



[www.seastargo.com](http://www.seastargo.com)



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**PHONE**

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Email : [hksun@seastargo.com](mailto:hksun@seastargo.com)



# ABOUT US





**Koh, Youngkwan**  
President

## Simplicity and good mind brings unique solution for all

With my 24 years career in shipbuilding and offshore engineering,  
simplicity and good mind always brings better solution for all.

But when those solution combine with  
the familyship & dynamic teamwork,

it will elicit the qualified high-level service to the client.

It will be our privilege to provide our unique engineering service to you in  
soonest time..

A handwritten signature in black ink, appearing to read 'Youngkwan Koh'. The signature is stylized and fluid.

01

## ABOUT US

### 1-2 Who We Are

02

03

04

05

Seastar Inc. is a total engineering company, providing newbuilding, offshore and ship repair services since 2012. Our high-level technology in shipbuilding and offshore design based on its successful cooperation with major Korean shipbuilders.

Especially, our manpower came from major Korean shipbuilders and outstanding expert in classification society and marine equipment manufacturer.

Since launching our business, we've been doing our best to provide systematic engineering service to reflect clients' needs, and more over we matter the client's idea to upgrading our service.

We expects clients' continued interest in its' technology and promises to build the best company for happiness of people and society.

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01

ABOUT US

1-3 Organization

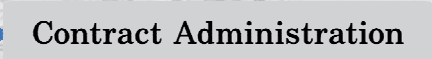
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02

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**Lee, Jaemyeong****Vice President**

Experience : 44 years  
 Engineering managing control  
 Hanjin Heavy Industry

**Kim, Taehwan****Director**

Experience : 35 years  
 Hull Outfitting  
 DSME

**Choi, Dongho****Director**

Experience : 30 years  
 Hull Outfitting  
 DSME


**Yang, Jongjin****Director**

Experience : 26 years  
 Machinery Design  
 Hyundai Heavy Industry

**Sun, Hankyong****Director**

Experience : 20 years  
 Sales & Procurement  
 Sungdong Shipyard  
 Wartsila





**TECHNICAL  
SUPPORT FOR  
OPTIMUM  
DESIGN**

DD VANGUARD

DL ROSE

01

# Technical Support for Optimum Design

02

## 2-1 Design program

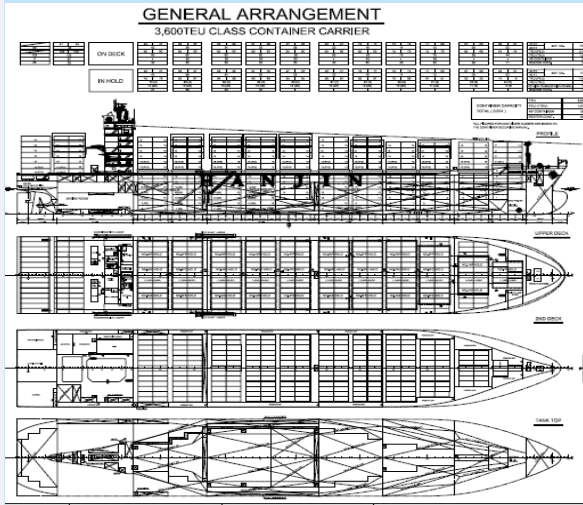
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### Basic Design

- NAPA
- SIKOB



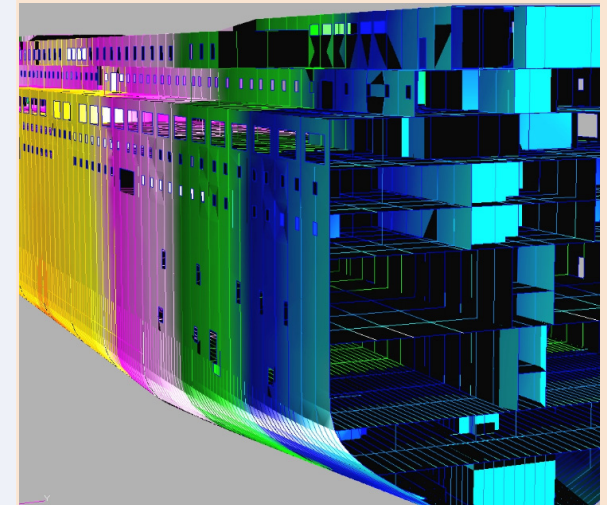
### Hull Outfitting

- Auto CAD
- TTM -3D
- PDMS / AM
- FORAN
- SMART Sketch
- TRIBON



### Analysis

- SACS
- NASTRAN / PATRAN
- HIPER MESH
- SESAM





01

## Technical Support for Optimum Design

02

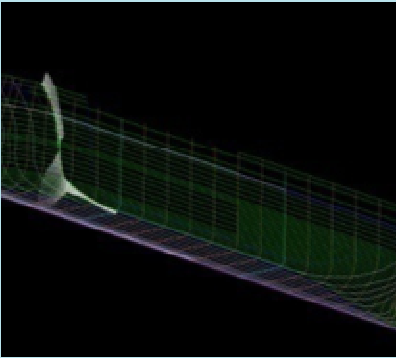
### 2-2 Hull form Development for Optimum Speed & Power

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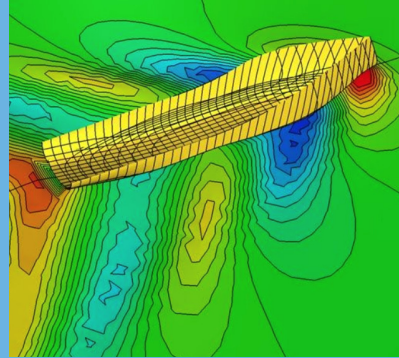
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#### Step 1



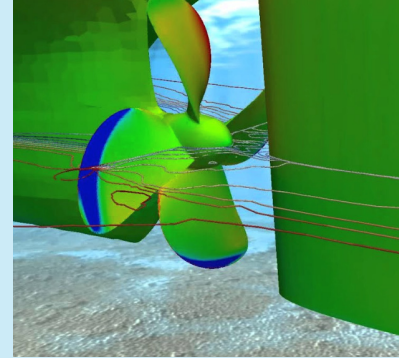
Estimation of speed ,  
power & hull  
performance

#### Step 2



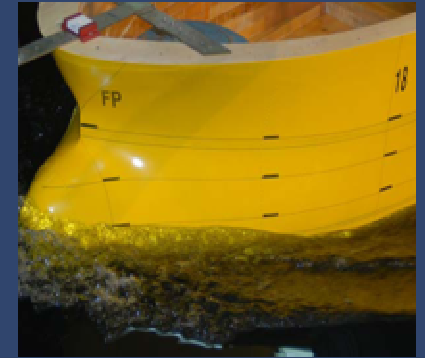
Initial hull form design  
using Design Records  
and CFD

#### Step 3



Detail design  
of hull form  
for Model Test

#### Step 4



Confirmation of  
design efficiency  
by Model Test

01

## Technical Support for Optimum Design

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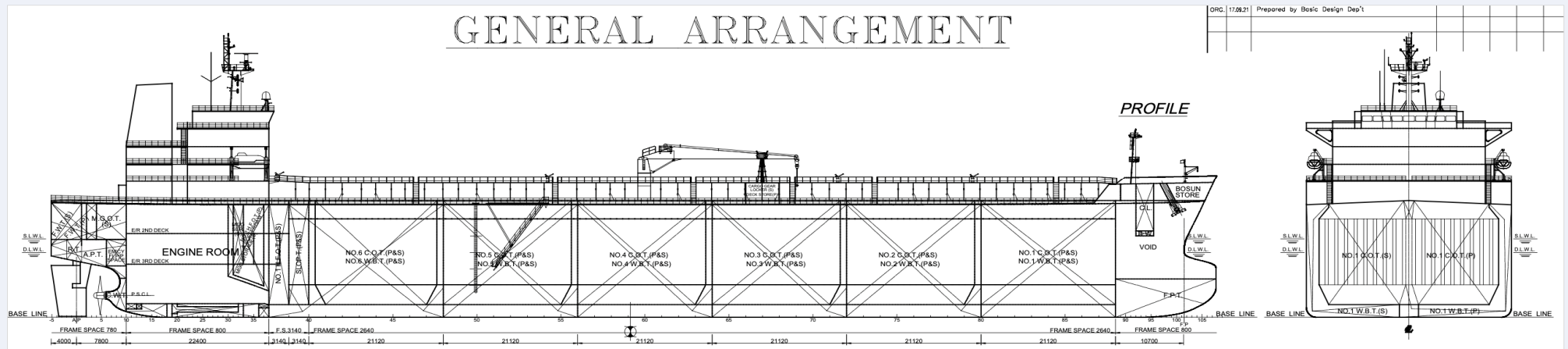
02

### 2-3 Basic Design for Optimum Arrangement / Service Item

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#### 1. Initial Design

Estimation of LWT, Freeboard calculation, Initial General Arrangement, Specification for Contract, Estimation of Speed & Power

#### 2. Basic Drawing Stability

General arrangement, Capacity Plan, Calculation of Intact & Damage

#### 3. Construction Support

Docking Plan, Calculation of Launching

#### 4. Test

Scheme & Result of I/E Test, Scheme & Result of Sea Trial Test

#### 5. Final Drawing

Final Intact & Damage Stability Calculation, Final General Arrangement, Capacity Plan with DWT Scale.



