



2022

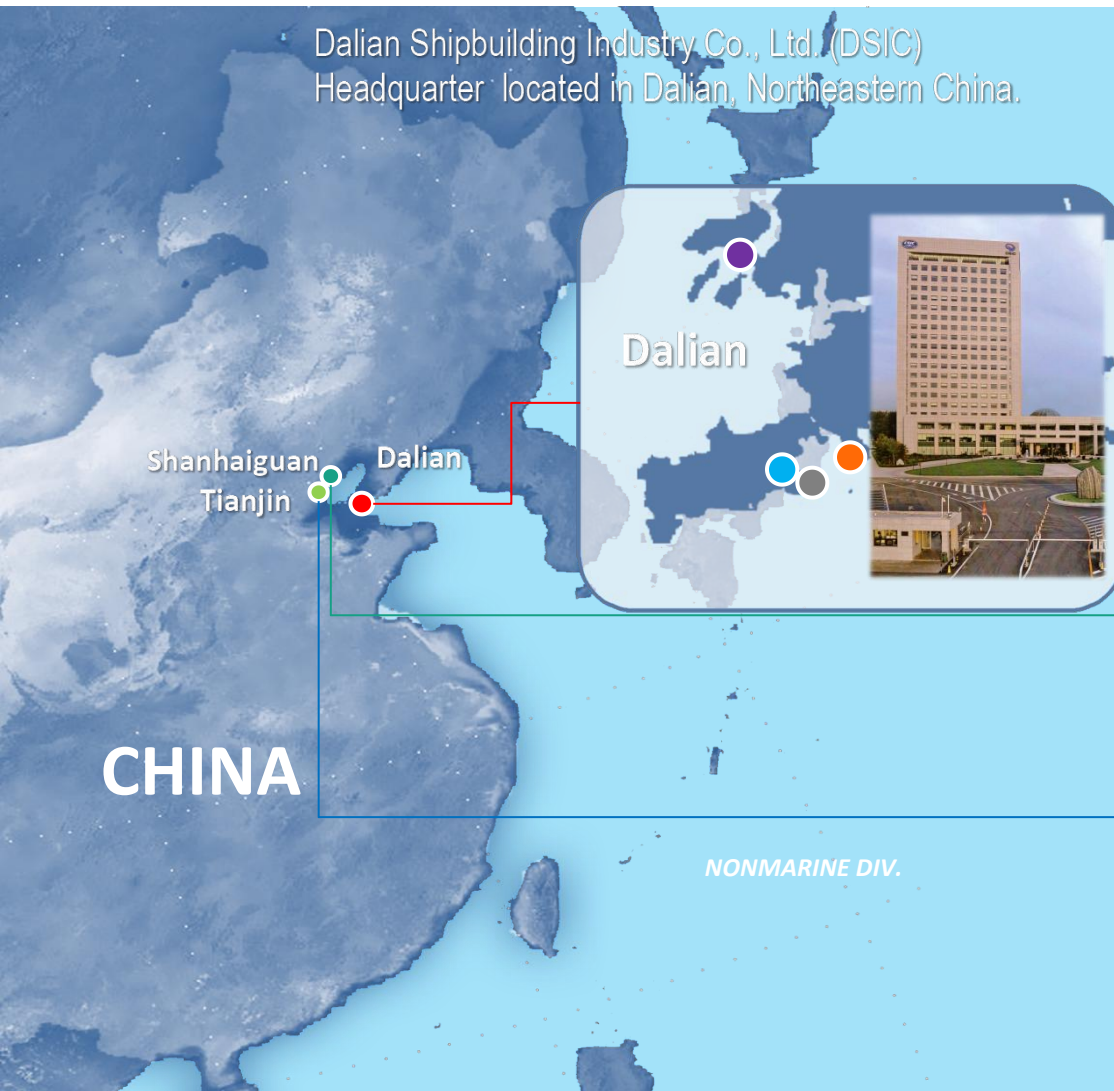
CSSC

大连船舶重工集团长兴岛船舶工程有限公司
DALIAN SHIPBUILDING INDUSTRY CHANGXINGDAO SHIPYARD CO.,LTD.

Brief Introduction - DSIC

Dalian Shipbuilding Industry Co., Ltd. (DSIC)
Headquarter located in Dalian, Northeastern China.

One Headquarter Three Premises



Yard No.1
Yard No.2
Yard No.3

- **Military**
- **FPSO New Building**
- **LNGC**

Premises 1
(in Dalian city)

**DSIC
Changxing** *

- **FPSO Conversion**
- **Module Fabrication & Integration**

DSIC SHGSIC *

- Ship repair
- Shipbuilding

Premises 2
(in Shanhaiguan city)

DSIC XGSIC*

- Shipbuilding

Premises 3
(in Tianjin city)

* Subsidiary of DSIC

- Total assets of DSIC group: over **11.99 billion USD**
- Revenue of 2020: **2.60 billion USD**
- Handing orders: **more than 60**

