Liquid Cargoe and Crude Oil Conveyance System

The liquid cargo handling system contains the pump room system, Submerged Cargo pumping system and FPSO stern transmission system. It is complied with the requirement for the ancillary integration of the liquid cargo handling system for the large-sized crude oil vessel, finished product oil tanker, chemical product vessel and FPSO.

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• Pump Room System

In a way of the integrated distribution at the pump room, the integrated conveyance for the liquid cargo can be realized by means of pump. It is suitable for the largesize vessel for single oil product, the finished product oil vessel and FPSO. For the special working condition for the oil tanker and FPSO, all the components are designed based on the long service life and failure free idea. With steady and reliable structure, all the rotary components have excellent performance of static and dynamic balance. It runs with stability and low noise. The automatic system is adopted in the control system, possessing friendly functions of man-machine interaction control

Single-pump Flow for Cargo Oil Pump: 500 \sim 6000 m ³ /h
Discharge Head: 100~150m
Single-pump Flow for Ballast Pump: 1000 \sim 5000 m ³ /h
Discharge Head: 25~35m



• Submerged Cargo Pumping System

In a way of one-hold-with-one-pump distribution, the different liquid cargos can be isolated efficiently. And the liquid cargos can be easily loaded or unloaded any time. It is suitable for FPSO for multi-oil product, crude oil vessel, finished product oil vessel and chemical product vessel. Based on the principle of high-strength and essence of safety, the system is designed to use the hydraulic drive and the concentric pipe pole, the cargo relative to volatile or dangerous liquids can be loaded or unloaded or swept safely and reliably.

Single-pump Flow for Cargo Oil Pump: 100~2000m ³ /h
Discharge Head: 100~160m
Single-pump Flow for Ballast Pump: 150~3500m ³ /h
Discharge Head: 25~35m

• Comprehensive Test Platform

WMMP has a comprehensive test platform, for which the system is designed to load or unload the crude oil. And the type test and the systematic combined test to load or unload various liquid cargos can be realized. This system is also used as a platform for the training of the crew.

Test Capacity: it is complied with the requirement for flow at 6000m³/h or belowfor the type test to the various product.





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MARINE MACHINERY EQUIPMENT SOLUTION

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Always Be the Flagship of China's Marine Equipment Suppliers

As the Flagship of China's Marine Equipment Suppliers, WMMP is capable of providing the ancillary integration for the ocean-going vessels and off-shore vessels. The scope of manufacture for the special and ancillary marine equipment ranges from Windlass, Mooring Winch, Steering Gear, Deck Crane, Propulsion System and the Shaft, Tunnel Thruster and Stern-tube Seals in compliance with Rules stipulated by CCS, LR, ABS, DNV, BV, GL, NK, KR and RINA. Our customers extended to the renowned shipowners in the world. Our marine equipments have be matched for several thousands of ocean-going vessels. For the three major kinds of vessels (VLCC, Bulk Carrier and Container Vessel)in china, the biggest-tonnage deck machinery is mainly supplied by WMMP.



Windlass

WMMP provides customers with three kinds of windlass and winch, among which the middle and low pressure ones are of IHI, the high pressure one is of KAWASAKI and all the pressure ones are of WMMP. Their technology keeps synchronized with the advanced one in the world. The technical system for Modulization, standardization and serialization has come into being. It is available widely in various vessels such as 400,000T VLOC. 8888TEU container vessel and 172,000 cubic meter LNG vessel. The Market occupancy keeps the top.

• Electro-Hydraulic Windlass and Winch

WMMP provides customers with two series of Eletro-Hydraulic windlass and winch ranging from middle and low pressure to high pressure, for which is featured by the light weight, high efficiency, structure compact, easy installation, safe operation, long life service and low noise. They have been using for LNG vessel, bulk carrier, oil tanker, container vessel and polar vessel.

For k122 or below, the specification for anchor chain goes as follows:

The rated pulling force at the mooring: 5t \sim 32t

The rated speed at the anchoring: \geq 9m/min

The rated speed at the mooring: \geq 15m/min

• Electric Windlass and Winch

By virtue of more than 30-year rich experience in design and manufacture of windlass and winch, First Class electric windlass and winch are offered for the world aiming at the special requirement for the installation space for the vessels, for instance, container vessel, Ro-Ro with passenger vessel, semi-submerged vessel. It features the energy saving, environmental protection, economical space, operational simplicity and easy maintenance.

For k134 or below, the specification for anchor chain goes as follows:

The	rated	pulling	force	at the	mooring:	5t~32t	

- The rated speed at the anchoring: \geq 9m/min
- The rated speed at the mooring: \geq 15m/min

Integrative Windlass and Winch

Using the advanced technology, First Class electric windlass and winch are offered for the world. It is featured by the structure compact and light weight in compliance with the special requirement for vessels.

For k111 or below, the specification for the anchor chain goes as follows:

- The rated pulling force at the mooring: $5t{\sim}30t$
- The rated speed at the anchoring: \geq 9m/min
- The rated speed at the mooring: \geq 15m/min

Apart from supply of windlass and winch, WMMP is capable of providing the integrative parts such as capstan, chain stopper, pump unit and electric control unit, while their systematic solution for the complete deck machinery is available.







