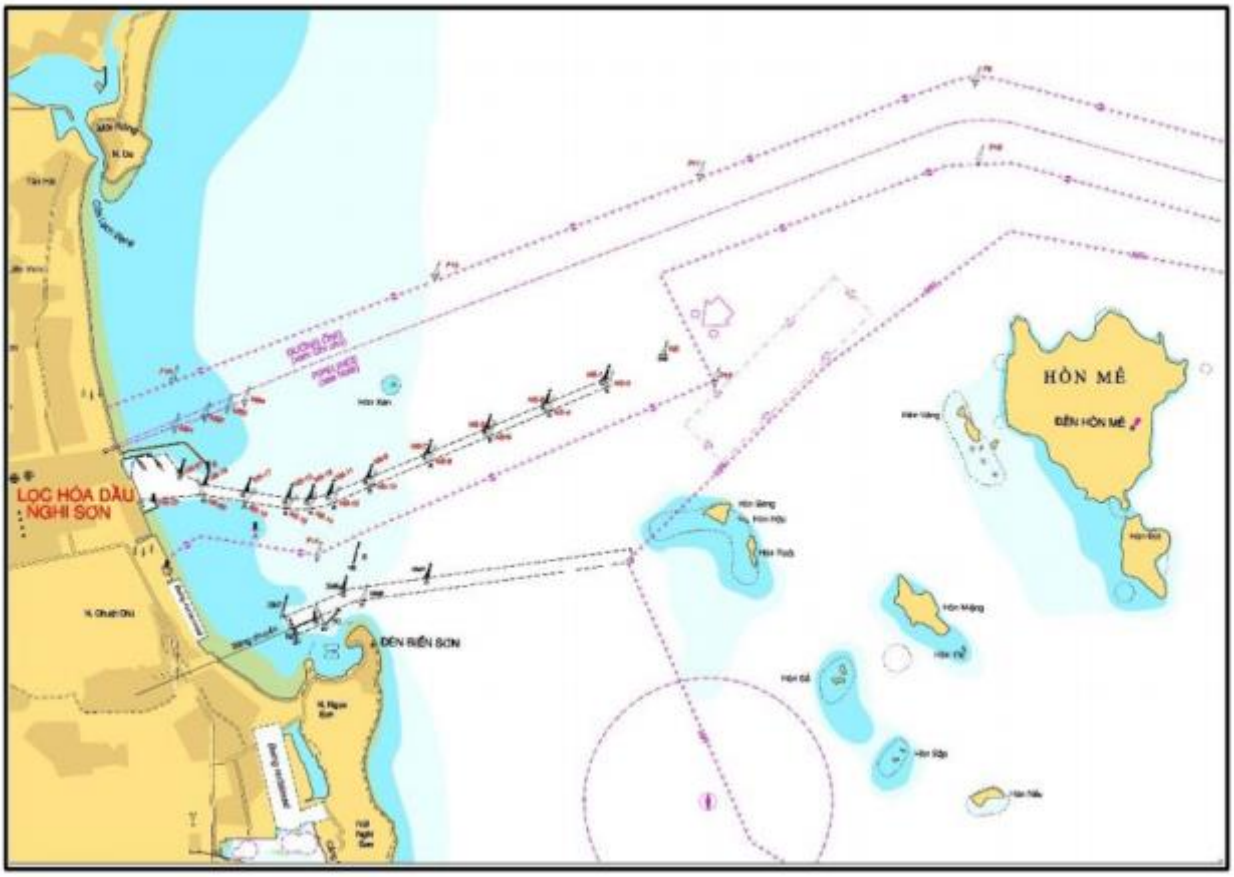
