



XW
XING WEI

Moving Forward with Your Trusted DP
& Marine Service Provider

Our Content...

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Who We Are...



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What We Do...



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Why Choose Us...



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Our Footprint...



Who We Are...

- One Stop service of Marine Consultancy Company that offers a comprehensive range of service such as DP FMEA Proving Trial, DP Trial, Vessel Systems Design, Integration Consultancy & Project Management.
- As a top-tier service-based company, we specialise in providing comprehensive solutions for marine inspection and technical services.



Company **Milestones**

2010



Xing Wei became an IMCA member

2016



Xing Wei was awarded the ISO 9001:2015 Quality Management Standard

2018



Xing Wei received the Singapore Enterprise Medal of Honour for being the Top 100 trusted SMEs

2010



Xing Wei Pte Ltd was established in Singapore in the year 2010

2018



Xing Wei achieved Level 4 Bizsafe recognition

2018




Jiangsu Xing Wei Marine Engineering Co., Ltd was established in Jiangsu China

Company **Milestones**

2020



 Xing Wei Marine L.L.C was established in Abu Dhabi, UAE

2022



 Xing Wei Pte Ltd and Xing Wei Marine L.L.C is now an approved ADNOC Supplier


2023



 Xing Wei is set to offer DP services in Saudi Arabia

2022



 Xing Wei started collaborating with Ngee Ann Polytechnic and offering internship opportunities to the students of Ngee Ann

2023



 Xing Wei has been elected as a member of the Association of Singapore Marine Industries (ASMI)

2024



 Jiangsu Xing Wei Marine Engineering Co., Ltd provided DP services to CIMC Raffles and Dajin Heavy Industry in China

What We Do...



1

Dynamic Positioning Consultancy

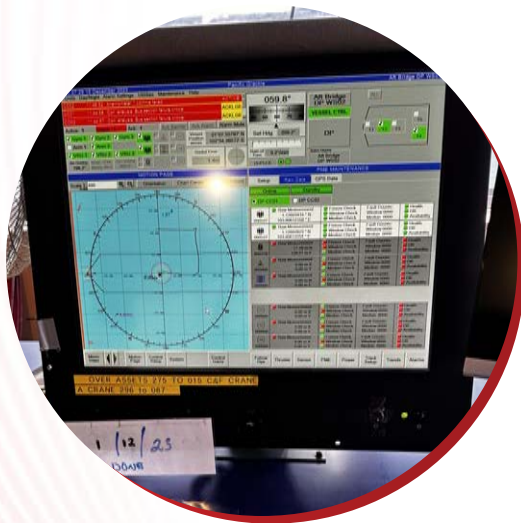
2

Marine Survey & Inspection

Dynamic Positioning Consultancy



1. DP FMEA Report
2. DP FMEA Proving Trials
3. DP Operation Manual
4. Annual DP Trial
5. 5th Yearly DP Trial
6. DP Healthcheck
7. ASOG (Activity Specific Operating Guidelines)
8. DP Upgrade Management



Marine Survey & Inspection



1. Marine Survey/ Marine Warranty Survey
2. Marine Assurance Inspections (OCIMF OVID and IMCA eCMID)
3. Owners Technical Inspection
4. Vessel Safety & Conditional Inspection
5. ISM / ISPS Audit
6. Pre-purchases & Pre-charter Survey



We Specialise in...

DP FMEA

- 150+ DP FMEA
- 850+ DP Annual Audit Trials
- 20+ DP Remote Trials



CONVERTTEAM



KONGSBERG

We Have Done...

DP Class

- DP Equipment Class 1 (DP-1)
- DP Equipment Class 2 (DP-2)
- DP Equipment Class 3 (DP-3)



