

**QINGDAO HAIXI HEAVY-DUTY
MACHINERY CO., LTD
SHIP-TO-SHORE/QUAYSIDE
CRANE FABRICATION
INTRODUCTION**

HHMC STS INTRODUCTION



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HHMC PROFILE

The background of HHMC, what we do, where we are, our values, mission and vision and our technical capacity are introduced.

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In this part, we will introduce to you the commissioning and test process.

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In this part, loading and delivery will be introduced by showing pictures.

PART 5

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In this part, we will introduce our STS delivery experience for Qatar, South Korea and Lebanon etc.

HHMC PROFILE

BACKGROUND OF HHMC

WHAT WE DO

OUR VALUES, MISSION &
VISION

TECHNICAL CAPACITY

01



Background of HHMC

Qingdao Haixi Heavy-Duty Machinery Co., Ltd. (QINGDAO HAIXI HEAVY-DUTY MACHINERY CO., LTD, HHMC), under the leadership of China State Shipbuilding Corporation (CSSC), established in 2005, is the wholly-owned subsidiary of Wuhan Marine Machinery Co., Ltd. (WMMP). Group company CSSC is the largest company in the Chinese shipbuilding industry listed on the Fortune Global 500.

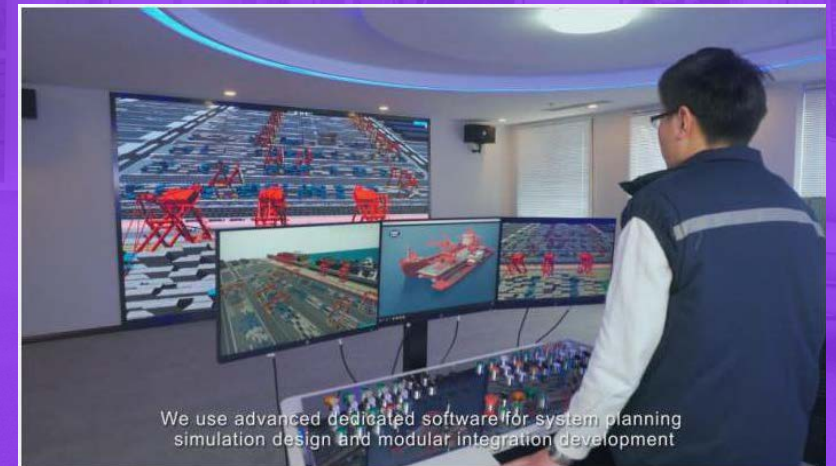


What We do

As a application industry strongly supported by CSSC, HHMC specializes in the R&D and manufacture of port handling machinery, ship hoisting equipment and functional offshore platform and provides professional overall intelligent solutions for port machinery and logistics system.

HHMC is a very professional manufacturer in the portal equipment industry. With 16 years of verification experience, the ship-to-shore container cranes, bridge-type grab ship-unloaders, rail-mounted cranes, portal cranes and functional self-elevating offshore platforms manufactured by HHMC can be found in major ports both at home and abroad.

CSSC 青岛海西重机有限责任公司
QINGDAO HAIXI HEAVY-DUTY MACHINERY CO.,LTD.