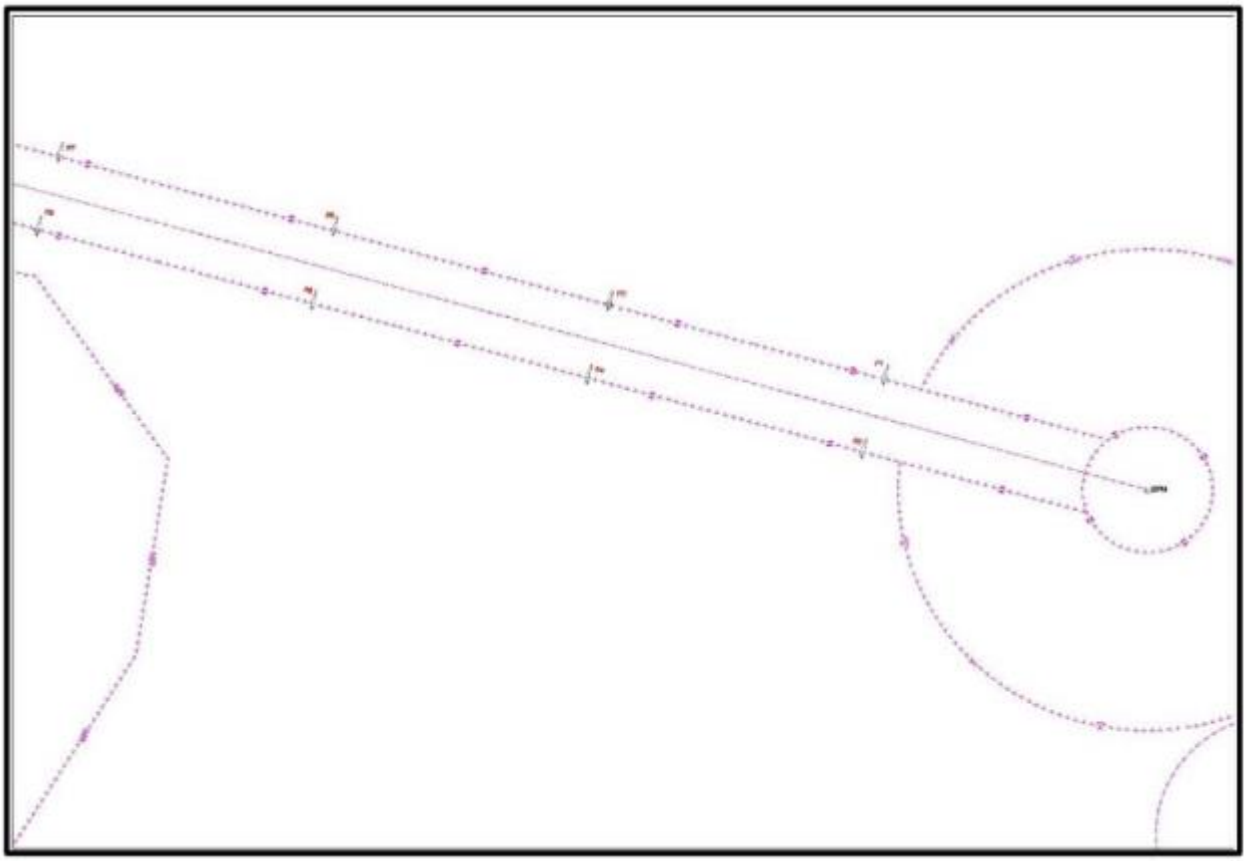