DP FMEA

VESSEL NAME

FMEA 

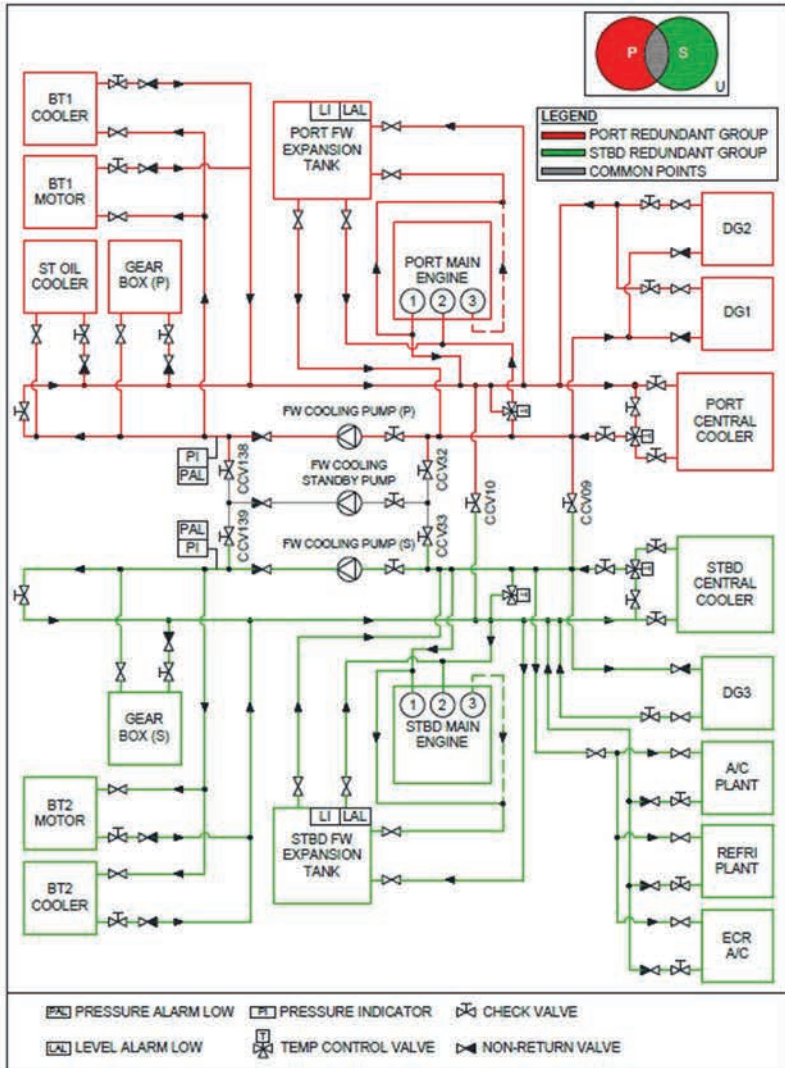


Figure 13: Freshwater Cooling System

VESSEL NAME

FMEA 

4.4.8 FAILURE MODE AND EFFECT ANALYSIS

Below table describes the failure modes and effects associated in the FW system.

Freshwater Cooling System Failure Modes							
No	Description	Cause	Detection	Probability	Severity	Criticality	Final Effect on DP / system
1	Failure of Port / Stbd LT FW Pump	<ul style="list-style-type: none"> - Pump failure - Component failure - Power failure 	<ul style="list-style-type: none"> - Can be detected by routine monitoring and inspection during planned maintenance. - Low pressure alarm initiated at AMS 	Remote	Minor	Low	Loss of redundancy. LT FW standby pump auto starts and relevant isolation valve auto realign to resume FW cooling circulation to the affected system.
2	Failure of standby LT FW Pump	<ul style="list-style-type: none"> - Pump failure - Component failure - Power failure 	<ul style="list-style-type: none"> - Can be detected by routine monitoring and inspection during planned maintenance. 	Remote	Minor	Low	Loss of redundancy. Main LT FW pumps are still operational. No loss of LT FW circulation. No loss of thrusters.
3	Port FW Expansion tank empty	<ul style="list-style-type: none"> - Mechanical seal failure - Gasket failure - Valve leakage - Cooler leakage - Pipe Leakage / Pipe Failure 	<ul style="list-style-type: none"> - Low pressure / high temperature alarm initiated at AMS 	Remote	Major	Medium	Loss of Port FW circulation. Loss of cooling to notable cooling units such as Port M/E, DG1, DG2, BT1 Cooler, BT1 Motor, and Port Azimuth Thruster LO Cooler. This will ultimately lead to the overheating and shutting down of Port M/E, BT1 and Port Azimuth Thruster. Vessel maintains position and heading with remaining thrusters.

DP Trial Progeammes...