Total area: over **9,285,000 m²**

Docks: **14**

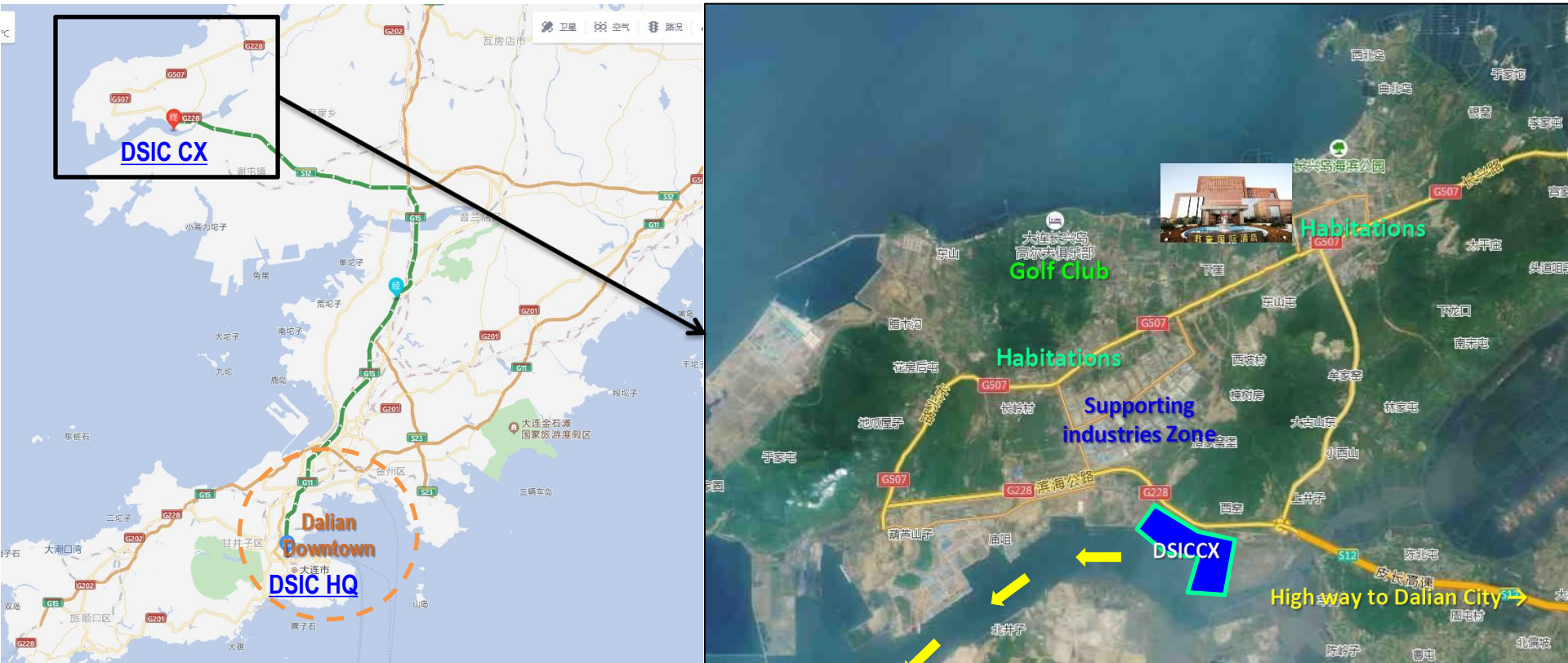
Slipways: **5**

Combined length of outfitting quay: **18,785 m**



Location - DSIC Changxing

- ◆ DSIC-CX is located in Dalian Changxing New Development Zone, facing to the open sea, close to Japan, Korea and many major ports in China.
- ◆ None raining season and moderate temperature in the whole year without typhoon impact.
- ◆ 80 miles high way direct to Dalian Downtown.(1 hour driving).
- ◆ 5 Stars Hotel, Sea beach park and International Golf Club in island.



Brief Introduction - DSIC Changxing

DSIC Changxing, A dedicated subsidiary yard of DSIC for Modules Fabrication, FPSO Conversion and Integration along with Ship repairing.

CSSC 大连船舶重工集团长兴岛船舶工程有限公司
DALIAN SHIPBUILDING INDUSTRY CHANGXINGDAO SHIPYARD CO.,LTD.



- ❑ With land requisition 1 Million square meter.
- ❑ The first case that marine conversion, topside fabrication and integration in same shipyard.
- ❑ 420 m Length Drydock for up to 20000 TEU container vessel repairing.
- ❑ -8.6m public sea channel for deep draft vessel sailing

ID	Capacity	Parameter	Crane
1	No.1 Quay	500m*-10.8m	D5075,D50100
2	No.2 Quay	576m*-10.8m	D5075,D50100
3	No.3 Quay	895m*-10.8m	D5075×2
4	No.4 Quay	450m*-10.8m	D5075
5	No.5 Quay	656m*-7.5m	D5075×2
6	No.6 Quay	550m*-7.5m	D5075
7	No.1 Dry Dock	420*68*-14.6m	D5075×2,D50100×1
8	No.2 Dry Dock	330*58*-13.4m	D5075×2(Share),D50100×1

HSSEQ Management System

HSE Policy

Protect lives and protect environment

QA | QC Policy

Responsible Management,
Quality Products, Best Service,
Continuous Improvement

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: 447301-2021-AS-RIGC-RVA Initial certification date: 30 April, 2021 Valid: 30 April, 2021 – 30 April, 2024

This is to certify that the management system of

Dalian Shipbuilding Industry Changxingdao Shipyard CO., LTD.