Where We are



Qingdao
Workshop Layout

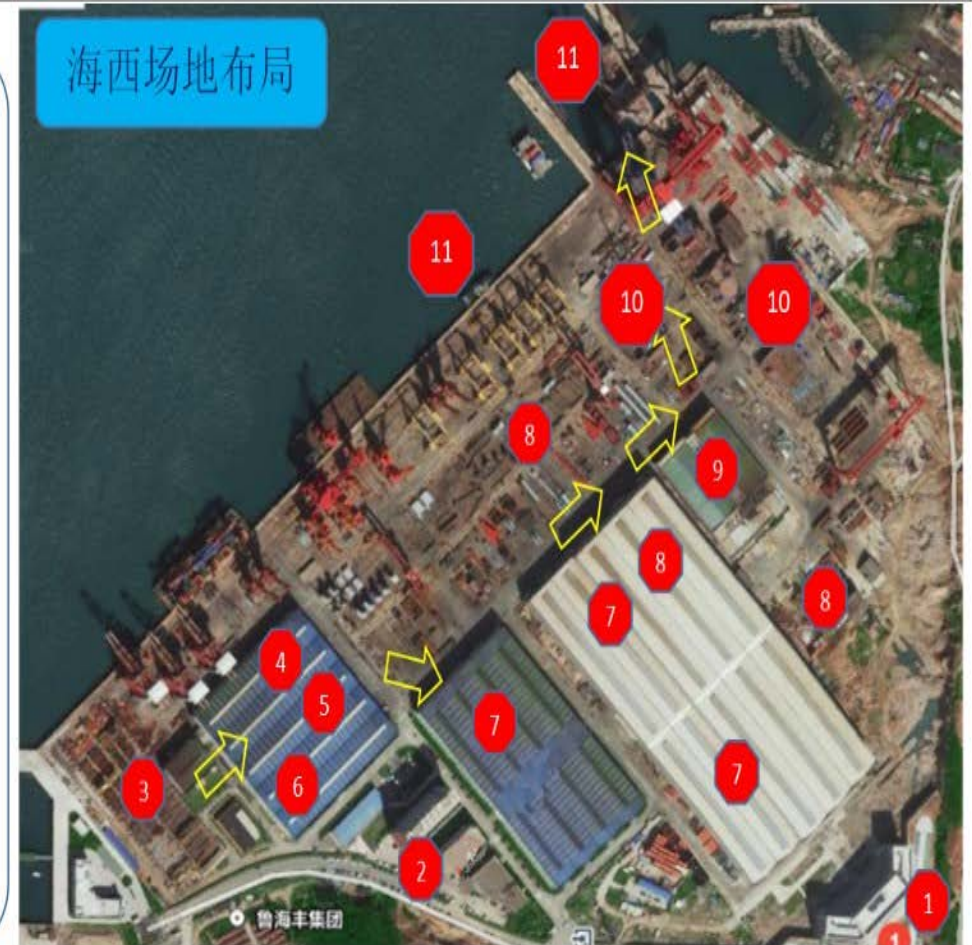


Shanghai
R&D Institute

No.	Workshop	Dimension (m)
1	Pre-treatment Workshop	42.70×43.99×17.15
2	Plates Cutting	144.70×151.64×18.85
3	Steel Structure Fabrication Workshop #1	216.64×116.64×18.80
4	Steel Structure Fabrication Workshop #2	348.7×243.8×28.75
5	Painting and Sandblasting Workshop	36×85×11
6	Open area for erection	60×110

海西场地布局

1. Office area
2. Living area
3. Steel plate stockyard
4. Cutting workshop
5. Cold Processing Center
6. Material warehouse
7. Welding workshop
8. Outfitting workshop
9. Painting workshop
10. Outside assembling area
11. Final assembling dock



HHMC'S

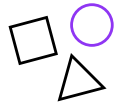
Values, Mission & Vision



Values

Every project

“Give us an opportunity, you will experience the joyance” as principle and “Three virtue and Three minds” as core value (moral quality based on the honesty, Corporate conduct focused on persistence, Products depended on ingenuity)



Mission

Lifelong

Leading the industry development, supporting the defense needs, serving the national strategy



Pursue

Excellence

HHMC develops intelligent ports with container handling equipment, responds to the “Maritime Power” strategy and the Belt and Road Initiative to realize the grand vision of becoming “a Modern Enterprise Providing World-leading Port Equipment and Logistics System Integration”.

Technical Capacity



Technical Center:

Constitute:

HHMC has set up the technical center gathering the professional talents to concentrate on R&D of port machineries and marine products. R&D institute in Shanghai, for the design of container handling cranes and floating cranes..



Organization:

Two expert studios;

Five departments:

- Science & Technology Administration Dept
- Port Machinery Engineering
- Electrical R&D
- Offshore Platform Engineering
- Intelligent Technology R&D

FABRICATION

In this part, we will introduce our fabrication process, starting from pre-treatment, till the final delivery, all fabrication processes shall be introduced.