Vessel : VESSEL NAME Date : 24th Feb 2021

Test No.	Test Description	Test Result				Remarks
		S	A	U	NC	
1.	Software Audit	✓				
2.	Gyrocompass Failures Test	✓				
3.	Wind Sensors Failures Test	✓				
4.	VRS Failures Test	✓				
5.	Failures of DGNSS 1	✓				
6.	Failures of DGNSS 2	✓				
7.	CyScan Failure Test	✓				
8.	Position Dropout Alarm and Mathematical Model Tests	✓				
9.	DP Performance (Movement and Rotation)	✓				
10.	Position and Heading Limit Alarm	✓				
11.	Failures of DP Network Test	✓				
12.	IJS Performance test	✓				
13.	Simulate Insufficient Thrust Test	✓				
14.	Failure of DP UPS 1 and Battery Endurance Test	✓				
15.	Failure of DP UPS 2 and Battery Endurance Test	✓				
16.	Failures of DP Controller	✓				
17.	Failure of DP Operator Station	✓				
18.	Main Engine Full Power Test	✓				
19.	Failure of 24Vdc Bus Bar 1	✓				
20.	Failure of 24Vdc Bus Bar 2	✓				
21.	Failure of 220Vac Bus Bar A	✓				
22.	Failure of 220Vac Bus Bar B	✓				
23.	220Vac / 440Vac Emergency Switchboard Failure	✓				
24.	Failure of 440Vac Bus Bar A	✓				
25.	Failure of 440Vac Bus Bar B	✓				
26.	Failure of 440Vac Bus Bar C	✓				
27.	Failure of 440Vac Bus Bar D	✓				
28.	Simulate Main Engine Failure (WCFDI)	✓				
29.	Thruster Full Power Tests	✓				
30.	Tunnel Thruster Hydraulic System Failure	✓				
31.	Tunnel Thruster Control System Signal Failure	✓				
32.	Tunnel Thruster Control System Power Failure	✓				
33.	Main Propulsion Hydraulic System Failure	✓				
34.	Main Propulsion Control System Signal Failure	✓				
35.	Main Propulsion Control System Power Failure	✓				
36.	Main Engine Control System Failure	✓				
37.	Thrusters Emergency Stop	✓				

Test No.	Test Description	S	A	U	NC	Remarks
38.	Freshwater Cooling System	✓				
39.	Compressed Air System	✓				
40.	Fuel Oil System	✓				
41.	Lube Oil System	✓				
42.	Seawater Cooling System	✓				
43.	Ventilation / HVAC / WT Doors	✓				
44.	Diesel Generators & Main Engine Protection, Alarms and Trips	✓				
45.	Failure of Power Management System	✓				
46.	Load Dependent Start	✓				
47.	Voice Communications	✓				
48.	Blackout Prevention	✓				
49.	DP Endurance Test	✓				
50.	Load Sharing	✓				
51.	Generator Load Testing	✓				
52.	Blackout Recovery Test	✓				
53.	Recovery from All-Vessel-Shutdown	✓				

S – Satisfactory A – Attention U - Unaccepted NC – Not conducted

Witness and Acceptance

The completed trial results together with the DP related finding(s) is appended to this report.

As per the appended test report, it is certified that the above tests have been successfully completed and is witnessed and accepted by the below.

Witness Name : _____ Auditor Name : James Tsen
 Class : _____ Company : XING WEI PTE LTD
 Signature : _____ Signature : _____
 Date : _____ Date : 24rd Feb 2021