No.299, Guanghai Road, Changxing Island Economic District, Dalian, Liaoning Province, China

has been found to conform to the Environmental Management System standard: **ISO 14001:2015**

This certificate is valid for the following scope:

Manufacture, Repair and Conversion of Ships & Offshore Engineering

Place and date:
Shanghai, 30 April, 2021



For the issuing office:
DNV GL - Business Assurance
Suite A, Building 9, No.1591 Hongqiao Road, Changning District, Shanghai
200336, P.R. China
TEL: +86 21 32799000

Zhu Hai Ming
Management Representative

Look of differences of our office as set out in the Certification Agreement may render this Certificate invalid.
AOC:01010411001 ENR/CS Business Assurance R.V., 2nd Floor, 1, 2504 18, Riverside Avenue, Singapore, TEL: +1 (38) 52927660, www.dnvgl.com/assurance

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: 447302-2021-OSA-RIGC-RVA Initial certification date: 30 April, 2021 Valid: 30 April, 2021 – 30 April, 2024

This is to certify that the management system of

Dalian Shipbuilding Industry Changxingdao Shipyard CO., LTD.

No.299, Guanghai Road, Changxing Island Economic District, Dalian, Liaoning Province, China

has been found to conform to the Occupational Health and Safety Management System standard: **ISO 45001:2018**

This certificate is valid for the following scope:

Manufacture, Repair and Conversion of Ships & Offshore Engineering

Place and date:
Shanghai, 30 April, 2021



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MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: 447300-2021-AQ-RIGC-RVA Initial certification date: 30 April, 2021 Valid: 30 April, 2021 – 30 April, 2024

This is to certify that the management system of

Dalian Shipbuilding Industry Changxingdao Shipyard CO., LTD.

No.299, Guanghai Road, Changxing Island Economic District, Dalian, Liaoning Province, China

has been found to conform to the Quality Management System standard: **GB/T 19001-2016/ISO 9001:2015**

This certificate is valid for the following scope:

Manufacture, Repair and Conversion of Ships & Offshore Engineering

Place and date:
Shanghai, 30 April, 2021



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Shipyard Facility



Sequence	Yard Workshop capacity	Back Up Resources	Capacity Skyline
Steel Cutting	Hull Workshop: 2000t/m	CSIE: 8000t/m DSIC Steel cutting Center:50000t/m	~10000t/m
Piping Fabrication	Piping workshop:600t/m(~6000spl)	DSIC Outfitting Company: 1500t/m	~2000t/m
Workshop Painting	Painting Workshop:70000m ² /m	Outsourcing:150000m ²	~150000m ² /m

Shipyard Facility



SPMT & Barge



Crawl crane: 300t, 450t



Floating crane:
5000t/3600t/3000t/1600t

Engineering

■ DSIC Ship & Offshore Engineering and Development Research Institute

Approved by China State Technical Center, organized by a professional and most capable. design & engineering team among the Chinese shipyards, consisted of more than 1000 engineers and designers (including 400 engineers for Offshore) led by the Academician of Chinese Academy of Engineering. With aid of TRIBON M3, CADD5 and NAPA, the Center is able to introduce and develop top technical products, including offshore devices and LNG vessels etc

■ DSIC Changxing site engineer

DSIC CXD engineer department focus on shop engineering of FPSO conversion, module fabrication and vessel repairing. Around 200 engineers keep working on site to provide reliable support for construction.



Engineering

Project execution proposal for Engineering

■ Marine Hull conversion detail & shop design

DSIC Ship & Offshore Engineering and Development Research Institute have the full capacity of VLCC size marine conversion for detail & shop design.

DSIC CX engineer department to provide shop design & site engineer support.

Tracking Record:

- MV31 marine conversion shop design.
- MV33 marine conversion detail & shop design.
- Bacalhau FPSO Basic, detail and shop design.

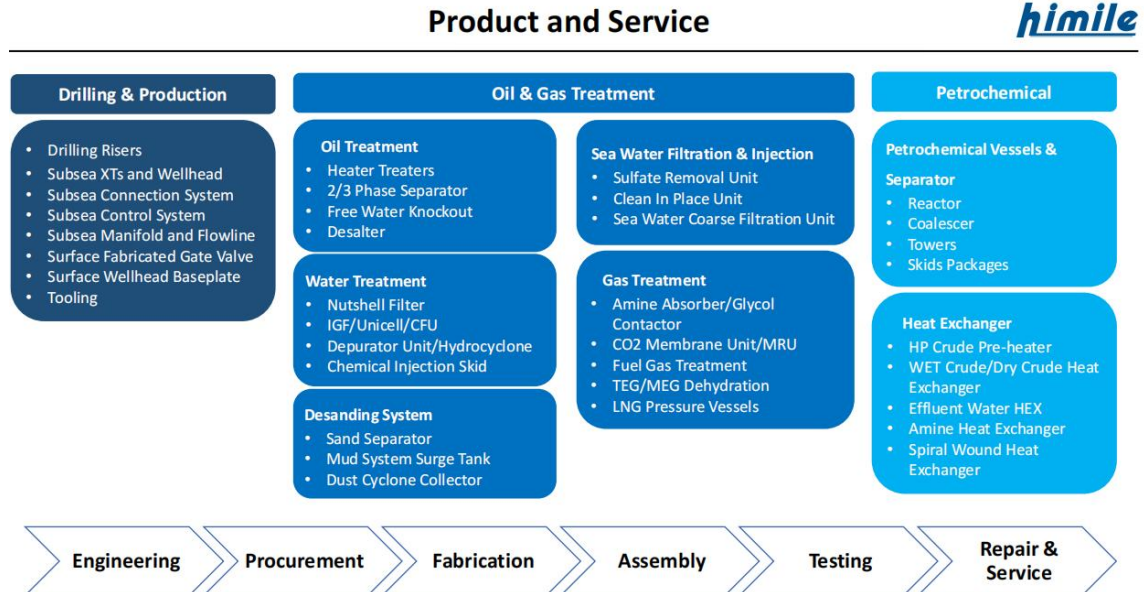
■ Topsides module design

Himle, DSIC strategy cooperative partner. Provide product and services for FPSO Oil & Gas. Dedicate engineer team for topside detail design.

