

## General Part

### 1. Overview

This ship is a steel, single deck, double engine, double propeller, double rudder, double tail type, square tail, bulbous bow coastal self-suction dump ship. Three decks are provided on the aft main deck. The ship's engine room rear wall to the freighter front wall is a double-sided structure, sand

The tank bottom in the ship area is double bottom structure, while the other areas are single bottom and single side structure.

### 2. Design basis

MSA2020 Statutory Inspection Rules for Vessels and Marine Facilities Statutory Inspection Technical Rules for Domestic Navigable Seagoing Vessels 2018 CCS Code for Construction of Domestic Navigable Seagoing Vessels 2019, 2019 Notification of Modification 2020 CCS Material and Welding Code 2018, 2018 and 2020 CCS Notification of Modification

### 3. Operating equipment and methods

**3.1 The ship's operating equipment includes 1 set of sand absorption equipment and 1 set of self-discharging equipment.** Sand absorption equipment includes sand absorption main machine, gear box, sand suction pump, sand suction pipe, sand production pipe, filtering net frame, and self-discharging equipment includes main machine, gear box, reduction machine, belt wheel, conveyor belt, lifting and landing derrick.

### 3.2 Operation mode

**Self-suction:** the sand suction pump group sucks the sand pump in the riverbed through the sand suction pipe on the right side of the ship to the sand discharging pipe above the cargo compartment, and then discharges to the compartment through the filter screen.

**Self-discharging:** the sand in the cargo hold is transported to the front end of the ship through the bilge conveyor belt and transferred to other places. The conveyor belt is driven by the engine room of the ship head conveyor belt.

4. Changes applied for:

1. The self-suction self-discharging vessel is converted from the self-discharging vessel.
2. The caoside wall of the fore peak cabin conveyor belt extends to the bottom of the cabin and is watertight.
3. Change the water pump tank (right) to sand suction pump tank (right) and change the normal cabin to class A machinery space.
4. Add a groove to the bottom plate at the collision bulkhead, which is higher than the full load waterline.
5. Cancel weathertight hatchcover at the exit of cargo hold and first conveyor belt.
6. The design draft is changed from 4.60m to 3.55m, and the relevant load line draft drawing and relevant drawings are all changed.

**dimensions:**

The name of the	Size/m.
The total length L	104.80
Design waterline length	85.60
L between the columns	86.24
<sup>pp</sup> Width B	19.20
Type D deep	5.80
Design draft D	3.55
Structural draft D	4.80

Tween deck  
height : (average  
height)

The scope of	Size/m.
Main deck to living deck	2.95-3.30
Living deck to driving deck	2.60
Pilot deck to compass deck	2.60

beam	0.29
At the designed full load condition of 3.55m draft	
The name of the displacement	The numerical 4915.4 t
Square coefficient	0.817
load	~ 2707.9 t
Cargo capacity	~ 2165.48 t

5. Overview of general layout (see Zy4917B-100-02 general layout for details)

(1) In addition to the cargo hold, there are 5 watertight transverse bulkheads, FR2, FR7, FR22, FR121 and FR132 respectively. The cabins are divided from aft to fore successively as follows:

#### Name location

NO.2 Fresh water tank (left and right) Stern ~ Fr.2

NO.1 Fresh water tank (left and right) Fr.2 ~ Fr.7

No.2 Cooling water tank (left and right) Fr.2 ~ Fr.7 Isolation cabin

(left and right) Fr.2 ~ Fr.7 No.2 Fuel tank (left and right) Fr.2 ~ Fr.7

Engine room Fr.7 ~ Fr.22 Sand chamber Fr.22~Fr.121 Settling tank

Fr.22 ~ Fr.25 Conveyor belt engine room (left) Fr.121 ~ Fr.132

Emergency cabin (right) Fr.121~Fr.132 Chain cabin (left and right)

Fr.132~Fr.135 The bow cabin (left center right) Fr.132~ bow

There are 7 watertight transverse bulkheads in the cargo hold, namely FR33, FR44, FR58, FR72, FR86, FR98, FR110; From end to beginning, it is divided into:

Name location

NO.8 Sand chamber Fr.22 ~ Fr.33

NO.7 sand chamber Fr.33 ~ Fr.44

NO.6 sand chamber Fr.44 ~ Fr.58

NO.5 sand chamber Fr.58 ~ Fr.72

NO.4 Sand chamber Fr.72 ~ Fr.86

NO.3 Sand chamber Fr.86 ~ Fr.98

NO.2 Sand chamber Fr.98 ~ Fr.110

NO.1 Sand chamber Fr.110~Fr.121

There are 6 watertight transverse bulkheads under the sand trough inclined plate, namely FR44, FR58, FR72, FR86, FR98, FR110, The pump room area is equipped with a double bottom, and the empty tanks below the sand trough slope are installed from the tail to the fore:

Name location Water pump room (left) Fr.22 ~ Fr.44 Sand suction

pump room (right) Fr.22 ~ Fr.44 NO.6 Empty cabin (left and right)

Fr.44 ~ Fr.58