图 纸 履 历　　PLAN HISTORY

日 期 DATE	标 记 MARKER	数量 NUMBER	版本 REV.	修 改 单 号/说 明 MODIFICATION NO./DESCRIPTION	页码 PAGE	设绘 DESIGNED	审核 EXAMINE

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5,100箱集装箱船
5,100TEU CONTAINER VESSEL

设计阶段 DES.STA.	完工设计 FINISH DESIGN
工程号 HULL NO.	H2431/ /

文件号 FILE		版本 REV.	
设绘 DESIGNED		审核 EXAMINE	
校对 CHECKED		复审 REVIEWED	
会签 COUNTERSIGN		审定 APPROVED	
标检 STANDARDIZED		批准 AGREED	

舾装数计算书
NUMBER OUTFITTING CALCULATION

图 号 DRAWING NO.	FO-01 72000100D		
重量 (kg) WEIGHT		比例 SCALE	面积 ㎡ AREA
共 5 页 TOTAL SHEETS		第 1 页 SHEET	

上海江南长兴重工有限责任公司
SHANGHAI JIANGNAN CHANGXING HEAVY INDUSTRY CO.,LTD.

总面积: 0.3m^2　4号 297x210=0.06m^2

1． Principal particular:

Length	(o.a)	abt.294.00 m
Length	(b.p)	284.16 m
Breadth	(mld)	32.20 m
Depth	(mld)	21.80 m
Scantling Draft	(mld)	13.50 m

2． Calculation of equipment number:

According to RULES FOR CLASSIFICATION AND CONSTRUCTION I-SHIP TECHNOLOGY PART 1-SEAGOING SHIPS 2006(GL). Equipment Number is the value obtained from the following formula.

$Z= D^{2/3} + 2hB + A/10$

Where:

D=moulded displacement in [t] (in sea water having a density of 1,025t/m^3) to the summer load waterline.

D= 84935.5 t $D^{2/3}$ = 1932.23302 (at scantling draft)

h=a+∑hi

h--effective height from the summer load waterline to the top of the uppermost house

a--distance in [m], from the summer load waterline, amidships, to the upper deck at side.

a= 8.30 (m)

h1--height measured at centreline from the Upper deck to Coaming deck.

h1= 1.40 (m)

h2--height measured at centreline from Coaming deck to A deck.

h2= 3.80 (m)

h3--height measured at centreline from A deck to B deck.

h3= 2.80 (m)

h4--height measured at centreline from B deck to C deck.

h4= 2.80 (m)

h5--height measured at centreline from C deck to D deck.

h5= 2.80 (m)

h6--height measured at centreline from D deck to E deck.

h6= 2.80 (m)

h7--height measured at centreline from E deck to F deck.

h7= 2.80 (m)

h8--height measured at centreline from F deck to Nav. Bridge deck.

h8= 2.80 (m)

h9--height measured at centreline from Nav. Bridge deck to Compass deck

h9= 3.00 (m)

h=a+∑hi 33.30 (m) (at scantling draft)

B--the greatest breadth of ship

B= 32.20 (m)

L--Rule length

L= 280.00 (m)

$$A = f_b L + \sum_{n=1}^{12} h'' l''$$

A--area in [m^2], in profile view of the hull, superstructures and houses,having a breadth greater than B/4, above the summer load waterline within the length L and up to the height h. screens of bulwarks 1.5 m or more in height are to be regarded as parts of houses when determining h and A.

The calculation as follows:

a*L= #REF! (at designed draft)

a*L= 2324 (at scantling draft)

h"1--Height of the f'cle deck

h"1= 3.115 (m)

l"1--calculation length of the f'cle deck

l"1= 28.05 (m)

h"2--Height of the upper deck house

h"2= 1.50 (m)

l"2--calculation length of the upper deck house

l"2= 18.40 (m)

h"3--Height of Coaming deck house

h"3= 3.65 (m)

l"3--calculation length of Coaming deck house

l"3= 13.60 (m)

h"4--Height of the A deck house

h"4= 2.80 (m)

l"4--calculation length of the A deck house

l"4= 13.60 (m)

h"5--Height of the B deck house

h"5= 2.80 (m)

l"5--calculation length of the B deck house

l"5= 13.60 (m)

h"6--Height of the C deck house

h"6= 2.80 (m)

l"6--calculation length of the C deck house

l"6= 13.60 (m)

h"7--Height of the D deck house

h"7= 2.80 (m)

l"7--calculation length of the D deck house

l"7= 13.60 (m)

h"8--Height of the D deck house

h"8= 2.80 (m)

l"8--calculation length of the D deck house

l"8= 13.60 (m)

h"9--Height of the D deck house

h"9= 2.80 (m)

l"9--calculation length of the D deck house

l"9= 13.60 (m)

h"10--Height of the Nav. Bridge deck

h"10= 3.00 (m)

l"10--calculation length of the Nav. Bridge deck house

l"10= 12.8 (m)

h"11--Height of part of the bulwark screen at fore

h"11= 2.325 (m)

l"11--calculation length of part of the bulwark creen at fore

l"11= 2.588 (m)

h"12--Height of part of the bulwark screen at fore

h"12= 3.150 (m)

l"12--calculation length of part of the bulwark creen at fore

l"12= 10.4 (m)

$$A = f_b L + \sum_{n=1}^{12} h^{"} l^{"}$$

= 2794.47

Equipment number:

$$Z = D^{2/3} + 2hB + A/10$$

= 4356.57

3 . Determination of equipment

The anchor, chain cable and mooring line are determined based on the requirements of rule table 18.2, equipment number 4200~4400.

3 .1 Anchor

Two HHP bower anchors: Type: AC-14 anchor. Each Weight: 9675kg.

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Two HHP bower anchors: Type: AC-14 anchor. Each Weight: 9675kg.

3 .2 Chain cable for bow anchors

Electrical welded stud link chain cable

Grade: Id 3

Diameter: φ87 mm

Total length: 715 m (357.5m each)

3 .3 Mooring line

Mooring lines:
8 lines: ATLAS rope.
Diameter: φ64mm
Length of each line : 200m
Min. breaking strength: 794.6KN>680KN(rule value)

3 .5 The vessels are subject to revised IACS UR A2 for "Shipboard fittings and supporting hull structures associated with towing and mooring on conventional vessels" , which is in line with MSC/Circ.1175, so the calculation of mooring and towing equipment number including the side projected area of maximum stacks of deck cargos as follows:

Enlarged equipment number:

$$Z' = Z + A'/10$$

= 4356+4024/10
= 4758

A'--the side projected area of maximum stacks of deck containers
A'= 4024 (m^2)

Refer to MSC/Circ.1175 annex Table 1

EQUIPMENT NUMBER		MOORING LINES	TOW LINE
EXCEEDING	NOT EXCEEDING	Min. breaking strength(KN)	Breaking strength(KN)
4600	4800	680	1470