VESSEL NAME FMEA PROVING TRIAL 

Test No.2: Gyrocompass Failures Test																																															
Equipment	Gyrocompass																																														
Objective	To demonstrate the failure effects of gyro																																														
Assumption	Power plant, PMS, DP and Thrusters are fully operational and available																																														
Location	Electronic Equipment Room, Wheelhouse (DP Station)																																														
Method	With vessel on full auto DP and the full DP setup configuration as stated in the Section 2.4.																																														
Results Expected	<ol style="list-style-type: none"> Select Gyro 1 as preference in DP. Disconnect the Gyro 1 serial link at the cabinet. Observe results and reinstate. Select Gyro 1 as preference in DP. Disconnect the Gyro 1 ready signal at the cabinet. Observe results and reinstate. Fail the main power supply to Gyro 1. Observe results and reinstate. Fail the backup power supply to Gyro 1. Observe results and reinstate. Repeat the step 1 to step 4 for Gyro 2 and Gyro 3. 																																														
Actual Results	<table border="1"> <thead> <tr> <th colspan="4">Gyro 1</th> </tr> <tr> <th>No</th> <th>Failure</th> <th>Alarms</th> <th>Effects on DP</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Serial link</td> <td>Alarm initiated on DP "Gyro 1 not ready" "GYRO1_Nmea-Telegram Timeout"</td> <td>Loss of redundancy. Gyro 1 rejected from DP and auto switch to Gyro 2. No effect on DP.</td> </tr> <tr> <td>2</td> <td>Ready signal</td> <td>Alarm initiated on DP "Gyro 1 not ready"</td> <td>Loss of equipment. Loss of redundancy. Gyro 1 rejected from DP and auto switch to Gyro 2. No effect on DP.</td> </tr> <tr> <td>3</td> <td>Main power supply</td> <td>Alarm initiated on AMS "NO.1 GYRO COMPASS POWER FAULT"</td> <td>Loss of one power supply to Gyro. Loss of redundancy. Alternative power from 24Vdc DC1 is still available. No loss of Gyro. No effect on DP.</td> </tr> <tr> <td>4</td> <td>Backup power supply</td> <td>Alarm initiated on AMS "NO.1 GYRO COMPASS POWER FAULT"</td> <td>Loss of one power supply to Gyro. Loss of redundancy. Alternative power from DP UPS 2 is still available. No loss of Gyro. No effect on DP.</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">Gyro 2</th> </tr> <tr> <th>No</th> <th>Failure</th> <th>Alarms</th> <th>Effects on DP</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Serial link</td> <td>Alarm initiated on DP "Gyro 2 not ready" "GYRO2_Nmea-Telegram Timeout"</td> <td>Loss of equipment. Loss of redundancy. Gyro 2 rejected from DP and auto switch to Gyro 1. No effect on DP.</td> </tr> <tr> <td>2</td> <td>Ready signal</td> <td>Alarm initiated on DP "Gyro 2 not ready"</td> <td>Loss of equipment. Loss of redundancy. Gyro 2 rejected from DP and auto switch to Gyro 1. No effect on DP.</td> </tr> <tr> <td>3</td> <td>Main power</td> <td>Alarm initiated on AMS</td> <td>Loss of one power supply to Gyro.</td> </tr> </tbody> </table>			Gyro 1				No	Failure	Alarms	Effects on DP	1	Serial link	Alarm initiated on DP "Gyro 1 not ready" "GYRO1_Nmea-Telegram Timeout"	Loss of redundancy. Gyro 1 rejected from DP and auto switch to Gyro 2. No effect on DP.	2	Ready signal	Alarm initiated on DP "Gyro 1 not ready"	Loss of equipment. Loss of redundancy. Gyro 1 rejected from DP and auto switch to Gyro 2. No effect on DP.	3	Main power supply	Alarm initiated on AMS "NO.1 GYRO COMPASS POWER FAULT"	Loss of one power supply to Gyro. Loss of redundancy. Alternative power from 24Vdc DC1 is still available. No loss of Gyro. No effect on DP.	4	Backup power supply	Alarm initiated on AMS "NO.1 GYRO COMPASS POWER FAULT"	Loss of one power supply to Gyro. Loss of redundancy. Alternative power from DP UPS 2 is still available. No loss of Gyro. No effect on DP.	Gyro 2				No	Failure	Alarms	Effects on DP	1	Serial link	Alarm initiated on DP "Gyro 2 not ready" "GYRO2_Nmea-Telegram Timeout"	Loss of equipment. Loss of redundancy. Gyro 2 rejected from DP and auto switch to Gyro 1. No effect on DP.	2	Ready signal	Alarm initiated on DP "Gyro 2 not ready"	Loss of equipment. Loss of redundancy. Gyro 2 rejected from DP and auto switch to Gyro 1. No effect on DP.	3	Main power	Alarm initiated on AMS	Loss of one power supply to Gyro.
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DP Health Check...

- Checking of DP Interface with sensors.
- Checking of DP Interface with thrusters.
- Create a plug-and-play back up for your DP OSes.