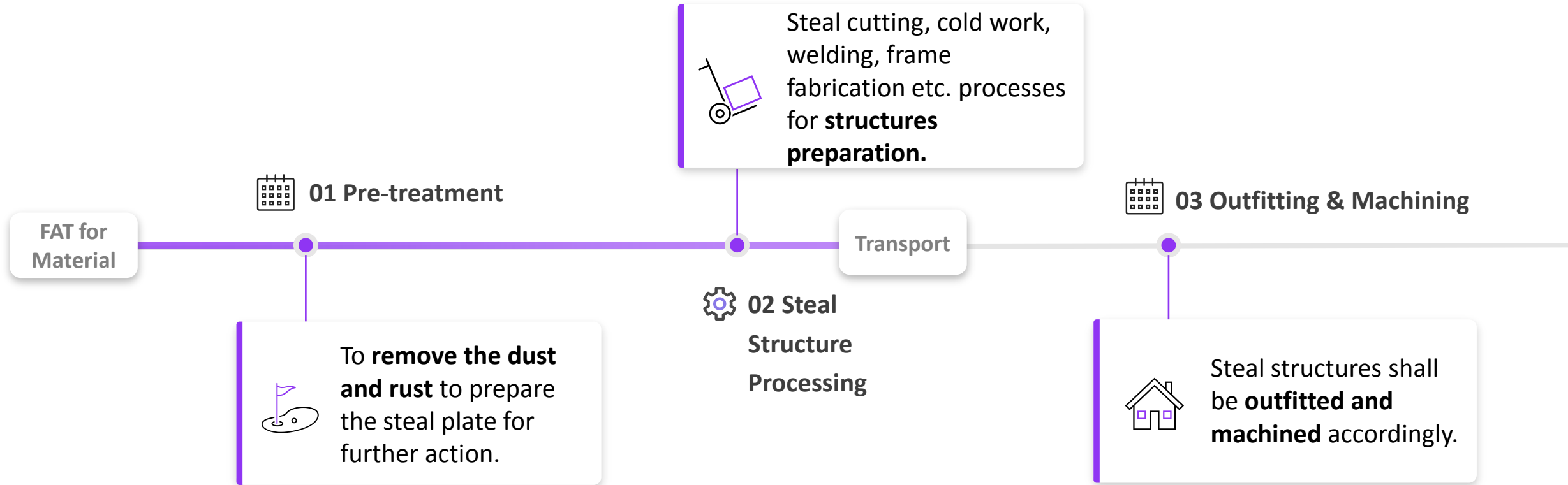
02



你给我机会，我给你喜悦

2.1 Overall Project

Process Table





Blasting and painting shall be done in specific **workshop**.



04 Sandblasting & Painting



05 Components Assembly



All equipments shall be **assembled in related structures**.

Pre-assembly



All structures shall be assembled together by lifting and welding.



06 Overall Assembly

2.2 Introduction to Pre-treatment

HHMC Pre-treatment

Material & equipment shall be tested before accepted. After FAT, steel plate need to be pretreated by degreasing, de-painting and anti-rust etc. for steal preparation.



Workshop for Pretreatment



WORKSHOP DIMENSION (M)

42.70×43.99×17.15



WORKSHOP PROCESSING

Shot blasting for de-painting

2.3 Introduction to Steel Structure Processing

HHMC Plate Cutting & Cold Work

Steel plate shall be cut, spliced, folding and other cold work , by degreasing, de-painting and anti-rust etc. for steel preparation.



Workshop for Steal Structure Processing



WORKSHOP DIMENSION (M)