DSIC CX engineer department to provide shop design & site engineer support.

Tracking Record:

- MV27 topside module shop design.
- MV31 topside module shop design.
- MV33 topside module shop design.



Human Resources

FPSO Experience Management Team FPSO

- Yard President FPSO MV18 Project Manager background.
- Key person with FPSO project manager experience as below:



Mr Zhang Yi

Production Director
*Project Manager of FPSO MV20, MV23, MV24.
Project Director of MV27 Module Fabrication, FPSO MV31 and Module.*



Mr Zhang Zhongbin

Project Director

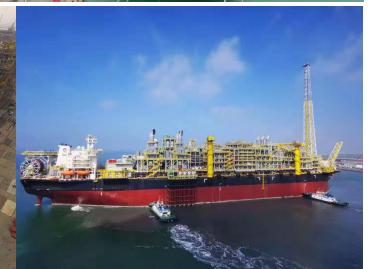
*Project Manager of FPSO MV22
Project Director of FPSO MV33*



Mr Sun Jianfei

Commercial Director

Project Manager of Libra/P75/77/68/71 E-house Fabrication, FPSO MV31



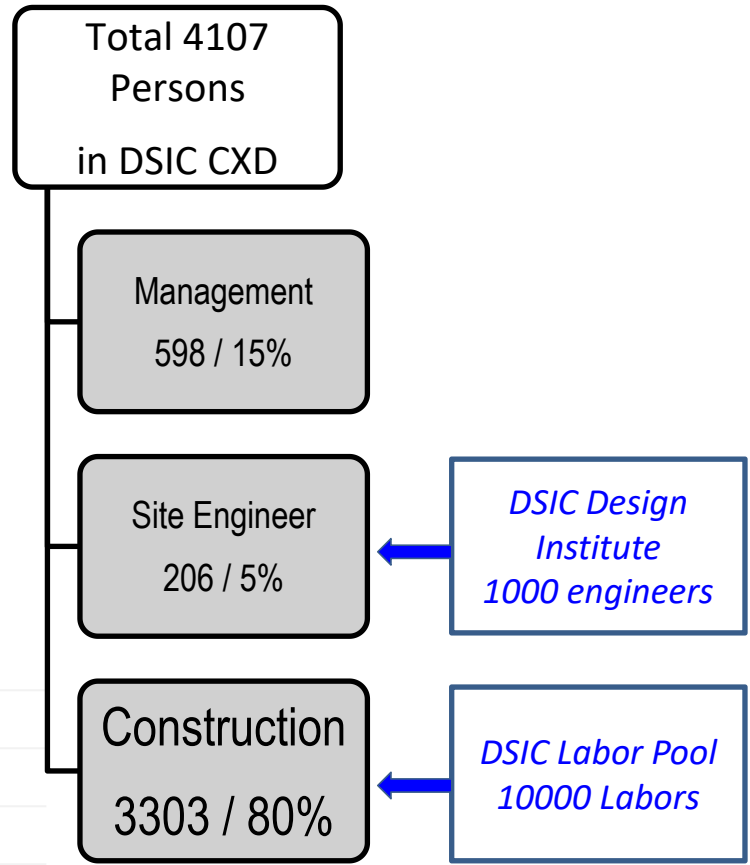
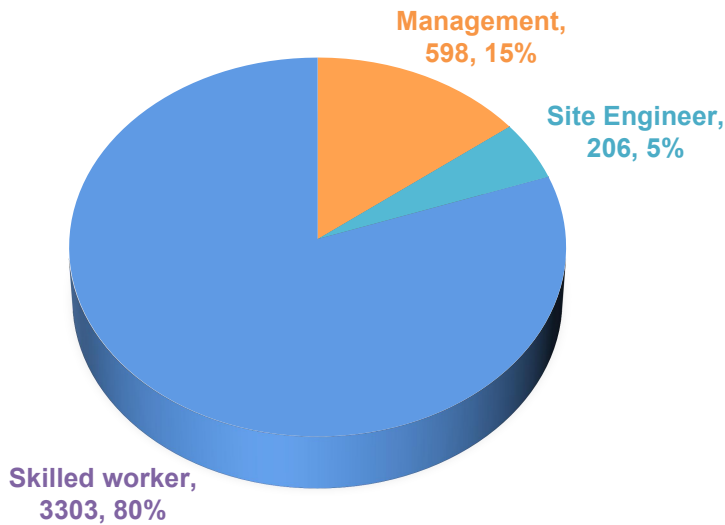
Mr Wang Linqiang