LỌC HÓA DẦU
NGHI SƠN
ĐÈN BIỂN SƠN
HÒN MÊ
ĐÈN HÒN MÊ



2 Detail report for channel buoy

Buoy number: NS

Item		Status
Coordinates WGS-84	:	19˚22'40.8" N 105˚51'56.5" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal
Racon	:	Normal
Solar panel	:	Normal
Battery & electricity	:	Normal

Buoy number: NS-1

Item		Status
Coordinates WGS-84	:	19˚22'33.1" N 105˚51'25.4"E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-2

Item		Status
Coordinates WGS-84	:	19˚22’24,8” N 105˚51’28,8” E
Buoy body	:	Normal
Fender :	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-3

Item		Status
Coordinates WGS-84	:	19˚22’20.6” N 105˚50’55.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Abnormal
Lantern light	:	Normal
Radar reflector	:	Normal

The insurant brim is broken

The insurant brim is broken

Buoy number: NS-4

Item		Status
Coordinates WGS-84	:	19˚22'12.1" N 105˚50'59.1" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-5

Item		Status
Coordinates WGS-84	:	19˚22'09.2"N ; 105˚50'26.2" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-6

Item		Status
Coordinates WGS-84	:	19˚22'00,0" N 105˚50'29.7" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-7

Item		Status
Coordinates WGS-84	:	19˚21'57.3"N ; 105˚49' 56.4"E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-8

Item		Status
Coordinates WGS-84	:	19˚21'49.1" N 105˚50'00.2" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-9

Item		Status
Coordinates WGS-84	:	19˚21'46.1" N 105˚49'26.6" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-14

Item		Status
Coordinates WGS-84	:	19˚21'24.9" N 105˚48'59.7" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-11

Item		Status
Coordinates WGS-84	:	19˚21'37.8"N ; 105˚49'07.7" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-12

Item		Status
Coordinates WGS-84	:	19˚21'29.7"N ; 105˚49'11.3" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Abnormal
Lantern light	:	Normal
Radar reflector	:	Normal

Recommendation:

- The contractor has conducted search thoroughly the sinker around location of buoy but not found
- Refer the detail report number 006 (6/12/2020), 011 (21/1/2021)
- Reinstall the new sinker and chain

Buoy number: NS-13

Item		Status
Coordinates WGS-84	:	19˚21'36.7" N 105˚48'58.0" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-10

Item		Status
Coordinates WGS-84	:	19˚21’37.0.” N 105˚49’30.3” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-15

Item		Status
Coordinates WGS-84	:	19˚21’35.6”N ; 105˚48’47.8” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-16

Item		Status
Coordinates WGS-84	:	19˚21'26.4" N 105˚48'46.1" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-17

Item		Status
Coordinates WGS-84	:	19˚21'38.8"N ; 105˚48'26.9" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-18

Item		Status
Coordinates WGS-84	:	: 19˚21'30.0" N 105˚48'25.2'' E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-19

Item		Status
Coordinates WGS-84	:	19˚21'42.0"N ; 105˚48'06.0" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-20

Item		Status
Coordinates WGS-84	:	19˚21'33.4"N ; 105˚48'04.6" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-21

Item		Status
Coordinates WGS-84	:	19˚21'46.2"N ; 105˚47'53.9" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: NS-22		
	**Item**	**Status**
	Coordinates WGS-84 :	19˚21'32.3"N ; 105˚47'40" E
	Structure :	Normal
	Lantern light :	Normal
	Radar reflector :	Normal

3 Detail report for outfall pipeline buoy

Buoy number: MB-1		
	**Item**	**Status**
	Coordinates WGS-84 :	19˚22'07.6"N ; 105˚47'50.6" E
	Buoy body :	Normal
	Fender :	Normal
	Structure :	Normal
	Lantern light :	Normal
	Radar reflector :	Normal

Buoy number: MB-2

Item		Status
Coordinates WGS-84	:	19˚22’13” N ; 105˚48’05.9” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: MB-3

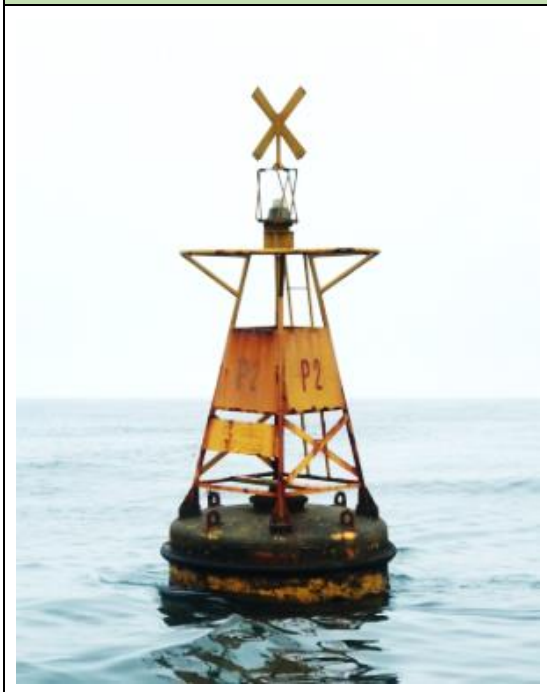
Item		Status
Coordinates WGS-84	:	19˚22’17.1”N ; 105˚48’17.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: MB-4		
	**Item**	**Status**
	Coordinates WGS-84 :	19 22 20.5 N ; 105 48 26.2 E
	Buoy body :	Normal
	Fender :	Normal
	Structure :	Normal
	Lantern light :	Normal
	Radar reflector :	Normal