144.70×151.64×18.85



WORKSHOP TRANSPORT

LCZY Heavy-duty transport vehicle

Workshop for Steal Structure Processing



WORKSHOP PROCESSING

Cold work



WORKSHOP PROCESSING

Steal cutting

Workshop for Steal Structure Processing



WORKSHOP PROCESSING

Welding



WORKSHOP PROCESSING

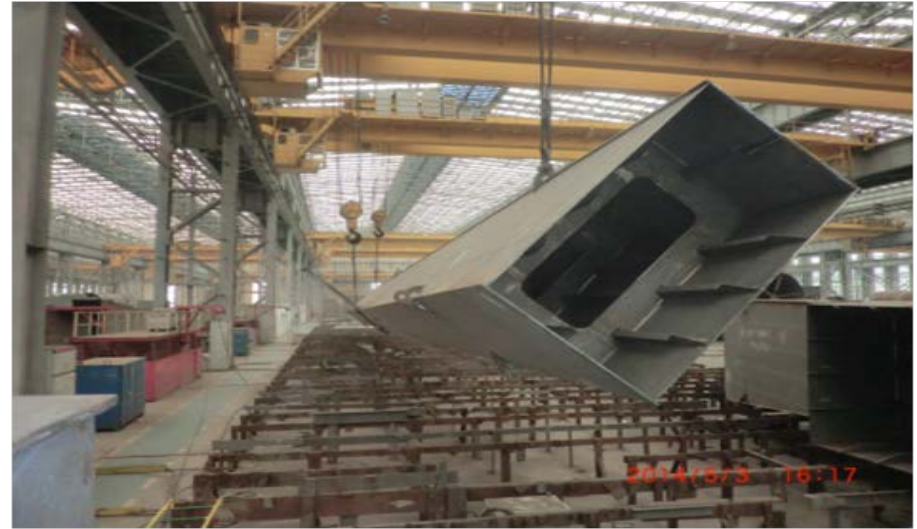
Welding

Workshop for Steal Structure Processing



WORKSHOP PROCESSING

Frame fabrication



WORKSHOP PROCESSING

Frame fabrication

Workshop for Steal Structure Processing



WORKSHOP PROCESSING

Frame fabrication



WORKSHOP PROCESSING

Frame fabrication

2.4 Introduction to Outfitting & Machining

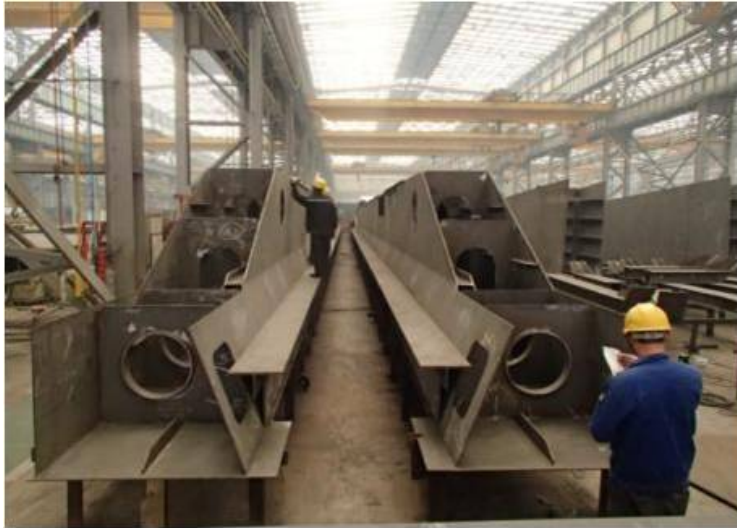
HHMC Outfitting & Machining

Steel structures shall be **outfitted and machined** by equipments such as boring mill, machine tool, lathe and so on.



Steal Structure

After Outfitting & Machining



WORKSHOP PROCESSING

Frame fabrication



WORKSHOP PROCESSING

Frame fabrication



WORKSHOP PROCESSING

Frame fabrication

Pre-assembly for Steal Structures



 **WORKSHOP PROCESSING**

Frame fabrication



 **WORKSHOP PROCESSING**

Frame fabrication



 **WORKSHOP PROCESSING**

Frame fabrication

2.5 Introduction to Sandblasting & Painting

HHMC Sandblasting & Painting

Steel structures shall be further processed for sandblasting and painting to prepare for the installation of spare parts .