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## Technical Support for Optimum Design

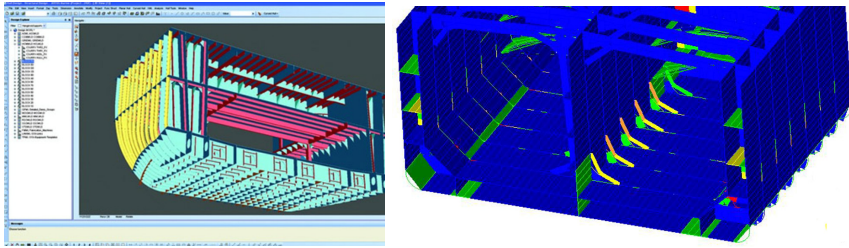
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### 2-4 Hull Design for Optimum Hull Structure

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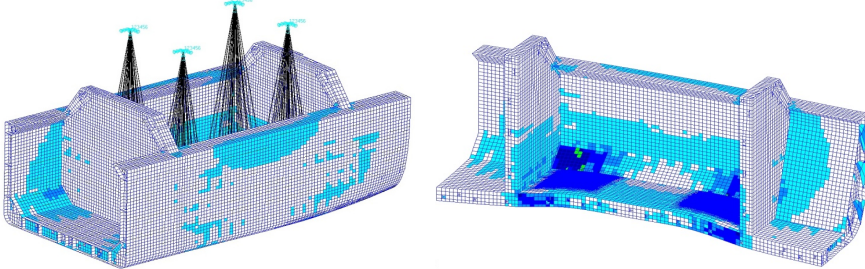
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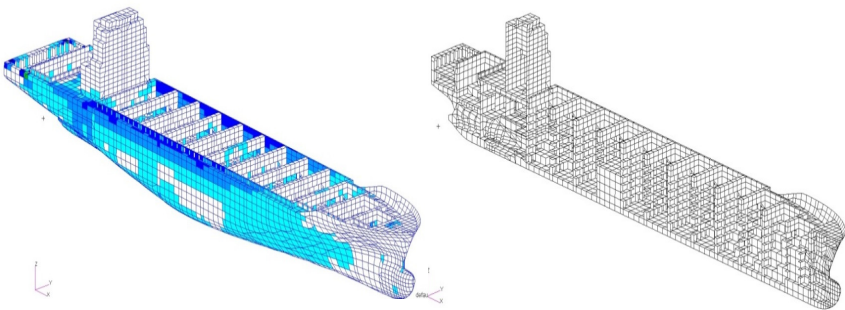
Our group using MSC/NASTRAN and RULE PROGRAM in the field of STRUCTURE ANALYSIS, we confirm stabilization of ship and design the best suited through structure modeling, evaluation of stress calculation, yield strength and buckling strength.

#### Block Lifting Analysis



Our group evaluate the structural strength of mega block under lifting condition.

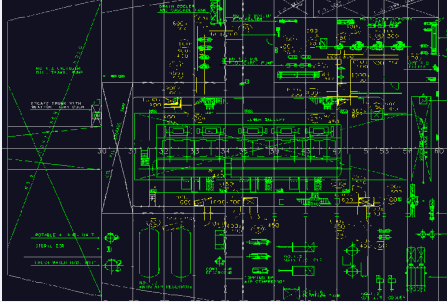
#### Block Lifting Analysis



The purpose of the global hull analysis is to obtain a reliable description of the overall stiffness and global distribution in the primary members in the hull.

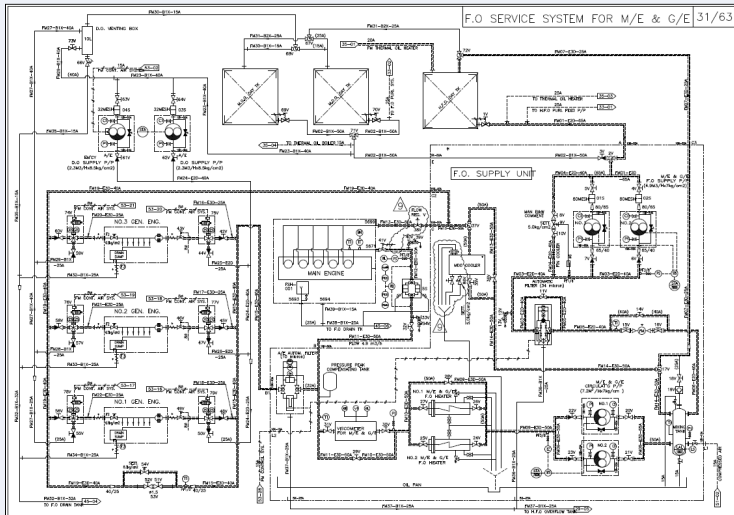
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- 03
- 04
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## Technical Support for Optimum Design 2-5 Outfitting & Machinery Design

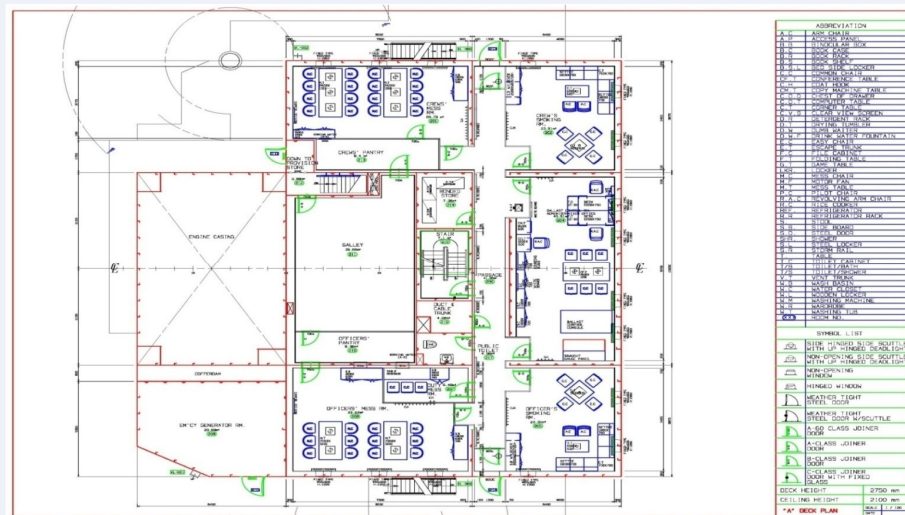


Outline Design takes charge of all devices and systems such as propulsion system, mooring system, cargo handling gear, piping equipment, fire protection and safety device and accommodation plan. And also, superior design quality that customers able to satisfy is guaranteed bases on great store of experience such as basic calculation and distribution diagram.