4 Detail report for marine safety zone buoy

Buoy number: P-1		
	**Item**	**Status**
	Coordinates WGS-84 :	19˚22’29.5”N ; 106˚03’51.4” E
	Buoy body :	Normal
	Fender :	Normal
	Structure :	Normal
	Lantern light :	Normal
	Radar reflector :	Normal

Buoy number: P-2



Item		Status
Coordinates WGS-84	:	19˚21'53.3" N ; 106˚03' 40.4" E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-3

Item		Status
Coordinates WGS-84	:	19˚23'05.9"N ; 106˚01'34.4"E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

		
The insurant brim is broken		

Buoy number: P-4

Item		Status
Coordinates WGS-84	:	19˚22’29.7” N ; 106˚01’23.8” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-5

Item		Status
Coordinates WGS-84	:	19˚23’42.3” N ; 105˚59’17.4” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-6

Item		Status
Coordinates WGS-84	:	19˚23’06.1” N ; 105˚59’06.8” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-7

Item		Status
Coordinates WGS-84	:	19˚24’18.6” N ; 105˚57’00.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-8

Item		Status
Coordinates WGS-84	:	19˚23’42.4” N ; 105˚56’49.8” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-9

Item		Status
Coordinates WGS-84	:	19˚24’53.4”N ; 105˚54’32.9” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-10

Item		Status
Coordinates WGS-84	:	19˚24’15.8”N ; 105˚54’34.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-11

Item		Status
Coordinates WGS-84	:	19˚24’08.2”N ; 105˚52’14.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-12

Item		Status
Coordinates WGS-84	:	19˚22’29.7”N ; 105˚52’21.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-13

Item		Status
Coordinates WGS-84	:	19˚23’20.3”N ; 105˚50’01.5” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Abnormal
Lantern light	:	Normal
Radar reflector	:	Normal

The chain is broken

Recommendation:

- Refer the detail report number 014 (18/5/2021)

Buoy number: P-14

Item		Status
Coordinates WGS-84	:	19˚21’06.2”N ; 105˚49’02.3” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Normal
Lantern light	:	Normal
Radar reflector	:	Normal

Buoy number: P-15

Item		Status
Coordinates WGS-84	:	19˚22’30.6” N ; 105˚47’50” E
Buoy body	:	Normal
Fender	:	Normal
Structure	:	Abnormal
Lantern light	:	Normal
Radar reflector	:	Normal

The chain is broken

Recommendation:

- Refer the detail report number 015 (18/5/2021)

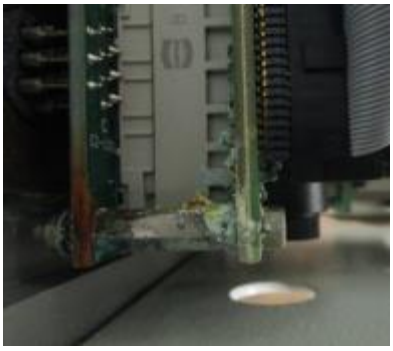
5 Detail report for Midi sea watch buoy & Tidal sensor & Wave radar

Buoy number: Midi Sea watch

Item		Status
Lighting rood	:	Missing
Met sensor	:	Missing
Rood of antenna	:	Missing
Passive radar reflector	:	Missing
combination rope 20m	:	Missing
combination rope 10m	:	Missing
Trawl float	:	Missing
Galvanized shackle	:	Missing
Galvanized shackle with plastic sleeve	:	Missing

Mast connector inlet is oxidized

Oxidize on Wavesense 3



Oxidize on Wavesense 3

Recommendation:

- Cleaning, installing equipment mounted buoy and then commissioning
- Reinstall the sea watch MIDI buoy to the original position

Tidal Sensor

Item		Status
Current meter sensor	:	Normal
Temperature and Salanity sensor	:	Normal
Electric Cable	:	Normal
Junction box	:	Normal
Manual winch	:	Normal
Structure of davit	:	Normal
Load weight	:	Normal