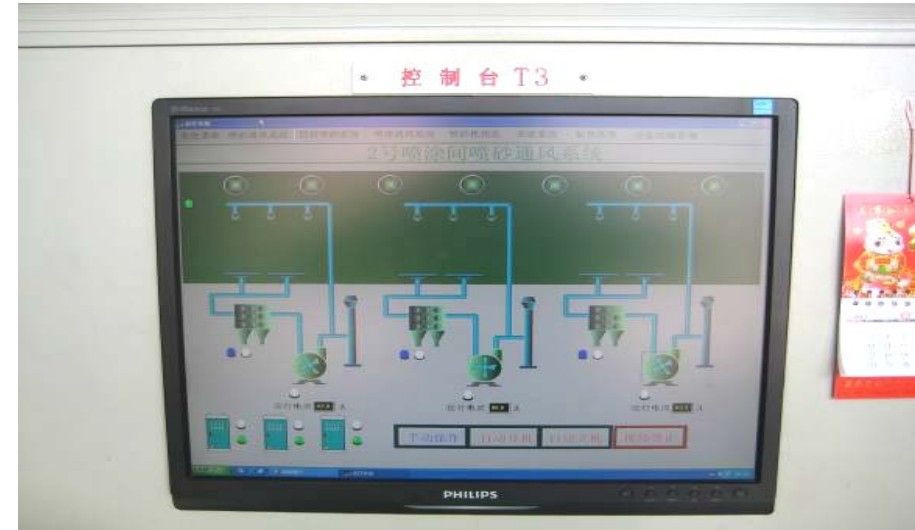


Workshop for Sandblasting & Painting



WORKSHOP DIMENSION (M)

36×85x11



CONTROL SYSTEM

Control system for blasting and painting

Workshop for Sandblasting & Painting



Sandblasting & Painting

Steal structure after B&P



Sandblasting & Painting

Being transported after B&P

Workshop for Sandblasting & Painting



WORKSHOP PROCESSING

Painting



WORKSHOP PROCESSING

Painting



WORKSHOP PROCESSING

Painting

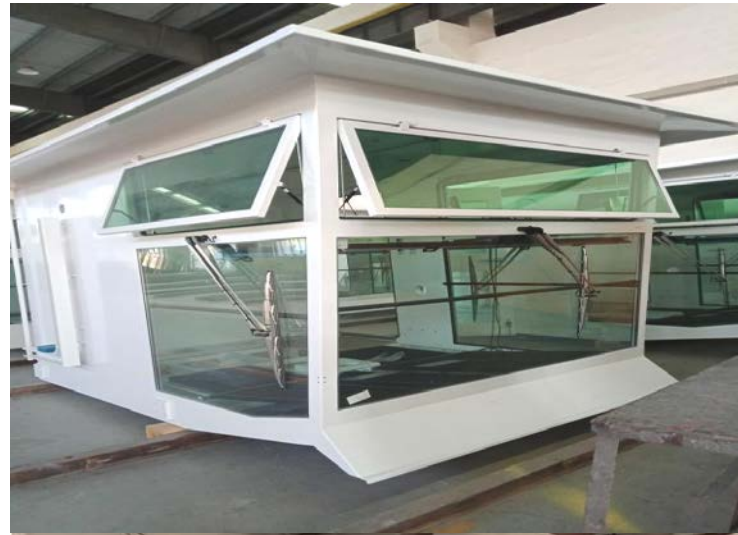
2.6 Introduction to Components Assembly

HHMC Components Assembly

Spare parts and components shall be installed in specific positions .