### Engine Room Piping Diagram (E/R)



### Accommodation Arrangement





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# Technical Support for Optimum Design

## 2-5 Outfitting & Machinery Design

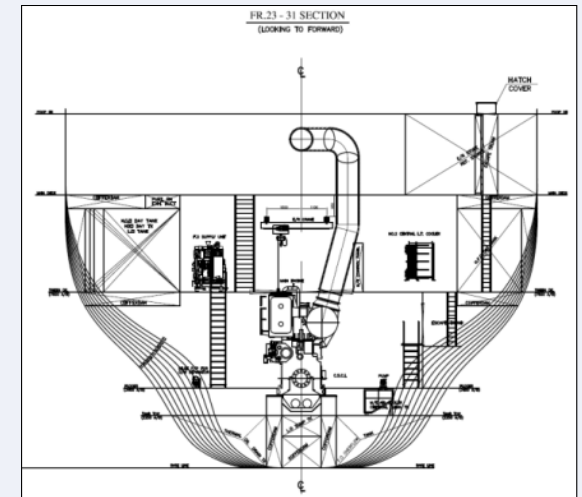
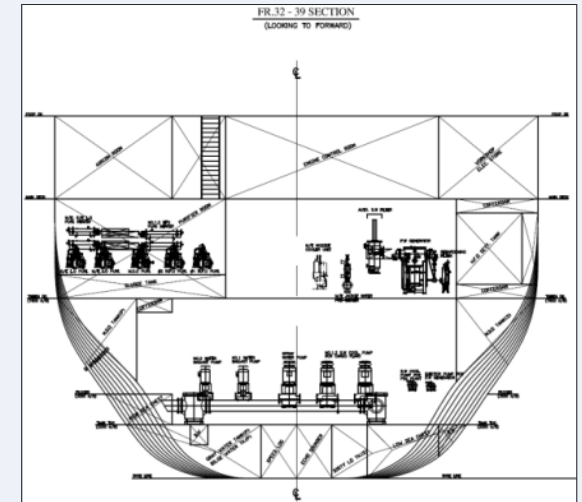
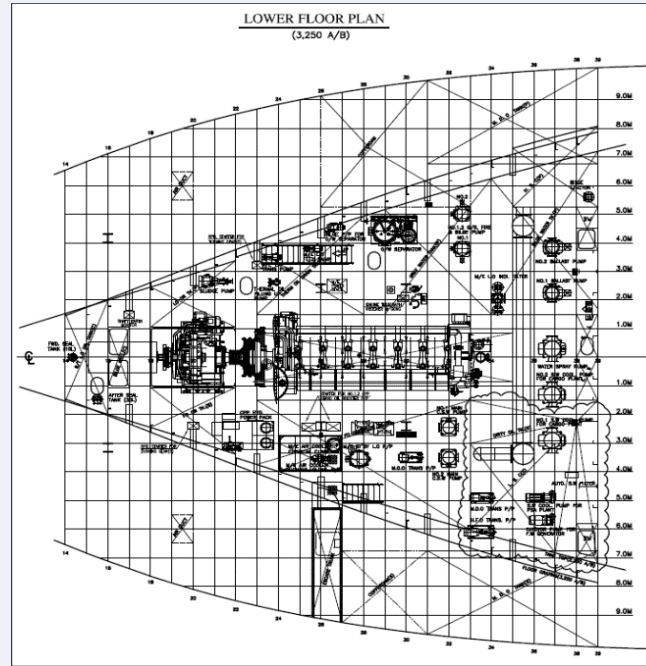
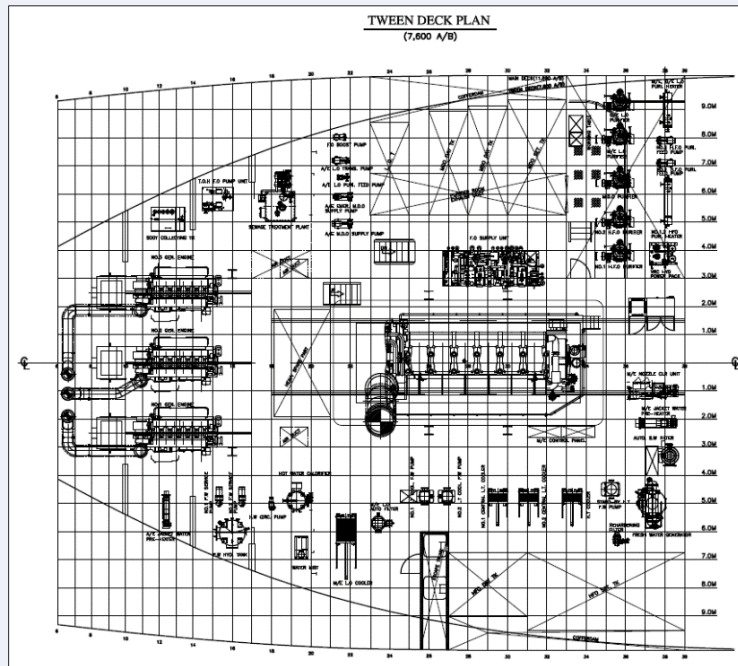
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### Machinery Arrangement (E/R)

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# Technical Support for Optimum Design

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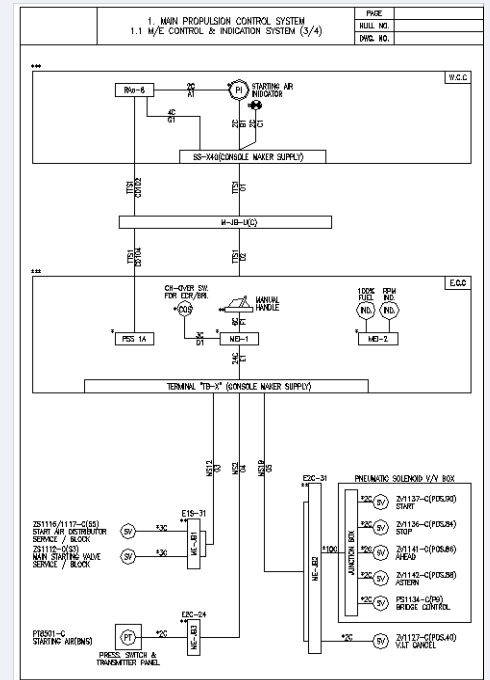
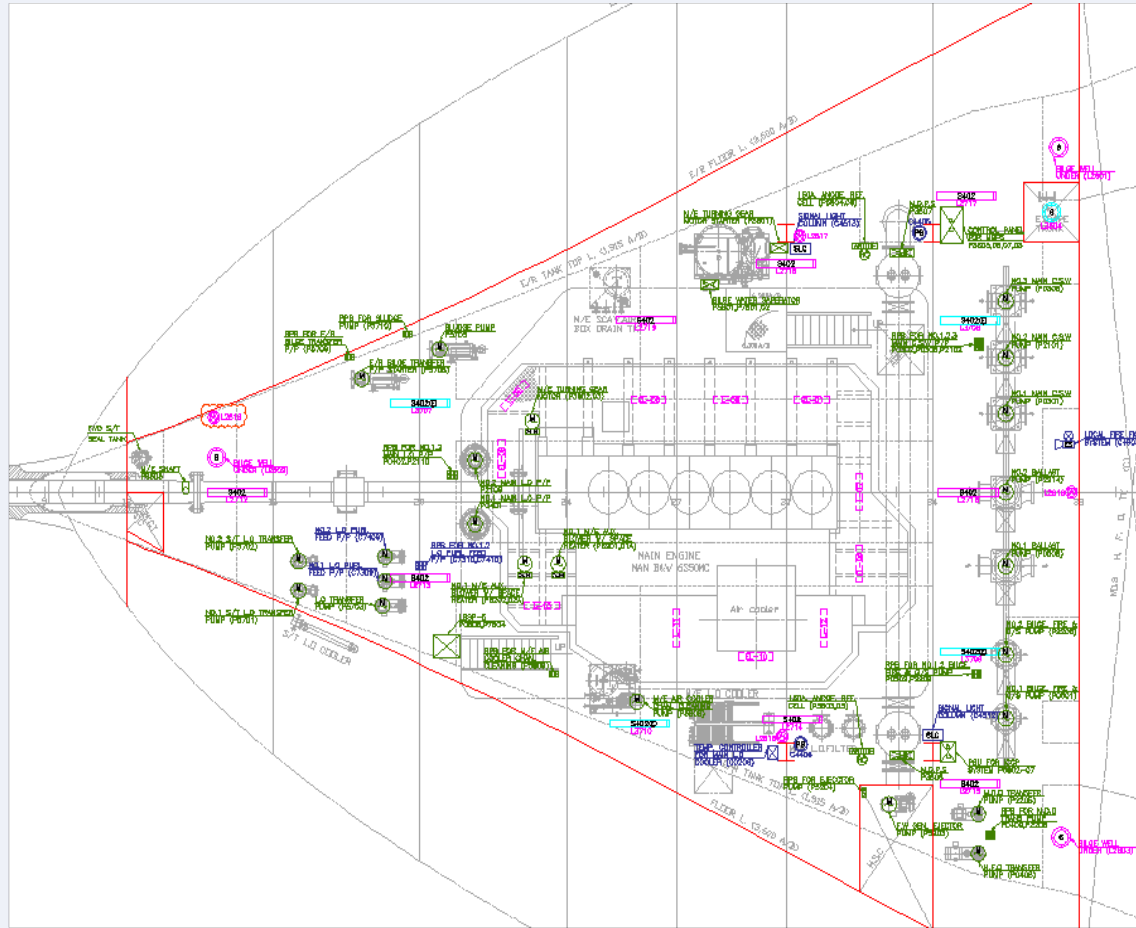
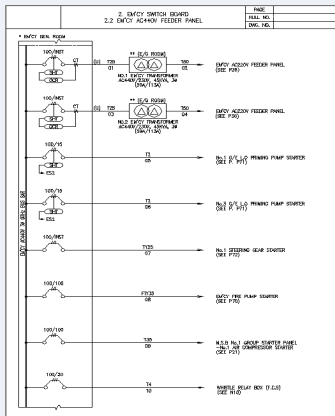
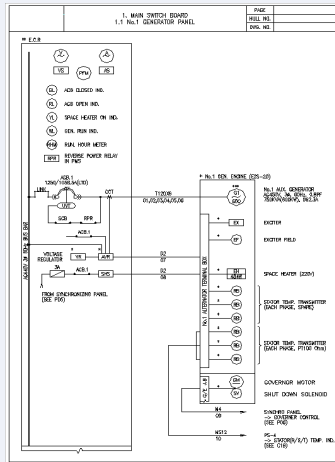
## 2-5 Outfitting & Machinery Design