Wave Radar

Item		Status
Wave radar	:	Normal
Electric Cable	:	Normal
Junction box	:	Normal
Earthing cable	:	Normal
Structure of davit	:	Normal
parabolic reflector	:	Normal
	:	

parabolic reflector

Junction box

Earthing cable

6 Detail report for lights

Name : Front leading light

Item		Status
Solar panel	:	Normal
Battery	:	Damage
VRL-74 Led range light	:	Not bright
Navigation Sign Board	:	Normal
Junction box	:	Damage
Lightning rob	:	Normal
Earthing cable	:	Normal
Safety Buoy	:	Normal

Name : Breakwater light

Item		Status
Radar reflector	:	Normal
Lantern light	:	Normal
Light cage	:	Normal
Structure	:	Normal
Top mark	:	Normal

Name : Rear leading light

Item		Status
Structure	:	Normal
battery box	:	Normal
Lightning rob	:	Normal
Earthing cable	:	Normal
Solar panel	:	Normal
Light flashing & LED light	:	Normal

SAFETY DATA SHEET

RX-9022

Revision date: 10/12/13

Revision No: 10

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: RX-9022

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Leak Detection Dye PC20: Products such as ph-regulators, flocculants, precipitants, neutralization agents.

1.3. Details of the supplier of the safety data sheet

Company name: Roemex Limited
Badentoy Crescent
Badentoy Park
Portlethen
Aberdeen
AB12 4YD
United Kingdom

Tel: 01224 783444

Fax: 01224 783663

Email: msds@roemex.com

1.4. Emergency telephone number

Emergency tel: +44(0)1224 783444 - 24 hour

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements: This product has no label elements.

2.3. Other hazards

Other hazards: Not applicable.

PBT: This product is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

[cont...]

Hazardous ingredients:

ETHYLENE GLYCOL - REACH registered number(s): 01-2119456816-28-XXXX

EINECS	CAS	CHIP Classification	CLP Classification	Percent
203-473-3	107-21-1	-	Acute Tox. 4: H302	10-30%

ACETIC ACID - REACH registered number(s): 01-2119475328-30-0000

200-580-7	64-19-7	-	Flam. Liq. 3: H226; Skin Corr. 1A: H314	1-10%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water.

Inhalation: Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Turn leaking containers leak-side up to prevent the escape of liquid.

[cont...]

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

ETHYLENE GLYCOL

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	52 mg/m3 (vapour)	104 mg/m3 (vapour)	-	-

8.1. DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure all engineering measures mentioned in section 7 of SDS are in place.

Respiratory protection: Respiratory protection not required.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Environmental: An environmental assessment must be made to ensure compliance with local environmental legislation.

[cont...]

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid
Colour: Dark purple
Odour: Pungent
Oxidising: Non-oxidising (by EC criteria)
Solubility in water: Miscible
Viscosity: Non-viscous
Viscosity test method: Dynamic viscosity
Boiling point/range°C: * 103
Melting point/range°C: -17
Flash point°C: >93°C
Relative density: 1.02-1.06
pH: 3-4

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

[cont...]

Hazardous ingredients:

ETHYLENE GLYCOL

IVN	RAT	LD50	3260	mg/kg
ORL	MUS	LD50	5500	mg/kg
ORL	RAT	LD50	4700	mg/kg

ACETIC ACID...100%

IVN	MUS	LD50	525	mg/kg
ORL	RAT	LD50	3310	mg/kg

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Recovery operations: Not applicable.

Disposal of packaging: Arrange for collection by specialised disposal company.

[cont...]

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3: H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Specifications

ROV

Size	15*10.5*6.5 inch
Weight	4.5kg
Battery	97.68Wh
Maximum Depth	328 ft
Maximum Speed	1.5 m/s (3 Knots))
Battery Life	⩽4h (Depend on working condition)
Battery Cycle	>300times
Operating Temperature	14°F~113°F

Camera

CMOS	1/2.3
Aperture	F1.8
Focal Length	1m
ISO Range	100-6400
Field of View	152°
Maximum Image Resolution	12M
Image File Types	JPEG/DNG
Normal video	4K UHD:3840*2160 30fps
	FHD:1920*1080 30/60/120fps
Slow motion video	720P：8x (240fps)
	1080P：4x (120fps)
Time-lapse video	4K/1080P
Video Maximum Stream	60M
Video Type	MP4
SD Card Memory	Standard 64G (maximum support 512G)