Workshop for Components Assembly



WORKSHOP PROCESSING

Spare parts



WORKSHOP PROCESSING

Spare parts



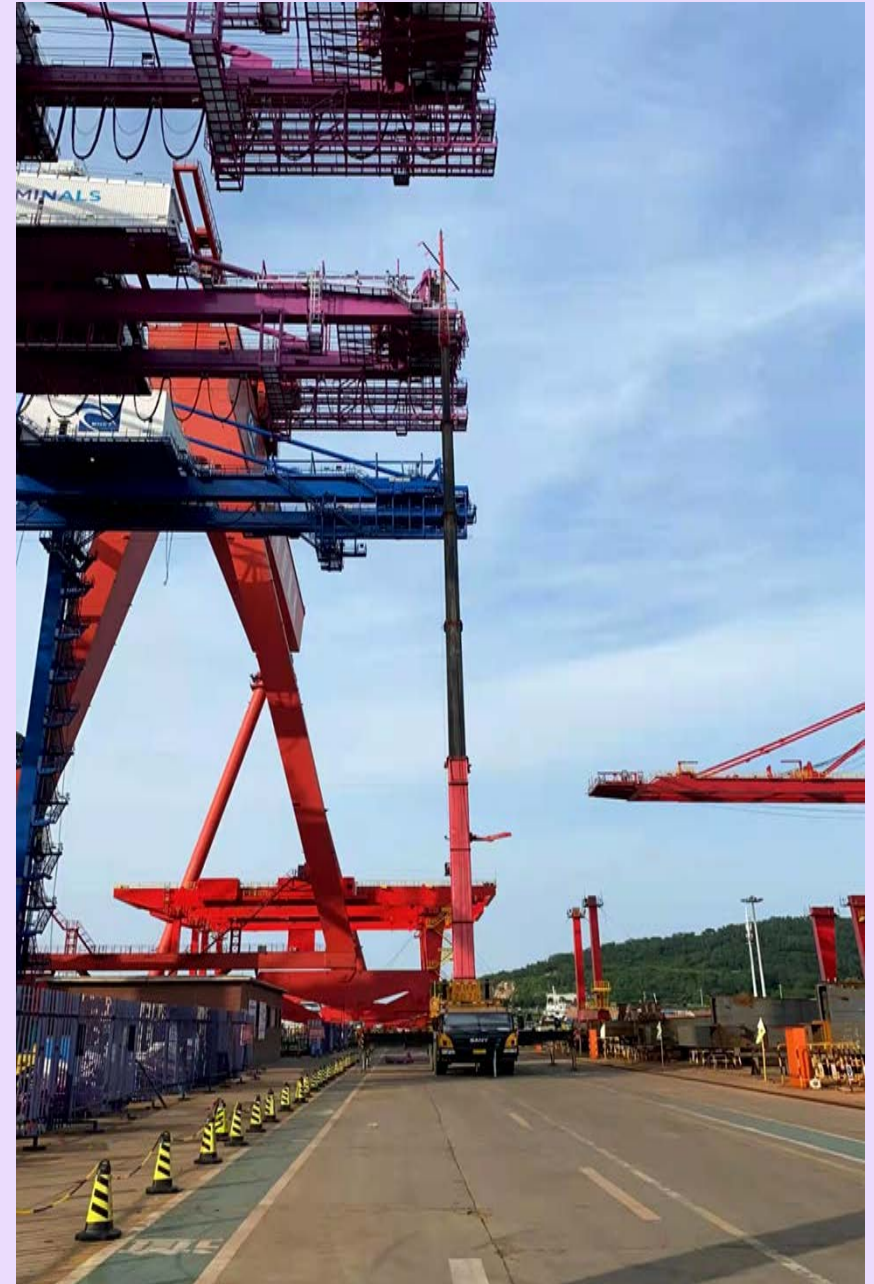
WORKSHOP PROCESSING

Spare parts

2.7 Introduction to Overall Assembly

HHMC Overall Assembly

All structures shall be assembled together by lifting and welding.



Workshop for Overall Assembly



OPEN AREA FOR ERECTION

Overall assembly for boom & girder



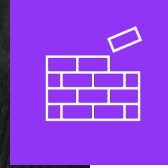
COMMISSIONING

In this part, we will introduce to you the commissioning and test process.

03

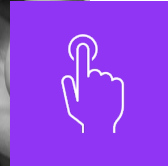


Commissioning Procedure



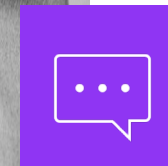
Factory Acceptance Test

Electrical control system is mainly responsible for the commissioning work at factory, HHMC supports to finish all commissioning requirements.



Site Acceptance Test

Site acceptance test shall be taken once the cranes are unloaded and erected on owner's site.



Punch List & Punching

Punch list shall be responded according to supervisor's suggestions and recovery punching shall be carried out actively.

Commissioning

Factory Acceptance Test



WORKSHOP PROCESSING

Frame fabrication



WORKSHOP PROCESSING

Frame fabrication



WORKSHOP PROCESSING

Frame fabrication

LOADING & DELIVERY

In this part, loading and delivery will be introduced by showing pictures.

04



SHIPPING ARRANGEMENTS

1st Loading & Sea Fastening

 Qingdao  HHMC Staff

Shipping arrangement and sea fastening plan usually formulated by HHMC and outsourcing advice. Conference and negotiation with mariners will be done ahead.



2nd Sail

Agenda for sailing will be influenced by the weather



3rd Unloading

One of main events for a project shall be finished in cooperation with owner.

LOADING & DELIVERY



LOADING & DELIVERY

Loading overtime



LOADING & DELIVERY

Finishing loading and sea fastening



LOADING & DELIVERY

Set sail

SHIPPING

No matter how difficult it is, HHMC never give up any chance to pursue the excellence.