HSE Director

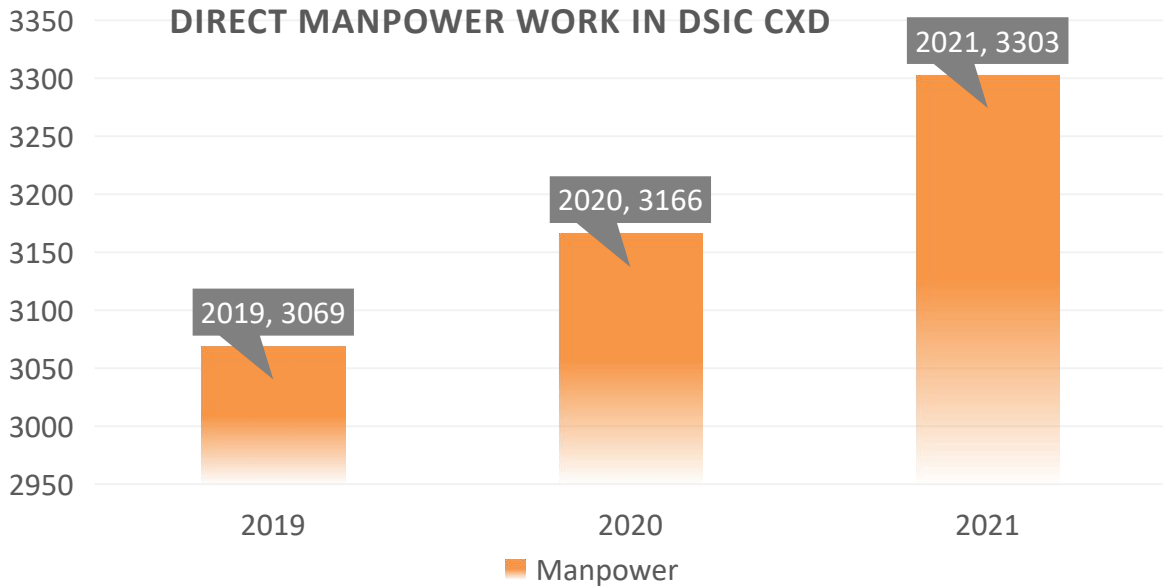
*Project Manager of MV27 Module Fabrication
MV31 Module Fabrication*



