

Establishment of All-weather Berth Network

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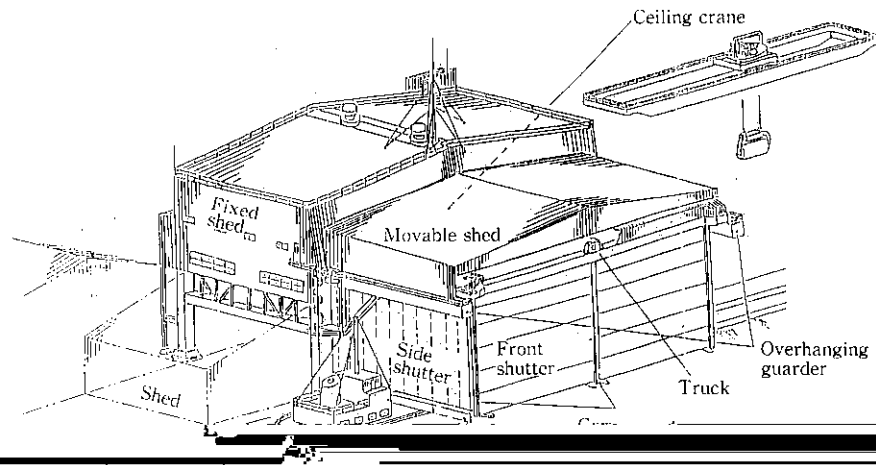
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Synopsis :

Kawasaki Steel Corporation established an integrated network comprising a total of six all-weather berths for loading and unloading at its Mizushima Works, Chiba Works, Chita Works and Osaka Service Center to improve transportation efficiency by the domestic vessels on which the company depends for approximately 70% of its steel product transportation. The Osaka Service Center, because it is located on a public wharf, has adopted the retractable vessel housing method for the first time in Japan. With a fixed shed equipped with both a ceiling crane and a movable shed which moves on an overhanging guard, the facility can be used in the shut down condition, and is possible to operate in both good and inclement weather. In addition, a multi-purpose semi-automatic crane was adopted to improve loading and unloading efficiency. Kawasaki Steel consequently realized a basic transportation improvement by achieving labor saving, improvement in

Table 1 Specifications of Kawasaki Steel all-weather berths

No.	Item	Specification
1	Material	SS400
2	Thickness	10mm
3	Surface Treatment	Galvanized
4	Structure	Steel Deck
5	Support	Steel Column
6	Foundation	Concrete
7	Accessories	Anchor Bolt
8	Paint	Anti-rust
9	Drainage	Pre-drilled
10	Sealing	Waterproof
11	Wind Load	1.5kN/m ²
12	Seismic	Resistant
13	Corrosion	Resistant
14	Fire	Resistant
15	Sound	Insulation
16	Lighting	LED
17	Ventilation	Automatic
18	Temperature	Control
19	Humidity	Control
20	Air Quality	Filter
21	Water Quality	Filter
22	Power	Supply
23	Water	Supply
24	Waste	Disposal
25	Maintenance	Easy
26	Life Span	20 Years
27	Cost	Low
28	Quality	High
29	Service	Good
30	Warranty	5 Years



保管倉庫：13棟（倉庫面積45,000㎡）

Table 2 Main Specification of equipment of Osaka Service Center

3.2 設備概要

ポストの昇降によってパネルが上昇・下降する構造となっている

Table 4 Change of vessel level

(m)

Table 5 Range of automatic operation for loading and

4.2.1 振れ止め速度制御

(1) 横走行動作の振れ止め速度制御

くすような速度制御パターンをシミュレーションで求め、テー

全天候バスの建設に必要となる知識として取り入れること

フルタイムオペレーションの導入による効果