VESSEL NAME
DP HEALTHCHECK
VESSEL NAME
DP HEALTHCHECK

Assessment No.2 Anemometer

Equipment Anemometer

Objective To assess the health of anemometer

Location Wheelhouse / Mast

Method

1. With the vessel stationary, record the readings of all anemometer in quick succession.
2. Take photo of the Anemometer HMI / Display.
3. Visual inspection on Anemometer.

Assessment Result

1. Anemometer Reading

Equipment	Speed in Display (knots)	Direction (deg)	Speed in DP (knots)	Direction (Deg)
Wind 1	5	150°	5.1	148°
Wind 2	3	140°	2.7	140°
Wind 3	4	160°	4.1	164°

Equipment	Maker / Model	Display Ver
Wind 1	Observer OMC 160	OMC 139
Wind 2	Gill WindObserver II	OMC 139
Wind 3	Gill WindObserver II	OMC 139

2. Anemometer photos

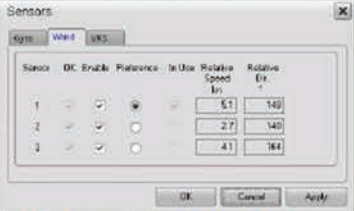


Figure 7 Wind speed and direction from DP OS




Figure 8 Wind Display 1




Figure 9 Wind Display 2




Figure 10 Wind Display 3

3. The junction box of the anemometers are properly mounted and sealed.




Figure 11 Wind Sensor 1


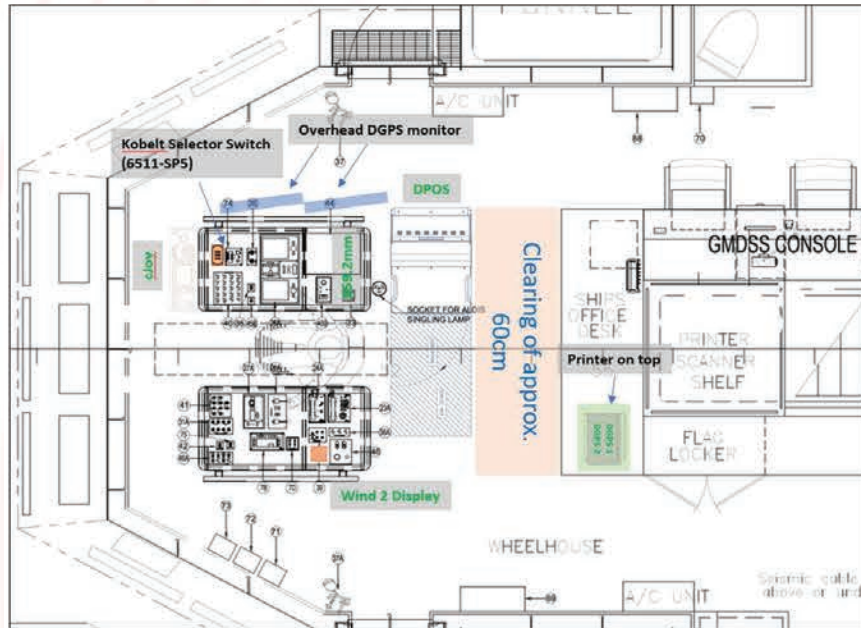


Figure 12 Wind Sensor 2

ASOG/WSOG/FSOG ...