Human Resources



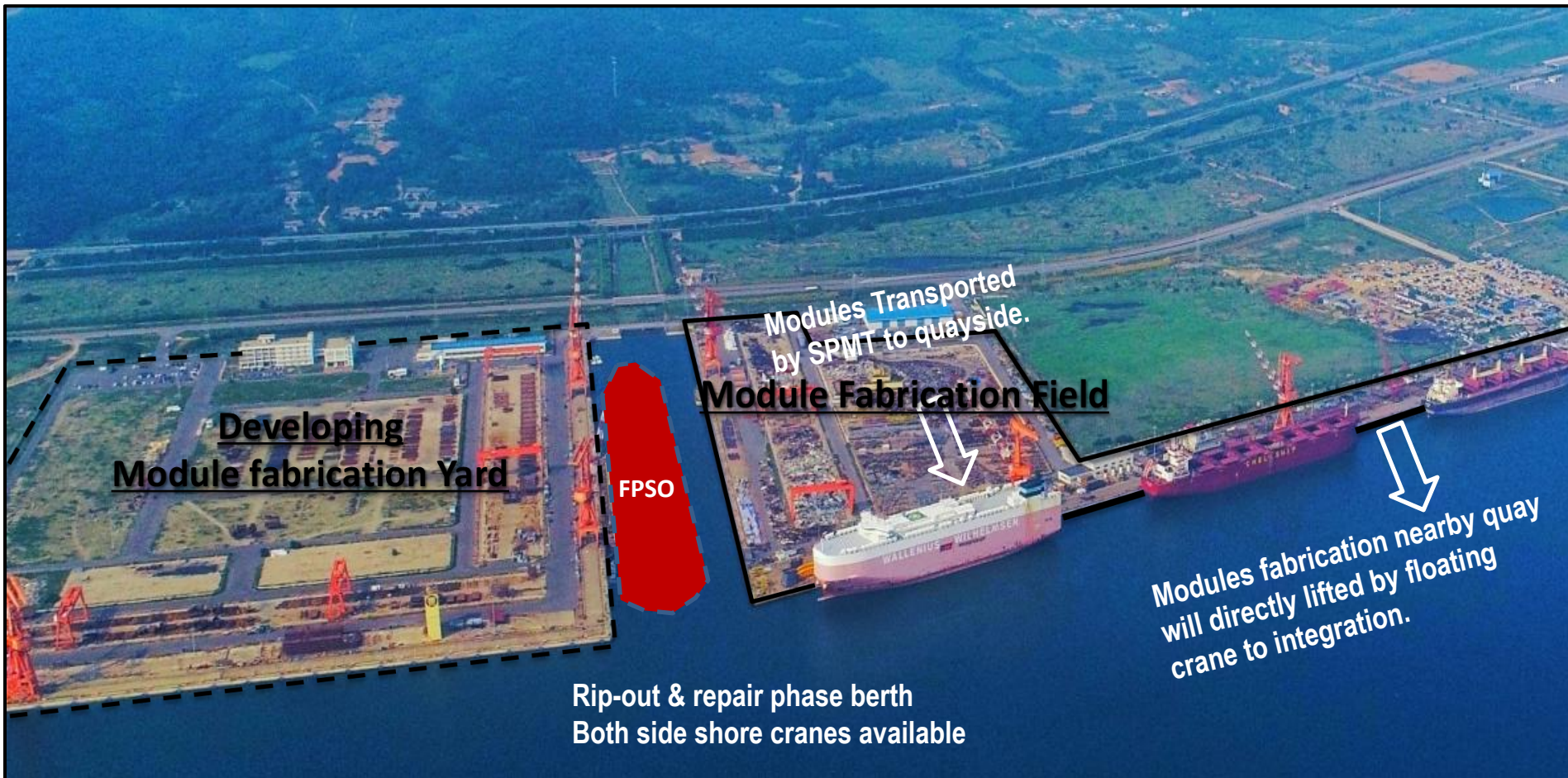
DIRECT MANPOWER WORK IN DSIC CXD



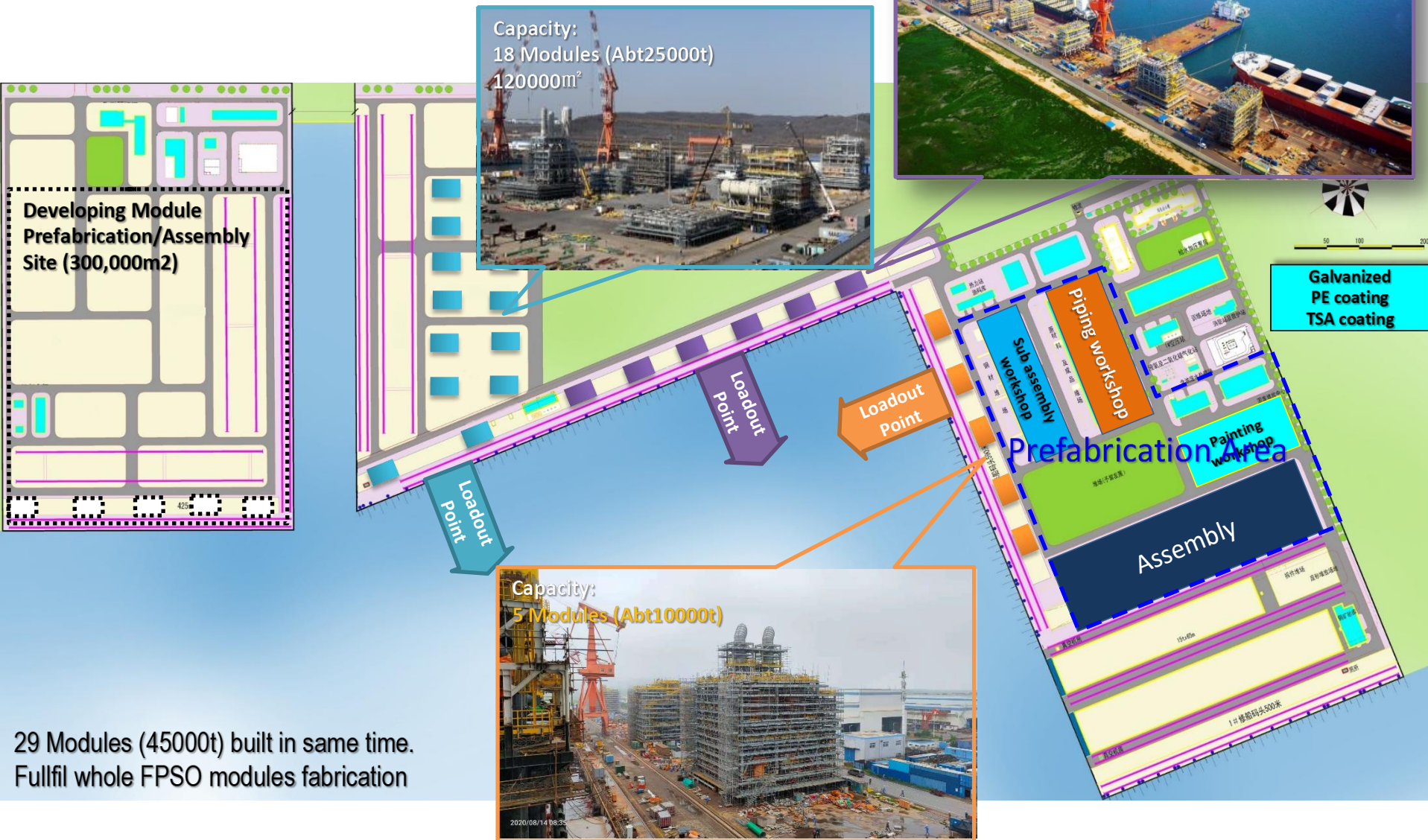
General arrangement of FPSO construction



General arrangement of FPSO construction



Module Fabrication



29 Modules (45000t) built in same time.
Fullfil whole FPSO modules fabrication

Module Fabrication

Track Record

● **Total 72k Tons Module fabricated**

Covered all kind of FPSO Modules



MV 27 Topside Modules

Work Scope:
25pcs modules fabrication
6pcs modules piping fabrication
Total Weight: 17,000 tons

MV 31 Topside Module

Work Scope: 27pcs modules
Total Weight: 34,000 tons

MV 33 Topside Module

Work Scope: 11 pcs modules
Total weight: 10,475 tons

E-house Module Fab.

Work Scope: 7pcs modules
Total Weight: 8,500 tons

GTG, CO2 Compression Module

Work Scope: 3pcs modules
Total Weight: 5,000 tons

Project/Modules	E-house	GTG	Compressor	Process Modules	Utility Modules	Laydown/W.S	Riser Module
Libra - GE	√						
P75/77 - GE&QGI	√	√	√				
P68/71 - GE	√						
MV27 - MODEC				√	√	√	√
MV31 - MODEC		√	√	√	√	√	√
MV33 - MODEC		√				√	√