03

### G/A OF ELECTRIC EQUIPMENT IN E/R

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# DESIGN RECORD





01

**Design Records - Newbuilding**

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02

**3-1 TANKER**

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04

05

Project Title	Client	Scope
75K Oil/Product Carrier	Sungdong Shipbuilding & Marine Engineering Co., Ltd.	Basic Design
113K Crude Oil Tanker	SPP Plant & Shipbuilding Co., Ltd.	Basic/Detail Design (Hull)
12.8K Chemical Tanker	STX Offshore & Shipbuilding Co., Ltd.	Basic Design (Outfit. Part)
113K Crude Oil Tanker	SPP Plant & Shipbuilding Co., Ltd.	Basic/Detail Design (Hull)
115K Crude Oil Tanker	Sungdong Shipbuilding & Marine Engineering Co., Ltd.	Basic/Detail Design (Hull)
13,000 DWT Chemical Tanker	Jinse Shipbuilding Co., Ltd	Basic Design (Basic Part)
24,000 DWT Oil/Chemical Tanker	Sekwang Shipping	Conversion Design
40,000 DWT Product Carrier	Jinse Shipbuilding Co., Ltd.	Initial Design
2,500 DWT Oil Tanker	Samho I&D	Basic/Detail Design
160,000 DWT Crude Oil Tanker	Hanjin Heavy Industries & Construction Co., Ltd.	Basic Design (Hull / Machinery)
300,000 DWT VLCC	-	Basic/Detail Design
52K CHEMICAL TANKER	Hyundai Mipo Dockyard Co.,Ltd.	Hull Outfitting Detail / Prod
25,000 DWT Chemical/Product Carrier	Hyundai Mipo Dockyard Co.,Ltd.	Hull Piping/Machinery Detail/Prod
35,000 DWT Chemical/Product Carrier	Hyundai Mipo Dockyard Co.,Ltd.	Hull Piping/Machinery Detail/Prod
37,000 DWT Chemical/Product Carrier	Hyundai Mipo Dockyard Co.,Ltd.	Hull Piping/Machinery Detail/Prod

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02

**3-2 BULKER**

03

04

05

Project Title	Client	Scope
34K Bulk Carrier	Jinse Shipbuilding Co., Ltd.	Basic/Detail Design
245K Ore Carrier	Korea Line Corp.	Conversion Design
86K Bulk Carrier	Sealink Shipping Comp.	Conversion Design
170K Bulk Carrier	Sungdong Shipbuilding & Marine Engineering Co., Ltd.	Basic Design (Basic Part)
82K Bulk Carrier	Sungdong Shipbuilding & Marine Engineering Co., Ltd.	Basic/Detail Design (Hull)
32K Bulk Carrier-Single Hull	Jinse Shipbuilding Co., Ltd.	Basic/Detail Design
32K Bulk Carrier-Double Hull	Jinse Shipbuilding Co., Ltd.	Basic/Detail Design
59K Bulk Carrier	STX Offshore & Shipbuilding Co., Ltd.	Basic Design (Outf. Part)
17K Bulk Carrier	Buyoung Shipbuilding Co.	Initial Design
35K Bulk Carrier (CSR)	Samho Shipbuilding Co., Ltd	Basic/Detail Design
150K Bulk Carrier	Hanjin Heavy Industries & Construction Co., Ltd.	Hull Part
32K Bulk Carrier	Samho Shipbuilding Co., Ltd.	Basic/Detail Design
82K Bulk Carrier	SPP Plant & Shipbuilding Co., Ltd.	Basic/Detail Design
90K Bulk Carrier	Oshima Shipbuilding Co., Ltd	Structure Analysis
97K Bulk Carrier	Oshima Shipbuilding Co., Ltd	Basic/Detail Design
82K BULK CARRIER	Hyundai Mipo Dockyard Co.,Ltd.	Hull Piping Detail/Prod

01

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02

**3-3 CONTAINER & RO-RO VESSEL**

03

Project Title	Client	Scope
6500 Unit Class PCTC	STX Offshore & Shipbuilding Co., Ltd.	Basic Design (Outfin. Part)
1700 TEU Class Container Ship	SPP Shipbuilding Co., Ltd.	Hull Part (Key Plan & Const. DWG.)
4700 TEU Class Container Ship	Sungdong Shipbuilding Co., Ltd.	Hull Part (Key Plan & Const. DWG.)
16000 TEU Class Container Ship	Samsung Heavy Industry	Detail Design (Hull )
9000 TEU Class Container Ship	Hanjin Heavy Industries & Construction Co., Ltd.	Hull Part
2500 TEU Class Container Ship	R&D Project with ABS	Initial Design
50K Con-bulk Carrier	Buyoung Shipbuilding Co.	Initial Design
3,000 Unit Class PCTC	Samho Shipbuilding Co.,Ltd.	Initial Design
4600 TEU Class Container Ship	Samsung Heavy Industry	Detail Design(Hull )
7500 UNIT PCTC	Hyundai Mipo Dockyard Co.,Ltd.	Hull Outfitting Detail / Prod
7700 UNIT PCTC	Hyundai Mipo Dockyard Co.,Ltd.	Hull Outfitting Detail / Prod

04

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01

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02

**3-4 SPECIAL VESSEL & ETC**

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Project Title	Client	Scope
Side Stone Dumping Vessel	STX Offshore & Shipbuilding Co., Ltd.	Basic/Detail Design
Hopper Dredger Vessel	STX Offshore & Shipbuilding Co., Ltd.	Basic/Detail Design
2,000T/H Floating Loading Facility Barge	Seabulk Co.	Basic/Detail Design
20,000 DWT CASSION Floating Dock	Heung Woo Industrial Co.,LTD	Basic/Detail Design
Piping Laying Vessel	DSME	Structure Analysis
250P Class Accommodation Barge	NVO Engineering	Initial Design
110 m Class Seismic Vessel	Oriental Precision & Eng.	Initial Design
250P Class Training Ship	Seaman	Conversion Design
13K Class Deck Cargo Vessel	O.M.S	Basic/Detail Design
Camping Boat	IAM COMMUNICATION	Basic/Detail Design
Side Stone Dumping Vessel	STX Offshore & Shipbuilding Co., Ltd.	Basic/Detail Design
15,000LC Floating Dock	STX OSV	Basic/Detail Design

01

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02

**3-5 Offshore ETC**

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Project Title	Client	Scope
Ro-Fax (SEONG HEE)	HMD	Basic / Detail Design
Jack-up Rig	DSME	Structure Design
320 Pax. Ferry Boat	Dhaka, Bangladesh	Basic / Detail Design
Piping laying & Platform uninstalation Vessel	DAEWOO Heavy Ind.	Piping Detail / Prod.
173,400 M3 LNGC	DAEWOO Heavy Ind.	Hull Piping Detail / Prod.
Statoil Jack-up Rig	Samsung Heavy Ind.	Piping Detail/Prod
Semi-Submersible Drilling Rig	Samsung Heavy Ind.	Piping Detail/Prod
50K MR Tanker	Worldwide	Green Ship for next generation