Dimmable LED Lights

Brightness	2 x 2000lm
Color Temperature	5000K~5500K
CRI	85
Dimming	Three adjustable

Remote Controller

Size	6.3*6.1*4.9 inch
Weight	0.685kg
Battery capacity	2500mAh
Battery life	⩾6H (Depend on working condition)
Wireless	Wi-Fi
HDMI	1080P

Tether & Winder

328ft Version (100M)	1.8kg
656ft Version(200M)	2.5kg

Adapter

Adapter	2.9A/25.2V
ROV Charging time	2.5h
Remote controller charging time	2h

Sensor

IMU	Three-axis gyroscope
	acceleration
	compass
Depth Sensor	＜±0.25m
Temperature Sensor	＜±2℃

HIMOINSA
A YANMAR COMPANY

HYW-25 T6

INDUSTRIAL RANGE
Powered by YANMAR

SERVICE		PRP	ESP
POWER	kVA	24	26
POWER	kW	19,2	21
RATED SPEED	r.p.m.	1.800	
STANDARD VOLTAGE	V	480/277	
AVAILABLE VOLTAGES	V	208/120 · 220/127 · 380/220 · 440/254 ·	
RATED AT POWER FACTOR	Cos Phi	0,8	

INDUSTRIAL RANGE

HIMOINSA Company with quality certification ISO 9001

HIMOINSA gensets are compliant with EC mark which includes the following directives:

- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2018 normative: 1000 mbar, 25ºC, 30% relative humidity.

Prime Power (PRP):
According to ISO 8528-1:2018, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):
According to ISO 8528-1:2018, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

Continuous Power (COP): According to Standard ISO 8528-1:2018, this is the maximum power available for continuous loads for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

G2 class load acceptance in accordance with ISO 8528-5:2018

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Manufacture facilities:
SPAIN • FRANCE • INDIA • CHINA • USA • BRAZIL • ARGENTINA

Subsidiaries:
PORTUGAL | POLAND | GERMANY | UK | SINGAPORE | UAE | PANAMA | DOMINICAN REPUBLIC | ARGENTINA | ANGOLA | SOUTH AFRICA

STANDARD SOUNDPROOFING

- B10
- WATER-COOLED
- THREE PHASE
- 60 HZ
- INT. TIER IV
- DIESEL

Himoinsa has the right to modify any feature without prior notice.

Weights and dimensions based on standard products. Illustrations may include optional equipment.

Technical data described in this catalogue correspond to the available information at the moment of printing.

The illustrations and images are indicative and may not coincide in their entirety with the product.

Industrial design under patent.

Engine Specifications | 1.800 r.p.m.

Rated Output (PRP)	kW	24,2
Rated Output (ESP)	kW	26,8
Manufacturer		YANMAR
Model		4TNV84TBGGEH
Engine Type		4-stroke diesel
Injection Type		Direct
Aspiration Type		Turbocharged
Number of cylinders and arrangement		4-L
Bore and Stroke	mm	84 x 90
Displacement	L	1,995
Cooling System		Coolant
Lube Oil Specifications		SAE 3 class 10W30 / API grade CD,CF
Compression Ratio		18,9:1

Lube oil consumption with full load	g/kWh	0,27
Total oil capacity	L	7,4
Total coolant capacity	L	5,8
Heat dissipated by coolant	kW	35,7
Governor	Type	Mechanical
Air Filter	Type	Dry
Inner diameter exhaust pipe	mm	34,7

- Diesel engine
- 4-stroke cycle
- Water-cooled
- 12V electrical system
- Water separator filter (visible level)
- Dry air filter
- Radiator with pusher fan
- Mechanical governor
- Hot parts protection
- Moving parts protection

Generator Specifications | MECC ALTE

Manufacturer		MECC ALTE
Model		ECP28.M4C
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-4 7,5"
Insulation	Class	H class

Enclosure (according IEC-34-5)	IP23
Exciter system	Self-excited, brushless
Voltage regulator	A.V.R. (Electronic)
Bracket type	Single bearing
Coupling system	Flexible disc
Coating type	Standard (Vacuum impregnation)