Module Fabrication

➤ Pipe Rack



➤ Riser Porch



➤ Compressor



➤ Gas Turbine Generator

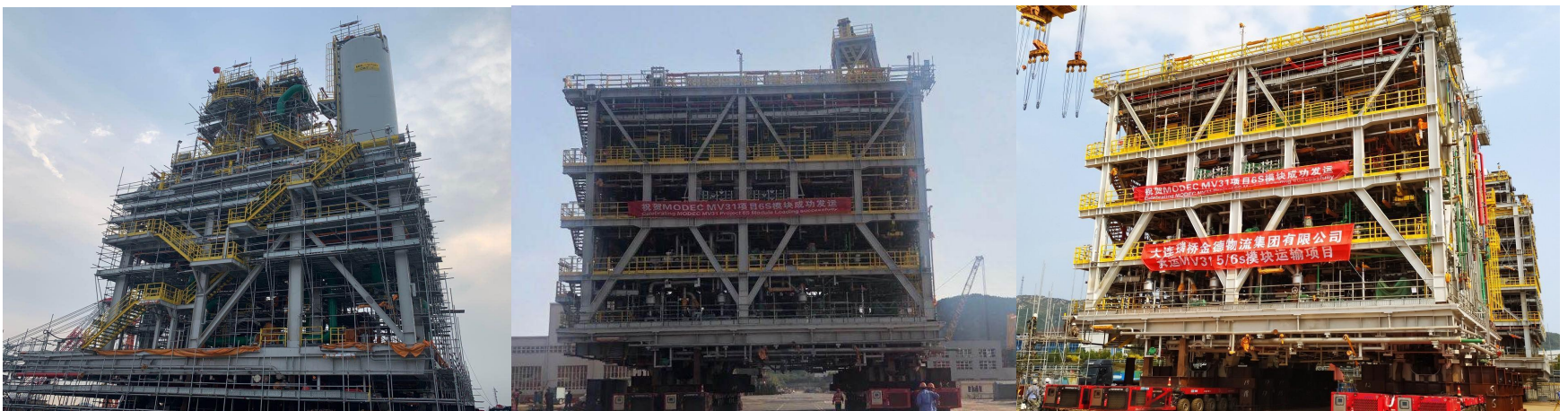


Module Fabrication

➤ Process Module



➤ Utilities Module

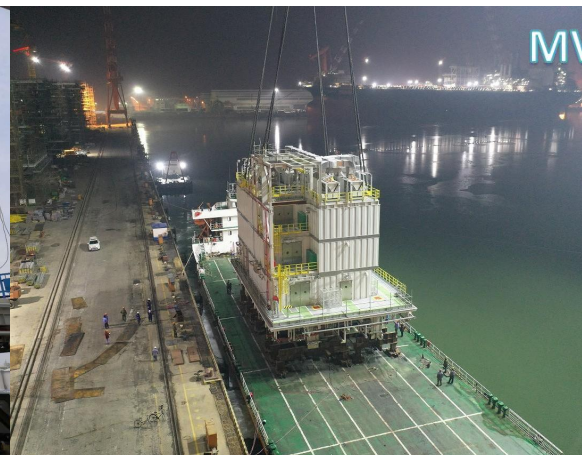


Module Fabrication

➤ E-house Module



➤ Workshop Module (EPC)



Living Quarter

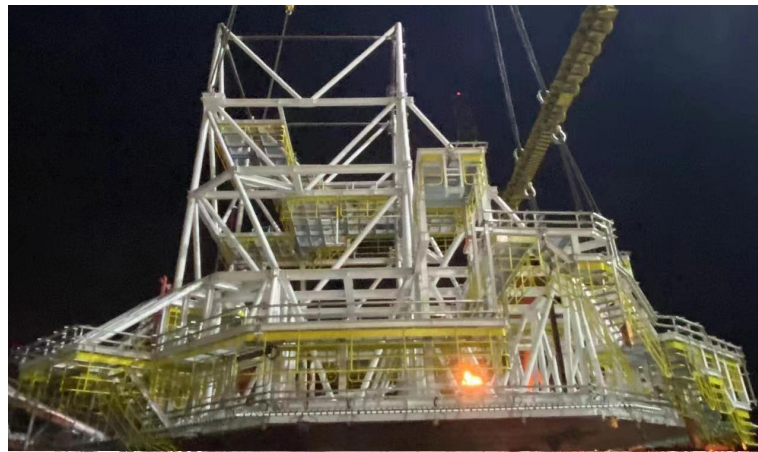
DSIC Ship & Offshore Engineering and Development Research Institute had completed 2 LQ detail & shop design.

- MV31 LQ: Original LQ conversion, 160 pax, 1.8m elevation increased
- MV33 LQ: New built, 160 pax, Norsok - S002 Standard.