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Steering Gear

WMMP is capable of providing customers with two kinds of steering gears, for which one is KAWASAKI Ram-type Steering Gear, while the other is WMMP Rotary-vane Steering Gear. At the same time, the ancillary integration with the technical service for the steering gear in series is available. The product is kept synchronized with the advanced technology in the world The technical system for Modulization, standardization and serialization has come into being. It is available widely in various vessels such as 400,000T VLOC and 9200TEU container vessel. The market occupancy keeps in the top rank.

• Series E Ram-type Steering Gear

Series E Ram-type Steering Gear is supplied by technology import from KAWASAKI. This series of the steering gear is widely applicable featuring the structure compact, easy installation, high-precision control, stable operation, low-impact system, easy maintenance and low noise.

Steering Angle: ±35°
Steering Speed: 65° /28s/20s
Maximum Working Torque: 314 \sim 9810 kn.m

• Series V Ram-type Steering Gear

Series V Ram-type Steering Gear is supplied by technology import from KAWASAKI. It features the structure compact, stable performance, precision control, safe operation, easy maintenance and long service life.

S	Steering Angle: ±35°
S	Steering Speed: 65° /28s/20s
Ν	Maximum Working Torque: 63 \sim 844 kn.m

• Vane-type Steering Gear

The vane-type steering gear is designed to have a feature with small size, easy installation, easy maintenance and integration with rudder carrier. The product is complied with the property for the advanced technology in the world.

Steering Angle: $\pm 35^{\circ} \pm 45^{\circ} \pm 65^{\circ}$	
Steering Speed: 65°/28s/20s	
Maximum Working Torque: 63 \sim 2000 kn.m	

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Deck Crane









WMMP is capable of providing customers with two kinds of deck cranes under two brands, for which one is named as IHI, while the other is named as WMMP. The product is widely applicable in various transportation vessels and the vessels for the polar navigation. The technical system for Modulization, standardization and serialization has come into being.. The product is kept synchronized with the advanced technology in the world.

• Single Deck Crane

It is applicable in various bulk carrier, container vessel and other transportation vessel. It has features with windproof, rainproof and waveproof, and it is operable with three-motion operation i.e. hoisting, luffing and slewing at the same time. This kind of Deck Crane is accessible for operation with easy maintenance and has been used to mach more than one thousand of vessels.

Rated Load: 20-60t

• Double Deck Crane

Two high-efficiency single deck cranes are incorporated into one rotatable platform, on which not only the single crane is operable individually but also the double deck cranes are operable at the same time. The loading capacity is reachable doubly. It is operable with in three-motion operation, i.e. hoisting, luffing and slewing. It is accessible for operation with high efficiency and easy maintenance.

Rated Load: 20-60t for single crane Rated load: 40-120t for double crane

• Cylinder-luffing Deck Crane

It has features with light weight, low gravity center and structure compact. The sensitivity load technology is used with high efficiency. It is operable with three-motion operation, i.e. hoisting, luffing and slewing. It is accessible for operation with easy maintenance.

Rated Load: 8-60t

• Four-rope Grab Crane

It is applicable in the operation for vessels for ore, coal, grain and etc. It has features with high efficiency and easy maintenance. Due to multi purpose, easy operation, high efficiency and structure compact, it has been widely used.

Rated Load: 30-50t









Marine Propulsion and Dynamic-positioning System

WMMP is well known home and abroad for the integrative supplier for the marine propulsion system. The scope of product contains controllable pitch propeller, azimuth propeller, water-jet, and tunnel thruster which are used as the propulsion and Dynamic-positioning system for surface vessel, Offshore support vessel and various high-performance vessel. WMMP is in the possession of rich experience in the ancillary integration of the marine propulsion system and Dynamic positioning system as well as the technical service capacity.

• Controllable Pitch Propeller System

WMMP has two kinds of CPP, one of which is under the CPP licence of MAN, while the other is named as WMMP. The ancillary integration capacity of the CPP system has come into being.

Power: 60000kw at single shaft.

Diameter of Propeller: maximum 6200mm

• Azimuth Propeller Propulsion System

There are two forms of azimuth propeller products in WMMP, one of which is Fixed Pitch Azimuth Propeller and the other is to read as controllable pitch azimuth propeller. And there are two series of azimuth products for which one is supplied under Brand WMMP, while the other is supplied under Brand Thrustermaster from USA. The ancillary integration for the azimuth propulsion system has come into being.

Azimuth Power: 5500kw

• Wateriet System

Under exclusively introduction of Deed of License from DOEN, Australia, WMMP has become a sole enterprise in China producing and selling Water-jets and its integration of power system in a professional way.

100 series

Scope of Power: 100kw ~ 900kw
Diameter of Impeller: 254mm ~ 432mm
200series

Scope of Power: 400kw ~ 4000kw

Diameter of Impeller: 508mm ~ 890mm

• Dynamic-positioning System

WMMP is capable of ancillary integration of DP2 and Dp3 Dynamicpositioning System. It has successfully matched the Dynamicpositioning system for AHTS Vessel and 300t Pipe-laying Vessel.