EXPERIENCE OF STS/QUAYSIDE

In this part, we will introduce our successful STS delivery experience for Qatar, South Korea and Lebanon etc.

05



Experience of STS/Quayside



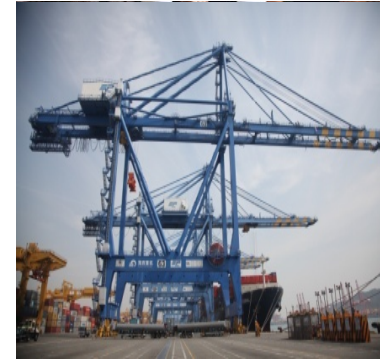
La Spezia Container Terminal, Italy

SWL: 60T

Lifting Height(Max/min): 43m/-18m

Outreach: 62m Back-reach: 10m

Rail Span: 18m



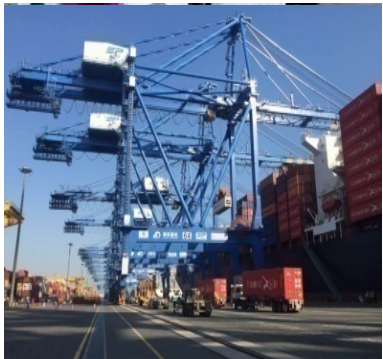
Pusan New Port Co., Ltd. ,Korea

SWL: 65T

Lifting Height(Max/min): 50m/-19.5m

Outreach: 70m Back-reach: 20m

Rail Span: 42.67m



Pusan New Port Co., Ltd. ,Korea

SWL: 65T

Lifting Height(Max/min): 50m/-19.5m

Outreach: 70m Back-reach: 20m

Rail Span: 42.67m



Cargo Handling Corporation Limited, Mauritius

SWL: 65T

Lifting Height(Max/min): 46m/-17m

Outreach: 63m Back-reach: 15m

Rail Span: 30.5m

Experience of STS/Quayside



Cargo Handling Corporation Limited, Mauritius

SWL: 65T

Lifting Height(Max/min): 43m/-18m

Outreach: 65m Back-reach: 20m

Rail Span: 30m



Cargo Handling Corporation Limited, Mauritius

SWL: 65T

Lifting Height(Max/min): 43m/-18m

Outreach: 65m Back-reach: 20m

Rail Span: 30m



Busan New Container Terminal (CMA CGM)

SWL: 65T

Lifting Height(Max/min): 51m/-20m

Outreach: 70m Back-reach: 25m

Rail Span: 35m



Qterminals. Qatar

SWL: 80T (Singflex)