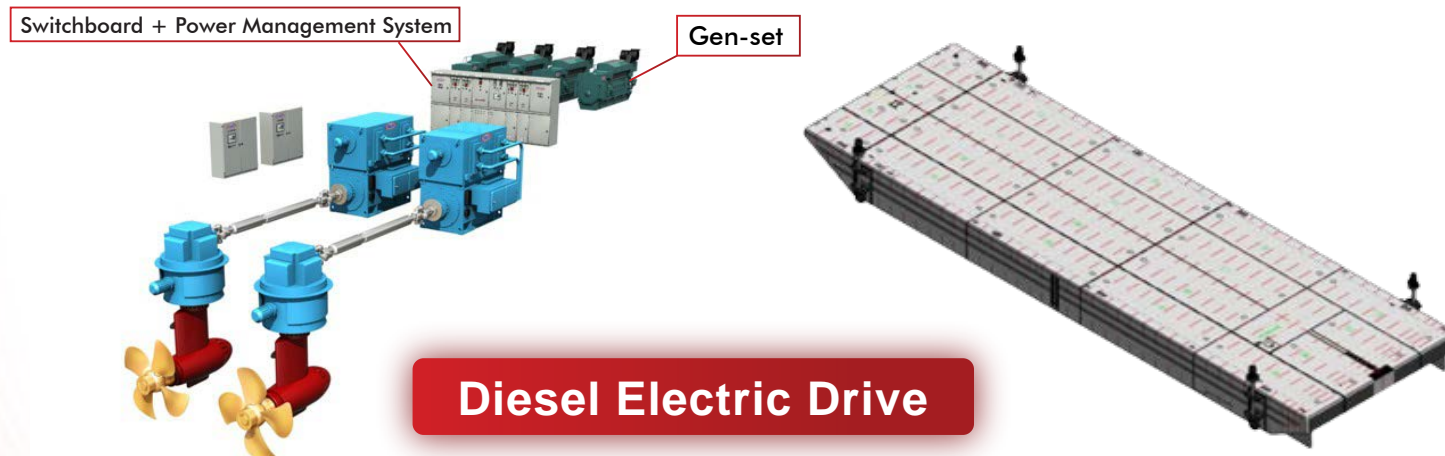
Activity Specific Operating Guidelines (ASOG) - M/V Vessel Name - 20200820 Rev.0					
Condition		GREEN	ADVISORY	YELLOW	RED
Notify Master, Chief Engineer, Client Rep, Crane, Deck and Surface Facility		NO	YES	YES	YES
Action		CONTINUE NORMAL OPERATIONS	INFORM / CONSULT / RISK ASSESS (CONSIDER ONGOING AND UPCOMING OPERATIONS)	CEASE OPERATIONS, BRING VESSEL TO SAFE POSITION, EXIT 500m ZONE. (DEFAULT WORKSITE TO 200m ON DP; 200m TO 500m MAY EXIT ON JOYSTICK OR MANUAL)	CEASE OPERATIONS - LEAVE 500M ZONE / WORK AREA IMMEDIATELY
Weather / Environment Conditions and Vessel Performance	Weather / Environment Forecast	Within Operating limits	Approaching operating limits	Exceeding operational limits	
	Drive Off / Drift Off	No discrepancies observed in PRS's and thruster loading as expected	Discrepancies observed in PRS's and/or inexplicable ramp up of thrusters observed	Immediately when recognized by DPO	Unable to bring the vessel under control
	Vessel Footprint/Weather related excursion (From Set point)	No position alarms or warnings	Position excursions, frequent alarms or position limits (> 3m)	Position excursion (> 5m)	
	Heading excursion	No heading alarms or warnings	Heading instability with frequent alarms or heading deviation (> 3 degrees)	Heading deviation (> 5 Degrees)	
	Maximum Heading change	Maximum step change <= ??? degrees	Step change > ??? degrees		
	Maximum Position change (step)	500m - 200m: <= ???m 200m to worksite: <= ???m	Any other setting		
Thrusters, Main Propulsion and Steering	All Thrusters	Operating without any alarms and operating on main pumps	Any in alarm or operating on backup pumps	Loss of any thruster	
	Bow Thrusters loading (Power)	Both < 45%	Either between 45% and 50%	Either > 50%	
	Main Propulsion loading (Power)	Both < 20%	Either between 20% and 25%	Either > 25%	
Diesel Generators and Main Engines	Main Diesel Generator	At least one diesel generator online on each auxiliary bus and operating without any alarms	Any alarm, poor performance, unexpected or unexplained event	Loss of any online main diesel generator	
	Shaft Generators	Both operating without any alarms	Any alarm, poor performance, unexpected or unexplained event	Loss of any shaft generator	
	Shaft Generators Loading	Both < 45%	Either between 45% and 50%	Either > 50%	
PMS System	PMS System	All operation and no Alarm	Any incorrect information, alarms, poor performance, unexpected or unexplained event.		
24Vdc & UPS's	DP UPS's	Batteries fully charged and no alarms and not in bypass	Batteries not fully charged, any UPS alarm, in bypass or problems found	Any UPS system on batteries	
	24Vdc	Batteries fully charged and no alarms and charger supply available	Batteries not fully charged, any charger alarm or problems found	Any 24Vdc system on batteries	
System	Main DP Control System Controllers	Both controllers and power supplies available	Any alarm, poor performance, unexpected or unexplained event	Only one controller or power supply operating	

DP Upgrade Project Management



WHEELHOUSE AFT SECTION

- Placement of equipment
- Wiring requirement and routing
- Engineering works (i.e drawings amendment, interface drawings, documentation).
- DP FMEA Services
- Sizing thrusters and power plant to withstand environmental condition



Why Choose Us...



