, 500

Table 2 Construction schedule of the port

	Phase	Period	Activities
1	Site investigation	May - June 1971	Site survey, geotechnical investigation
2	Planning	July 1971	Feasibility study, site selection, environmental impact study, land acquisition, permitting
3	Design	August 1971 - January 1972	Conceptual design, detailed engineering, cost estimation, contract documents
4	Procurement	February 1972 - April 1972	Equipment, materials, labor, subcontractors
5	Construction	May 1972 - December 1972	Infrastructure, port facilities, industrial buildings, utilities, equipment installation
6	Commissioning	January 1973	Port operations, industrial facility startup
7	Operation and maintenance	January 1973 - Ongoing	Port operations, industrial facility maintenance, expansion planning



(2) 壁高に比べて壁幅が大きく、壁幅が壁高の 2 倍近い。

and frequency by microtremor sensor

Damping ratio

—  $h = 0.025$   
- - -  $h = 0.050$   
—  $h = 0.075$