- Self-excited and self-regulated
- IP23 protection
- H class insulation

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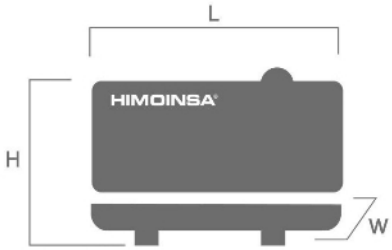
WEIGHT AND DIMENSIONS

		Standard Version	High Capacity version	High Capacity version
Length (L)	mm	2.100	2.100	2.100
Height (H)	mm	1.350	1.410	1.565
Width (W)	mm	975	975	975
Maximum shipping volume	m³	2,76	2,89	3,2
Weight with liquids in radiator and sump	Kg	800	887	938
Fuel tank capacity	L	100	190	330
Autonomy	Hours	20	39	67
		Plastic tank	Steel tank	Steel tank



SOUND PRESSURE

Sound pressure level	dB(A)@7m	62 ± 2,4

APPLICATION DATA

EXHAUST SYSTEM

Maximum exhaust temperature	°C	540
Exhaust Gas Flow	m³/min	7,52
Maximum allowed back pressure	mm H2o	1000
Exhaust Flange Size (external diameter)	mm	65

NECESSARY AMOUNT OF AIR

Intake air flow	m³/h	140,05
Cooling Air Flow	m³/s	0,987
Alternator fan air flow	m³/s	0,13

FUEL CONSUMPTION

Fuel Consumption 100% ESP	l/h	7,23
Fuel Consumption 70 % ESP	l/h	5,03
Fuel Consumption 100% PRP	l/h	6,47
Fuel Consumption 70 % PRP	l/h	4,62
Fuel Consumption 50 % PRP	l/h	3,48

FUEL SYSTEM

Fuel Oil Specifications		Diesel
Maximum power suction pump	mm Hg	30
Maximum return feed pump	mm Hg	250
Fuel Tank	L	100
Other fuel tank capacities	L	190, 330

STARTING SYSTEM

Starting power	kW	1,4
Starting power	CV	1,9
Recommended battery	Ah	60
Auxiliary Voltage	Vdc	12

Soundproofed version

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- Steel chassis
- Anti-vibration shock absorbers
- Chassis with integrated fuel tank
- Fuel level gauge
- External emergency stop switch
- Bodywork made from high quality steel plate
- High mechanical strength
- Low noise emissions level
- Soundproofing provided by high-density volcanic rock wool
- Epoxy polyester powder coating
- Full access for maintenance (water, oil and filters, no need to remove the canopy)
- Reinforced lifting hooks for crane hoisting
- Watertight chassis (acts as a double barrier against liquid retention)
- Fuel tank drain plug
- Chassis drain plug
- Chassis ready for future mobile kit installation
- Steel residential silencer -35db(A) attenuation.
- Oil sump extraction kit
- Versatility to assemble a high capacity chassis with a metallic fuel tank
- IP Protection according to ISO 8528-13:2016
- Fuel transfer pump (Opcional).

FEATURES OF THE CONTROL UNITS

		M6	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Generator Readings	Voltage between phases		•	•	•	•
	Voltage between neutral and phase		•	•	•	•
	Current intensities		•	•	•	•
	Frequency		•	•	•	•
	Apparent power (Kva)		•	•	•	•
	Active power (Kw)		•	•	•	•
	Reactive power (kVAr)		•	•	•	•
	Power factor		•	•	•	•
Mains Readings	Voltage between phases			•	•	•
	Voltage between phases and neutral			•	•	•
	Current intensities			•	•	•
	Frequency			•	•	•
	Apparent power			•		
	Active power			•		
	Reactive power			•		
	Power factor			•		
Engine Readings	Coolant temperature		•	•		•
	Oil pressure		•	•		•
	Fuel level (%)		•	•		•
	Battery voltage		•	•		•
	R.P.M.		•	•		•
	Battery charge alternator voltage		•	•		•
Engine Protections	High water temperature		•	•		•
	High water temperature by sensor		•	•		•
	Low water temperature by sensor		•	•		•
	Low oil pressure		•	•		•
	Low oil pressure by sensor		•	•		•
	Low water level		•	•		•
	Unexpected shutdown	•	•	•		•
	Fuel storage		•	•		•
	Fuel storage by sensor		•	•		•
	Stop failure		•	•		•
	Battery voltage failure		•	•		•
	Battery charge alternator failure		•	•		•
	Overspeed		•	•		•
	Underspeed		•	•		•
	Start failure	•	•	•		•
	Emergency stop	•	•	•	•	•