Lifting Height(Max/min): 50m/-22m

Outreach: 68m Back-reach: 22m

Rail Span: 35m

Experience of STS/Quayside



Wuhan New Port Container Co., Ltd. China

SWL: 45T

Lifting Height(Max/min): 20m/-20m

Outreach: 35m Back-reach: 10m

Rail Span: 16m



Wuhan New Port Huashan Terminal. China

SWL: 45T

Lifting Height(Max/min): 18m/-16m

Outreach: 26m Back-reach: 16m

Rail Span: 16m



Jiurong Wharf (Taicang) Co., Ltd. China

SWL: 35T

Lifting Height(Max/min): 25m/-12m

Outreach: 38m Back-reach: 10m

Rail Span: 22m



Shouguang Port. China

SWL: 40.5T

Lifting Height(Max/min): 15m/-10m

Outreach: 25m Back-reach: 12m

Rail Span: 16m

Experience of STS/Quayside



Dafeng Sea Port. China

SWL: 65T

Lifting Height(Max/min): 26.5m/-20m

Outreach: 40m Back-reach: 15m

Rail Span: 22m



Weifang Sime Darby. China

SWL: 40.5T

Lifting Height(Max/min): 25m/-14m

Outreach: 38m Back-reach: 22m

Rail Span: 22m



Hainan Yangpu Holding Co., Ltd. China

SWL: 65T

Lifting Height(Max/min): 45m/-20m

Outreach: 55m Back-reach: 22m

Rail Span: 35m



Wenzhou Jinyang Container Terminal Co., Ltd.. China

SWL: 41T

Lifting Height(Max/min): 30m/-15m

Outreach: 36m Back-reach: 11m

Rail Span: 16m

Experience of STS/Quayside



Dafeng Sea Port. China

SWL: 65T

Lifting Height(Max/min): 26.5m/-20m

Outreach: 40m Back-reach: 15m

Rail Span: 22m



Chongqing Longtou Port. China

SWL: 50T

Lifting Height(Max/min): 12m/-36m

Outreach: 22m Back-reach: 9m

Rail Span: 16m



Dongying Port. China

SWL: 41T

Lifting Height(Max/min): 20m/-15m

Outreach: 27m Back-reach: 12m

Rail Span: 10.5m



Ningbo Port. China

SWL: 50T

Lifting Height(Max/min): 28m/-20m

Outreach: 38m Back-reach: 12m

Rail Span: 21m

Experience of STS/Quayside



Shanghai International Port. China

SWL: 65T

Lifting Height(Max/min): 28m/-15m

Outreach: 38m Back-reach: 12m

Rail Span: 16m



Ningbo Port. China

SWL: 60T

Lifting Height(Max/min): 29m/-15m

Outreach: 38m Back-reach: 12m

Rail Span: 16m



Jiujiang Port Pengze Port Area. China

SWL: 40.5T

Lifting Height:20 m

Outreach: 26m Back-reach: 10m

Rail Span:16 m



Jiujiang Port Pengze Port Area. China

SWL: 35T

Lifting Height:20 m

Outreach: 26m Back-reach: 10m

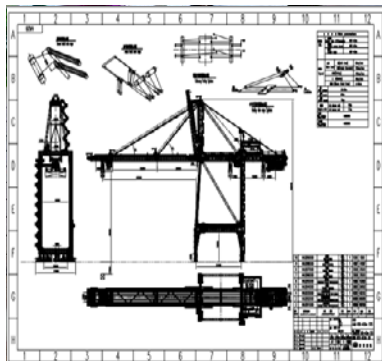
Rail Span: 16m

Experience of STS/Quayside



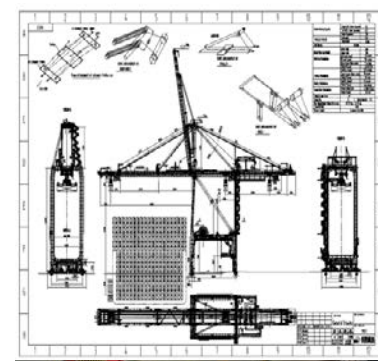
Qterminals. Qatar

SWL: 80T (Singflex)
Lifting Height(Max/min): 50m/-22m
Outreach: 68m Back-reach: 22m
Rail Span: 35m



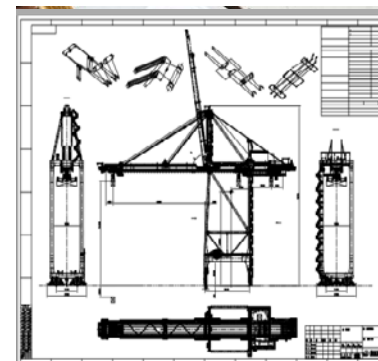
Port of Tripoli, Lebanon

SWL: 65T
Lifting Height(Max/min): 46m/-17m
Outreach: 63m Back-reach: 15m
Rail Span: 30.5m



GRAND PORT MARITIME DE LA REUNION

SWL: 65T
Lifting Height(Max/min): 45m/-18m
Outreach: 56m Back-reach: 23.5m
Rail Span: 30.48 m



Egyptian Group for Multipurpose Terminals (EGMPT)

SWL: 65T
Lifting Height(Max/min): 54m/-20m
Outreach: 63m Back-reach: 15m
Rail Span: 30.48m

Information to

Share

Idle boast the strong pass is a wall of iron, with firm strides we are crossing its summit. Over fifty years of military background, military level quality is our unchanging banner and superior quality is our unending commitment. HHMC focuses on every detail of product, carefully and constantly; HHMC concentrates on customers' concerns, attentively and always. Good quality bringing long-term profit for customer is the eternal value which is treasured by every employee of HHMC. We are strongly convinced that helping our customers to succeed is also the self-help of HHMC to success. HHMC expects to cooperate with customers to create a better future!





THANK YOU

Things come from harmony, and strength comes from unity

QINGDAO HAI XI HEAVY-DUTY
MACHINERY CO., LTD