01

02

03

04

05

## Design Records - Newbuilding

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### 3-6 Ballast Water Treatment System

NO	OWNER	SHIP TYPE	BWMS TYPE	BALLAST CAPACITY	CLASS	DATE
1	QATARGAS	260,000 m3 LNG CARRIER	ELECTROLYSIS	3000 m3/hr x 2 sets	ABS	2015
2	GEDEN	115,000 DWT CRUDE OIL TANKER	ELECTROLYSIS	1500 m3/hr x 2 sets	DNV	2015
3	EURONAV	158,000 DWT CRUDE OIL TANKER	ELECTROLYSIS	2500 m3/hr x 2 sets	LR	2015
4	QATARGAS	115,000 m3 LNG CARRIER	ELECTROLYSIS	1500 m3/hr x 2 sets	ABS	2016
5	HYUNDAI MERCHANT	8,600 TEU CONTAINER SHIP	CHEMICAL INJECTION	800 m3/hr x 2 sets	KR	2016
6	HYUNDAI MERCHANT	180,000 DWT BULK CARRIER	ELECTROLYSIS	2500 m3/hr x 2 sets	KR	2017
7	DUCKYANG SHIPPING	3250M3 LPG CARRIER	ELECTROLYSIS	300 m3/hr x 1 sets	KR	2017
8	DUCKYANG SHIPPING	708TEU CONTAINER CARRIER	ELECTROLYSIS	300 m3/hr x 2 sets	KR	2017
9	DUCKYANG SHIPPING	GT999 TON LPG CARRIER	ELECTROLYSIS	300 m3/hr x 1 sets	KR	2017
10	DUCKYANG SHIPPING	5600 TON OIL/CHEMICAL TANKER	ELECTROLYSIS	250 m3/hr x 2 sets	KR	2017
11	BW	50,000 DWT PRODUCT/OIL CARRIER	ELECTROLYSIS	750 m3/hr x 2 sets	LR	2018
12	DONGYOUNG SHIPPING	908TEU CONTAINER CARRIER	ELECTROLYSIS	300 m3/hr x 2 sets	KR	2018
13	FIVE OCEAN	180,000 DWT CLASS BULK CARRIER	ELECTROLYSIS	2500 m3/h x 30mTH x2 sets	KR	2018
14	BW	58,000 DWT CLASS BULK CARRIER	ELECTROLYSIS	300 m3/hr x 2 sets	LR	2018
15	HC SHIPPING	1,950 DWT PRODUCT/CHEM TANKER	ELECTROLYSIS	300 m3/hr x 1 set	KR	2019
16	KT SHIPPING	6800 TON CHEMICAL TANKER	ELECTROLYSIS	300 m3/hr x 1 set	KR	2019
17	SHL MARITIME	D.W. 6,500 M.T CARGO SHIP	ELECTROLYSIS	300 m3/hr x 2 set	KR	2019
18	Fuyo Kaiun	50,000 DWT PRODUCT/OIL CARRIER	CHEMICAL INJECTION	1,500m3 x 1set	NK	2019



01

02

03

04

05

## Design Records - Newbuilding

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### 3-7 Sox Scrubber

NO	OWNER	MAKER	SHIP TYPE	SCRUBBER TYPE	CAPACITY	ENGINEERING SCOPE
1	HAPAG LLOYD	LAB	13,200 TEU CEONTAINER	OPEN	45MW	Scanning Feasibility Study Design
2	HAPAG LLOYD	LAB	13,200 TEU CEONTAINER	OPEN	45MW	Scanning Feasibility Study Design
3	HAPAG LLOYD	LAB	13,200 TEU CEONTAINER	OPEN	45MW	Scanning Feasibility Study Design
4	HAPAG LLOYD	LAB	13,200 TEU CEONTAINER	OPEN	45MW	Scanning Feasibility Study Design
5	CAPITAL SHIP MANAGEMENT CORP.	HYUNDAI POWER	162,000 MT COT	OPEN	20MW	Scanning Feasibility Study Design
6	HYUNDAI GLOVIS	HYUNDAI POWER	6,600 UNIT ROLL-ON ROLL-OFF CAR CARRIER	OPEN	12MW	Scanning Feasibility Study Design
7	HYUNDAI GLOVIS	HYUNDAI METERIAL	6,600 UNIT ROLL-ON ROLL-OFF CAR CARRIER	OPEN	12MW	Scanning Feasibility Study Design
8	XT MANAGEMENT	HYUNDAI METERIAL	4,250 TEU CONTAINER	OPEN	35MW	Scanning Feasibility Study Design
9	XT MANAGEMENT	HYUNDAI METERIAL	180,000 DWT BULK CARRIER	OPEN	20MW	Scanning Feasibility Study Design
10	XT MANAGEMENT	HYUNDAI METERIAL	36,000 TEU CONTAINER	OPEN	30MW	Scanning Feasibility Study Design
11	XT MANAGEMENT	HYUNDAI METERIAL	36,000 TEU CONTAINER	OPEN	30MW	Scanning Feasibility Study Design

01

02

03

04

05

## Design Records - Newbuilding

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### 3-7 Sox Scrubber

NO	OWNER	MAKER	SHIP TYPE	SCRUBBER TYPE	CAPACITY	ENGINEERING SCOPE
12	XT MANAGEMENT	HYUNDAI MATERIAL	6,500 TEU CONTAINER	OPEN	35MW	Scanning Feasibility Study Design
13	XT MANAGEMENT	HYUNDAI MATERIAL	4,250 TEU CONTAINER	HYBRID READY	35MW	Scanning Feasibility Study Design
14	H-LINE SHIPPING	KANGRIM	180,000 DWT BULK CARRIER	OPEN	20MW	Scanning Feasibility Study Design
15	KMTC	HYUNDAI MATERIAL	4,300 TEU CONTAINER	OPEN	35MW	Scanning Feasibility Study Design
16	KMTC	HYUNDAI MATERIAL	4,300 TEU CONTAINER	OPEN	35MW	Scanning Feasibility Study Design
17	KMTC	HYUNDAI MATERIAL	4,300 TEU CONTAINER	OPEN	35MW	Scanning Feasibility Study Design
18	KMTC	HYUNDAI MATERIAL	4,300 TEU CONTAINER	OPEN	35MW	Scanning Feasibility Study Design
19	E.P.S	CLEAN MARINE	106,000 DWT C.O.T	OPEN	17MW	Design
20	E.P.S	CLEAN MARINE	106,000 DWT C.O.T	OPEN	17MW	Design
21	E.P.S	CLEAN MARINE	PCTC	OPEN	12MW	Design
22	E.P.S	CLEAN MARINE	106,000 DWT C.O.T	OPEN	17MW	Design
23	E.P.S	CLEAN MARINE	106,000 DWT C.O.T	OPEN	17MW	Design
24	E.P.S	CLEAN MARINE	114,000 DWT C.O.T	OPEN	17MW	Design
25	E.P.S	CLEAN MARINE	114,000 DWT C.O.T	OPEN	17MW	Design



01

## Design Records - Newbuilding

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02

### 3-7 Sox Scrubber

03

NO	OWNER	MAKER	SHIP TYPE	SCRUBBER TYPE	CAPACITY	ENGINEERING SCOPE
26	E.P.S	CLEAN MARINE	114,000 DWT C.O.T	OPEN	17MW	Design
27	E.P.S	CLEAN MARINE	120,000 DWT B.C	OPEN	12MW	Design
28	E.P.S	CLEAN MARINE	120,000 DWT B.C	OPEN	12MW	Design
29	E.P.S	CLEAN MARINE	120,000 DWT B.C	OPEN	12MW	Design
30	E.P.S	CLEAN MARINE	160,000 DWT C.O.T	OPEN	17MW	Design
31	E.P.S	CLEAN MARINE	160,000 DWT C.O.T	OPEN	17MW	Design
32	E.P.S	CLEAN MARINE	105,000 DWT C.O.T	OPEN	17MW	Design
33	E.P.S	CLEAN MARINE	190,000 DWT B.C	OPEN	17MW	Design
34	E.P.S	CLEAN MARINE	190,000 DWT B.C	OPEN	17MW	Design
35	E.P.S	CLEAN MARINE	190,000 DWT B.C	OPEN	17MW	Design
36	E.P.S	CLEAN MARINE	115,000 DWT C.O.T	OPEN	17MW	Design
37	E.P.S	CLEAN MARINE	115,000 DWT C.O.T	OPEN	17MW	Design
38	E.P.S	CLEAN MARINE	106,000 DWT C.O.T	OPEN	17MW	Design
39	E.P.S	CLEAN MARINE	170,000 DWT B.C	OPEN	14MW	Design