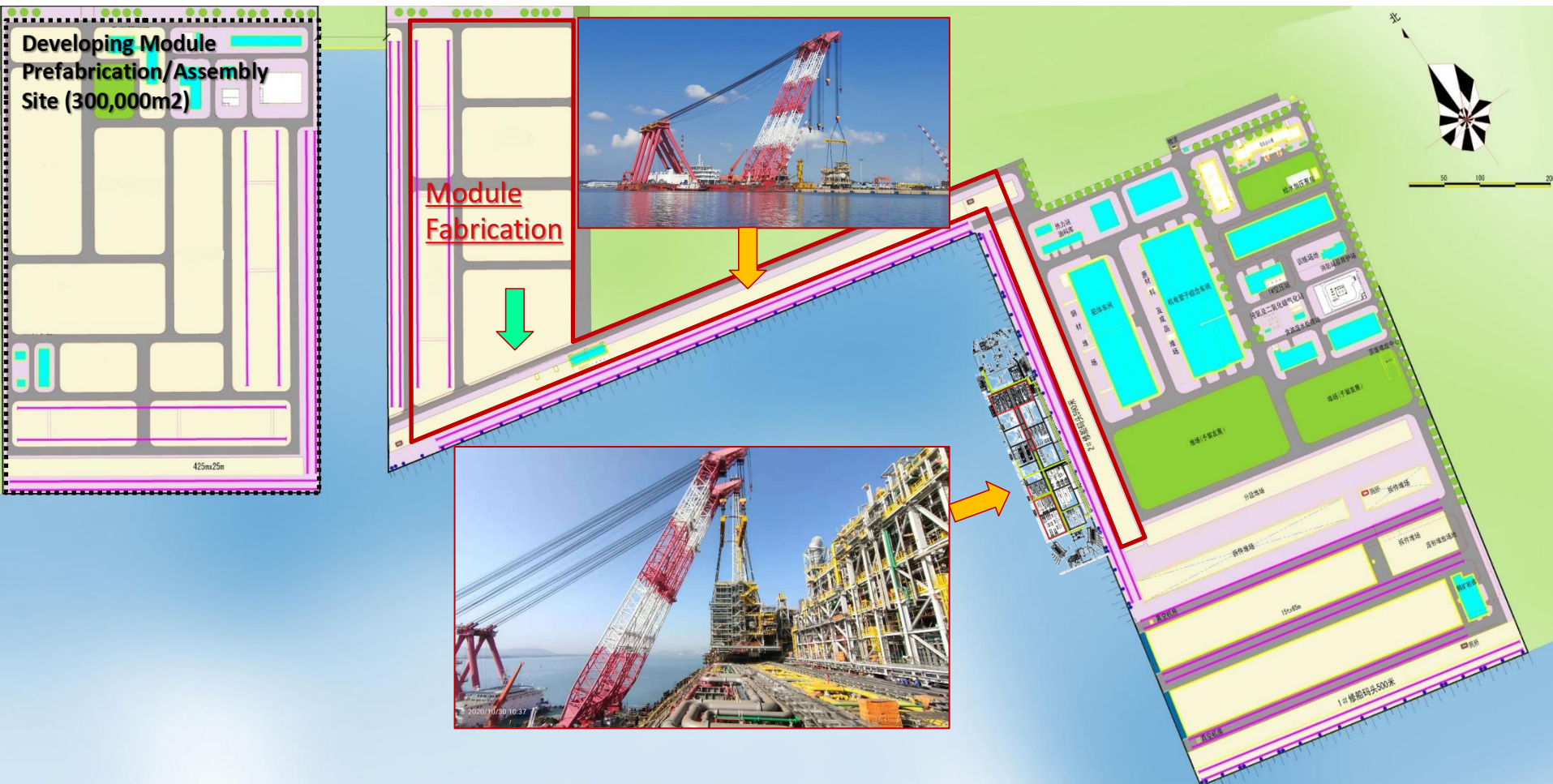


Flare Tower, Heli Deck, Vent Tower and Crane Pedestal

Flare Tower up to 140m



Module Integration



- **Module Fabricated at quay side will directly lifted by floating crane and integrated to FPSO marine hull.**
- **Module Fabricated at open field will be transported by SPMT to quay side.**
- **A dedicated project team for integration management, keep the record that completed all integration works within 2months after module lifting.**

FPSO Conversion & Integration

FPSO HaiYangShiYou 113 Upgrade & Refurbish

Owner : CNOOC Tianjin Ltd Type: FPSO

L.O.A: 282.00m M. Breadth: 51.00mM. Depth :20.60m



FPSO Conversion & Integration

Guanabara FPSO MV31 Conversion & Integration Project



Vessel Principal Particulars	
Length Overall	332.0m
Breadth, moulded	58.0m
Depth, moulded	31.0m
Net. Tonnage	108,708MT
Cargo Tank Capacity	1,400,000bbls
Complement	160pax
FPSO Production Capacity	
Number of Slots	56 slots
Oil Production	180,000bopd
Gas Production	12 million Sm ³ /d
Water Injection	225,000 bwpd
Produced Water Rate	150,000 bwpd



Marine Conversion, Topside Fabrication and Integration all in DSIC.

Sail Away 2021.08.22

FPSO Conversion & Integration

Anita Garibaldi FPSO MV33 Conversion & Integration Project



Vessel Principal Particulars	
Length Overall	332.0m
Breadth, moulded	58.0m
Depth, moulded	31.0m
Summer DWT	305,688MT
Cargo Tank Capacity	1,000,000bbls
Complement	160pax
FPSO Production Capacity	
Oil Production	80,000bopd
Gas Production	7 million Sm ³ /d



Sail Away 2022.10.06

辽宁省, 大连市 | 2022.10.06 07:57

FPSO New Building in DSIC

FPSO Newbuilding Tracking Record (7 Units)

PROJECT	Storage	QTY	CLIENT	DELIVERY YEAR	Remark
QHD 32-6 FPSO	1 million Barrels	1	CNOOC	2001	Include Topside module
WEN13-1/13-2 FPSO	1 million Barrels	1	CNOOC	2002	Include Topside module
Belanak FPSO Hull	1.5 million Barrels	1	Conoco-Phillips	2003	
CFD11-1/11-2 FPSO	1 million Barrels	1	CNOOC	2004	Include Topside module
Hai Yang Shi You 116	1.1 million Barrels	1	CNOOC	2007	
Enping 118	1 million Barrels	1	CNOOC	2014	
Bacalhau FPSO	2.2 million Barrels	1	Equinor / MODEC	On Going	



Thank you!