Our Credentials...

- ◆ IMCA Supplier Member since 2010 ◆
- ◆ Certificate of Participation & Industry Leadership ◆
- ◆ DP Trials & Assurance Practitioner ◆



Our Credentials...

◆ Certified by Bureau Veritas For ISO 9001:2015 ◆



Xing Wei Pte Ltd

ISO 9001:2015

Scope of certification:

Provision of Marine Surveying Services and Failure Modes and Effects Analysis (FMEA) for Marine and Offshore Industry.

Site Name/Location	Site Address	Site Scope
Head Office Xing Wei Pte Ltd	2 Venture Drive #16-22 Vision Exchange, Singapore 608526	Provision of Marine Surveying Services and Failure Modes and Effects Analysis (FMEA) for Marine and Offshore Industry.
Site 1 Xing Wei Marine L.L.C.	Office 1307 Lamar Tower Al Nahyan Abu Dhabi, UAE	Provision of Marine Surveying Services and Failure Modes and Effects Analysis (FMEA) for Marine and Offshore Industry.

Certificate No. SG003780 Version: 02 Revision date: 13 February 2023

Certification body address: 8th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: 2 Toh Tuck Link, #02-00, Singapore 596225



Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements,
Please call: +65 64187537

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Xing Wei Pte Ltd

2 Venture Drive #16-22 Vision Exchange, Singapore 608526

This is a multi-site certificate; additional site(s) are listed on the next page(s)

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification:

Provision of Marine Surveying Services and Failure Modes and Effects Analysis (FMEA) for Marine and Offshore Industry.

Original cycle start date: 19 April 2018
Expiry date of previous cycle: 18 April 2021
Recertification Audit date: 04 March 2021
Recertification cycle start date: 19 April 2021

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 18 April 2024


Certificate No. SG003780 Version: 02 Revision date: 13 February 2023

Certification body address: 8th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: 2 Toh Tuck Link, #02-00, Singapore 596225



Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements,
Please call: +65 64187537

1 / 3



Xing Wei Pte Ltd

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification:

The following site is part of the Management System of the above organisation:

Site 1: Xing Wei Marine L.L.C.
Office 1307 Lamar Tower Al Nahyan Abu Dhabi, UAE


Provision of Marine Surveying Services and Failure Modes and Effects Analysis (FMEA) for Marine and Offshore Industry.

Certificate No. SG003780-001

Version: 02 Revision date: 13 February 2023

The validity of this certificate depends on the validity of the main certificate, which expires on: 18 April 2024

Certification body address: 8th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: 2 Toh Tuck Link, #02-00, Singapore 596225



Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements,
Please call: +65 64187537

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Our Credentials...

◆ BizSafe 4 certified ◆



Our Credentials...

◆ SME Medal of Honour ◆



Our Credentials...

◆ ADNOC APPROVER SUPPLIER ◆



XING WEI IS NOW AN APPROVED ADNOC SUPPLIER

This certificate is valid till 3/24/2027

Work Group Commodity	Consultancy / Engineering Services
Work Group Commodity Code	110 - Project Consultancy / Engineering
Work Group	110320 - Marine Surveys
Pre-Qualification Status	PQ - Prequalified
Classification	D

ADNOC Unified no. for XING WEI MARINE LLC (UAE) - 10072921
ADNOC Unified no. for XING WEI PTE LTD (SINGAPORE) - 20032515

Our Clientele

South East Asia



East Asia



Middle East and Others



Our Footprints...


International Presence



Contact Us...

Singapore & Malaysia


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Vision Exchange Singapore 608526

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Thank You



 Xing Wei Pte Ltd

 Xing Wei Marine L.L.C.