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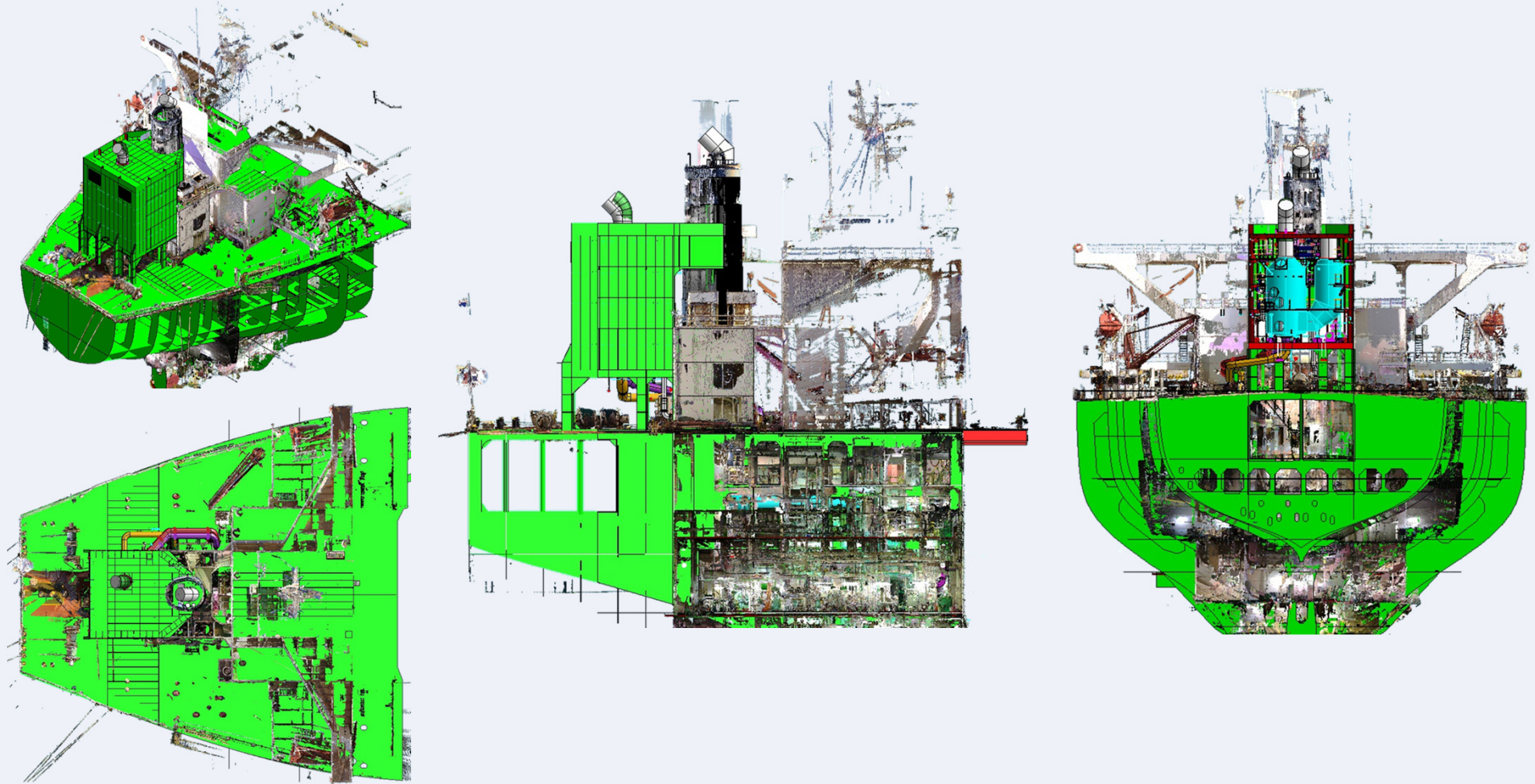
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## Design Records

### 3-8 180K MR Tanker

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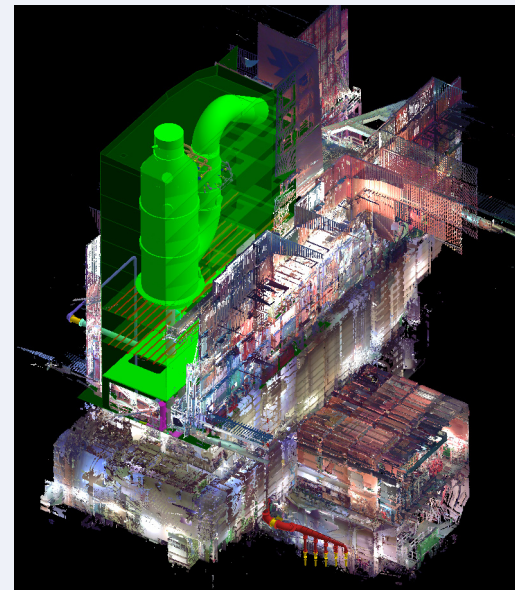
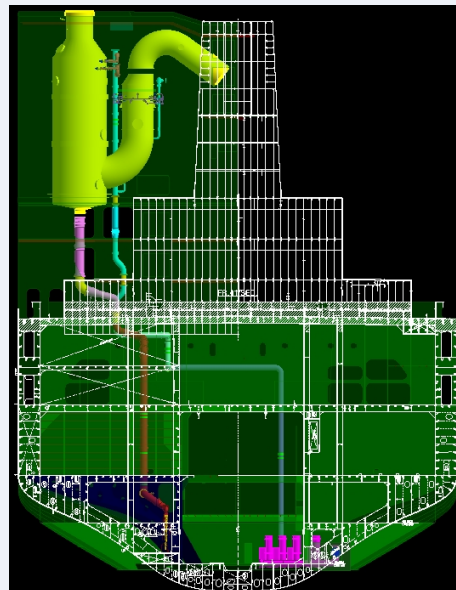
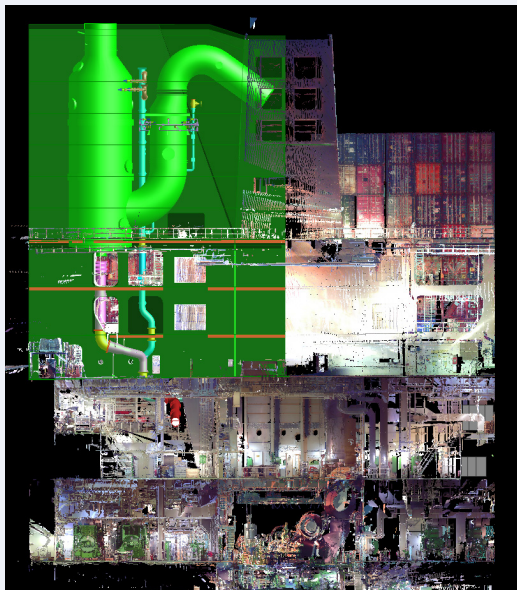
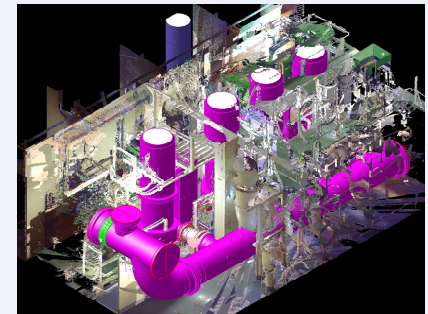
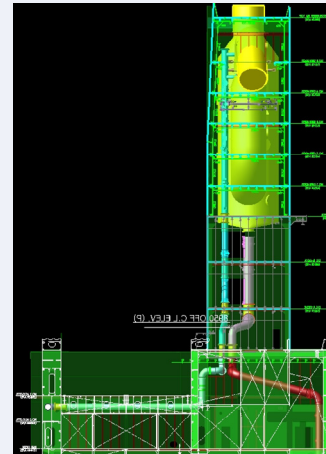
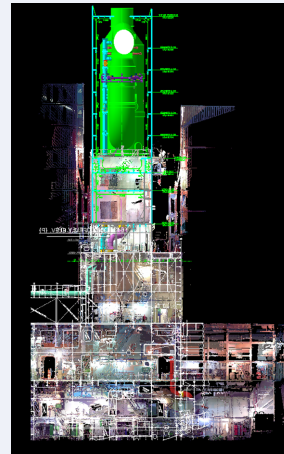
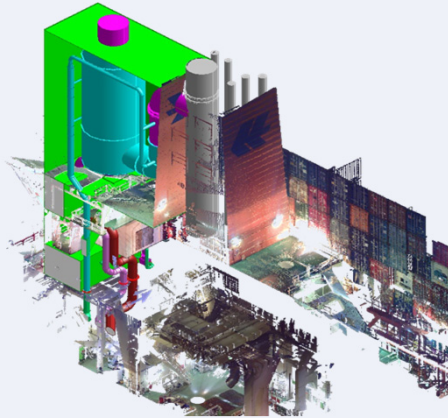
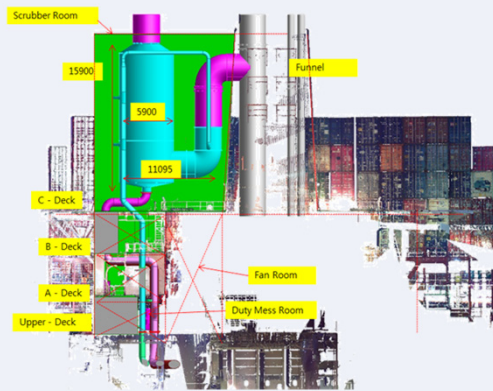
03

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# Design Records

## 3-9 13,200 TEU Container





01

# Design Records

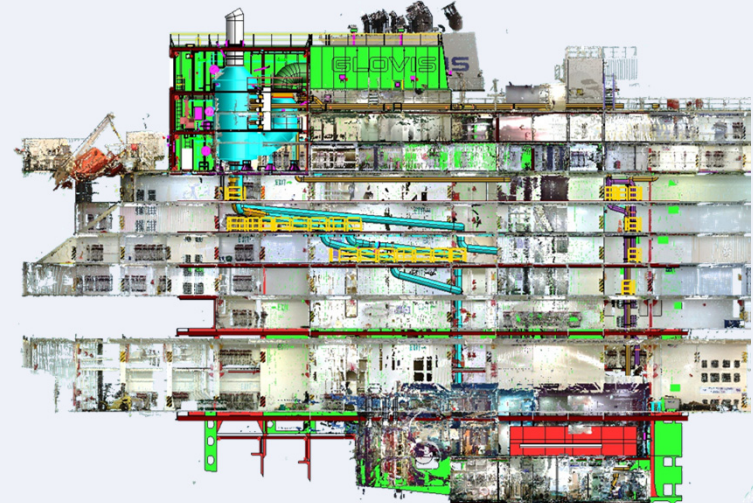
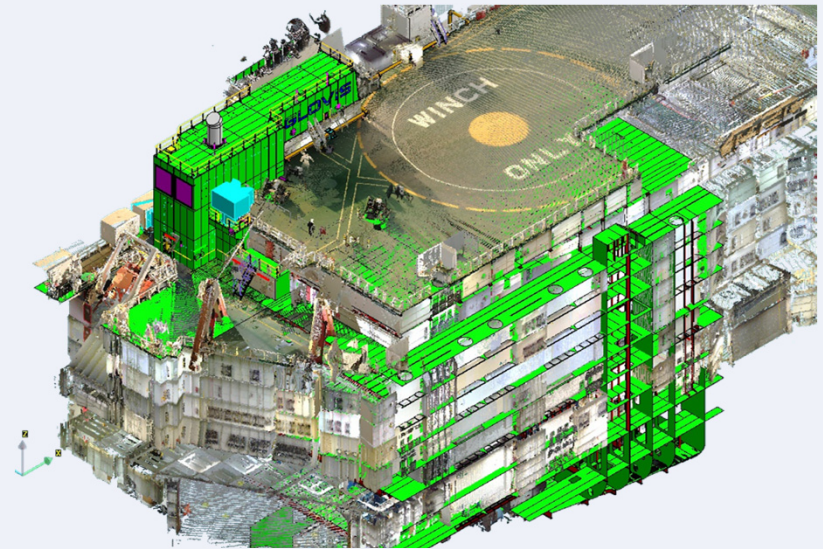
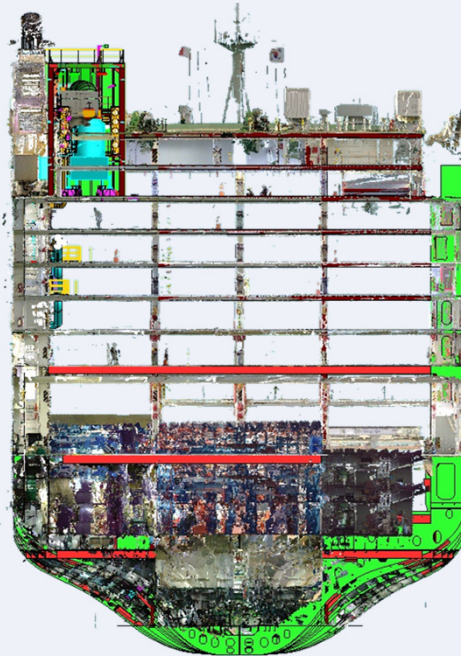
## 3-10 6,600 PCTC Car Carrier

02

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01

02

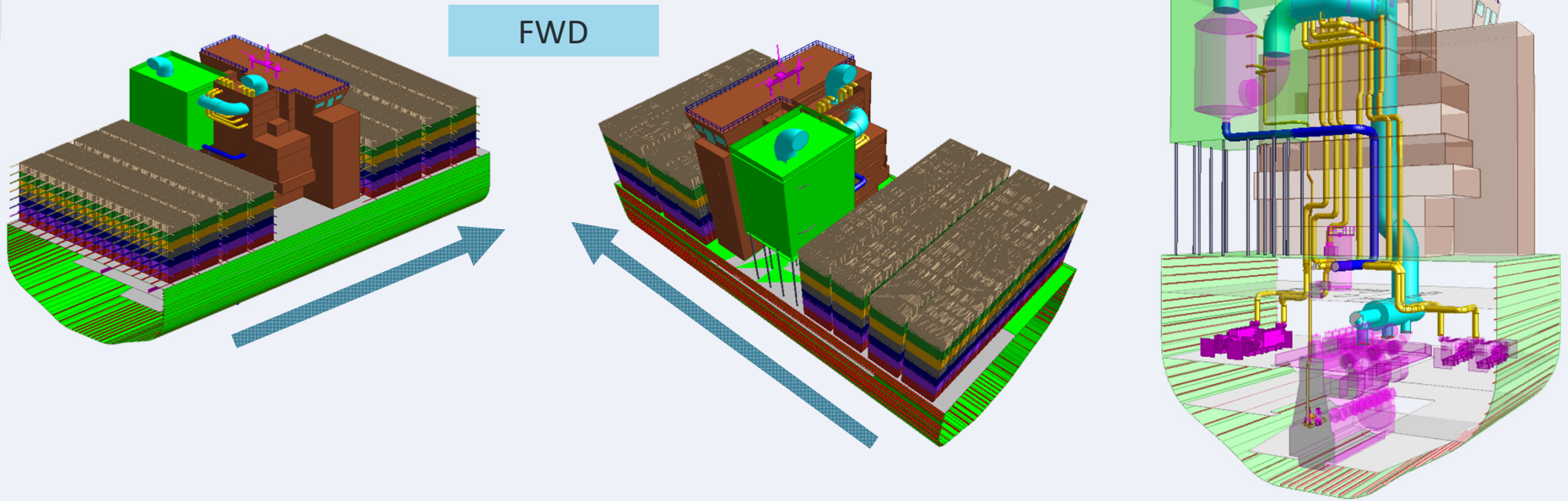
03

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# Design Records

## 3-11 8,600 TEU Container Carrier





01

02

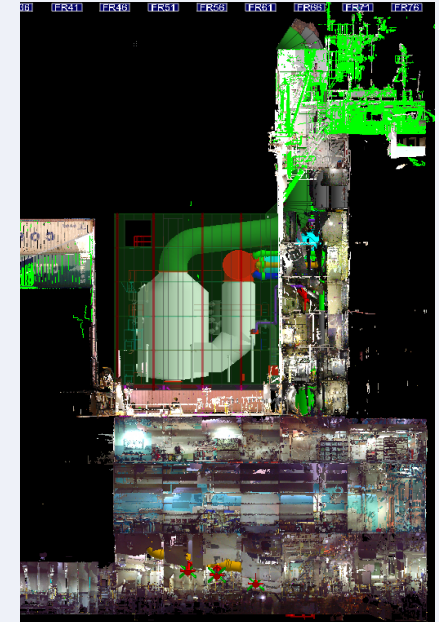
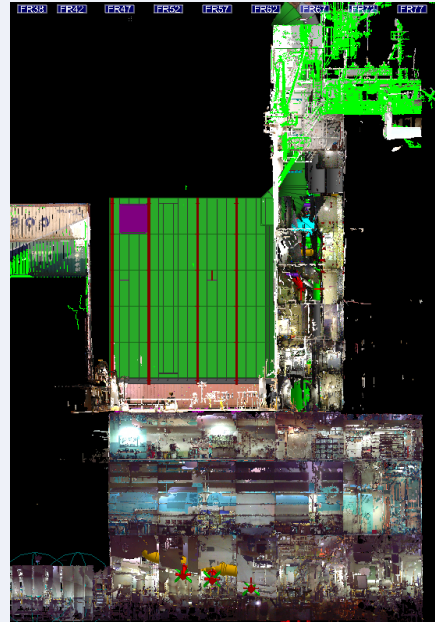
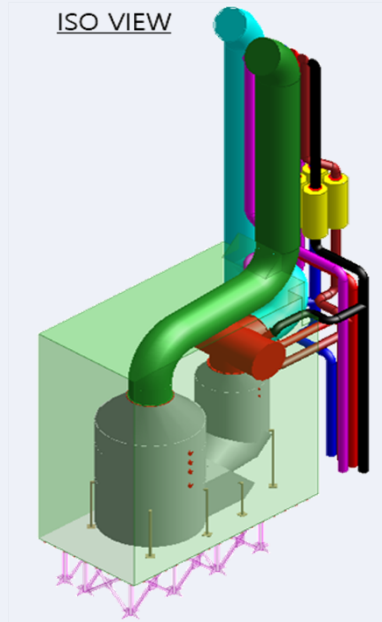
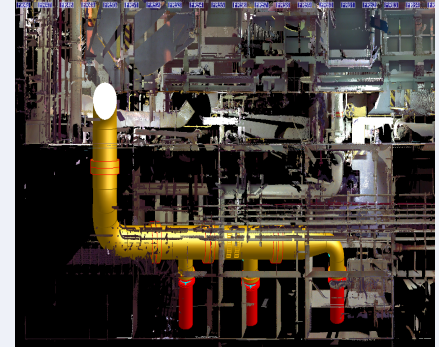
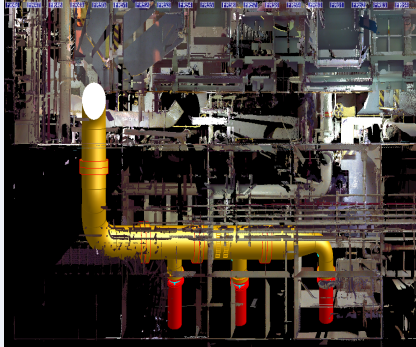
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### Design Records

### 3-12 4,250 TEU Container Carrier





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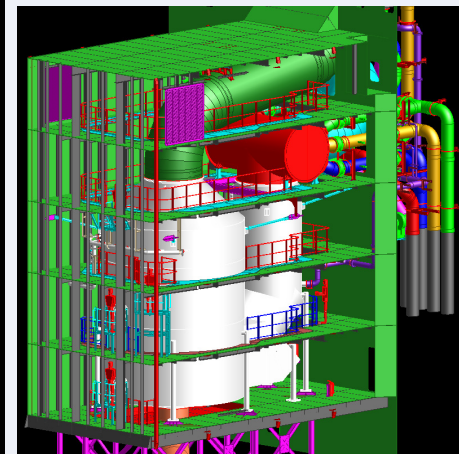
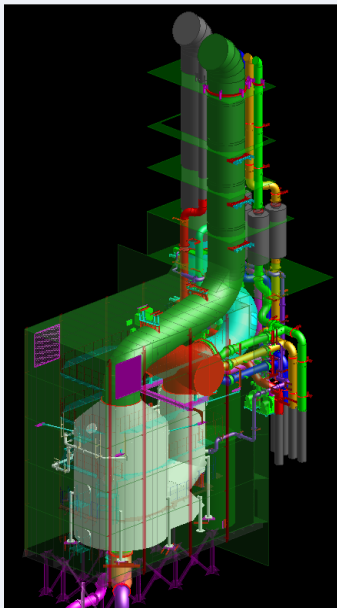
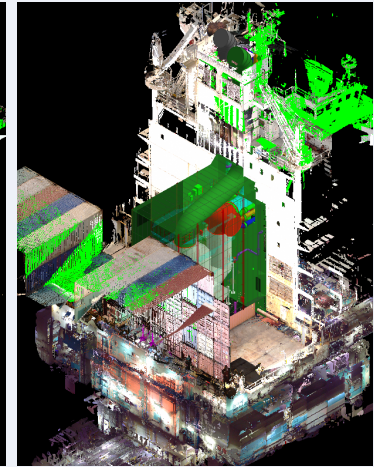
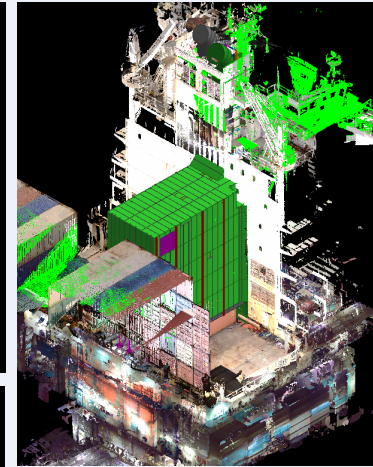
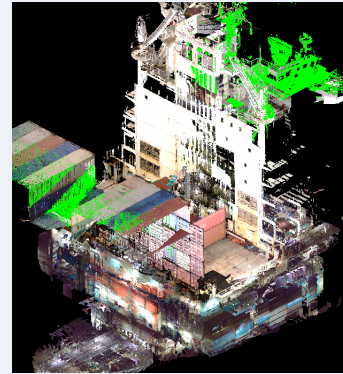
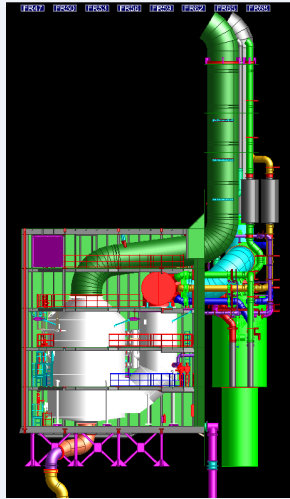
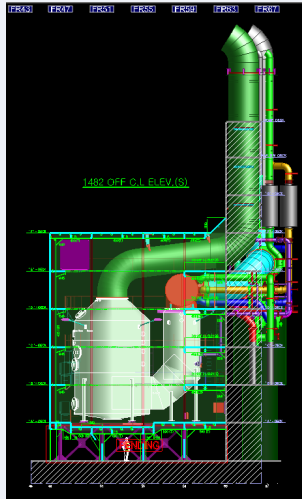
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# Design Records

## 3-12 4,250 TEU Container Carrier



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## Retrofit Schedule

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\*If manufacturing time is reduce, schedule to be adjusted.

NO.	Tasks	1M	2M	3M	4M	5M	6M	7M	8M
1	Technical review	→							
2	Onboard survey including 3D scanning	→						ETA	
3	Reverse engineering & new pipe equipment modeling (feasibility report)	→							
4-1	• Basic & detailed design for approval		→						
	• Class approval			→					
4-2	• Design for working (yard)			→					
5	• Purchasing & manufacturing SOx scrubber		→						
	• Bulk & raw material				→				
6	• Transit							→	
	• Installation & commissioning								→

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# Design Records / Ship Blocks / Inspection