• Standard (o) Optional

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		M6	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Alternator Protections	High frequency		●	●	●	●
	Low frequency		●	●	●	●
	High voltage		●	●	●	●
	Low voltage		●	●	●	●
	Short-circuit		●	●		●
	Asymmetry between phases		●	●	●	●
	Incorrect phase sequence		●	●	●	●
	Inverse power		●	●		●
	Overload		●	●		●
	Genset signal drop		●	●	●	●
Counters	Total hour counter		●	●	●	●
	Partial hour counter		●	●	●	●
	Kilowatt meter		●	●	●	●
	Starts valid counters		●	●	●	●
	Starts failure counters		●	●	●	●
	Maintenance		●	●	●	●
Communications	RS232		ⓞ	ⓞ	ⓞ	ⓞ
	RS485		ⓞ	ⓞ	ⓞ	ⓞ
	Modbus IP		ⓞ	ⓞ	ⓞ	ⓞ
	Modbus		ⓞ	ⓞ	ⓞ	ⓞ
	CCLAN		ⓞ	ⓞ		ⓞ
	Software for PC		ⓞ	ⓞ	ⓞ	ⓞ
	Analogue modem		ⓞ	ⓞ	ⓞ	ⓞ
	GSM/GPRS modem		ⓞ	ⓞ	ⓞ	ⓞ
	Remote screen		ⓞ	ⓞ		ⓞ
	Tele signal		ⓞ (8 + 4)	ⓞ (8 + 4)		ⓞ (8 + 4)
	J1939		ⓞ	ⓞ		ⓞ
Features	Alarm history		● (10) / (opc. +100)	● (10) / (opc. +100)	● (10) / (opc. +100)	● (10) / (opc. +100)
	External start	●	●	●	●	●
	Start inhibition		●	●	●	●
	Mains failure start			●	●	●
	Start under normative EJP		●	●		●
	Pre-heating engine control	●	●	●		●
	Genset contactor activation	●	●	●	●	●
	Mains & Genset contactor activation			●	●	●
	Fuel transfer control		●	●		●
	Engine temperature control		●	●		●
	Manual override		●	●		●
	Programmable alarms		●	●		●
	Genset start function in test mode		●	●	●	●
	Programmable outputs		●	●		●
	Multilingual		●	●	●	●
Special Functions	GPS Positioning		ⓞ	ⓞ		ⓞ
	Synchronisation		ⓞ	ⓞ		ⓞ
	Mains synchronization		ⓞ	ⓞ		ⓞ
	Second Zero elimination		ⓞ	ⓞ		ⓞ
	RAM7		ⓞ	ⓞ		ⓞ
	Remote screen		ⓞ	ⓞ		ⓞ

● Standard ⓞ Optional

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CONTROL PANELS

M6

Manual volt-free contact start panel and thermal magnetic protection (depending on current and voltage) and differential.

Control unit M6

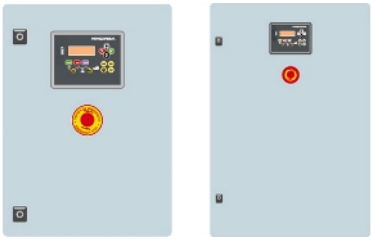
M5

Digital manual Auto-Start control panel and thermal magnetic protection (depending on current and voltage) and differential with CEM7.

Digital control unit CEM7

AS5

Automatic panel WITHOUT transfer switch and WITHOUT mains control with CEM7 unit. (*) AS5 as optional with CEA7 unit. Automatic panel without transfer switch and WITH mains control.



CC2

Himoinsa Switching cabinet WITH display.

Digital control unit CEC7

AS5 + CC2

Automatic panel WITH transfer switch and with mains control. The display will be on the genset and on the cabinet.

Digital control unit CEM7+CEC7

AC5

Automatic mains failure control panel. Wall-mounted cabinet WITH transfer switch and thermal magnetic protection (depending on current and voltage).

Digital control unit CEA7

Electrical system

- Electric control and power panel with measurements devices and control unit (according to necessity and configuration)
- 4-pole thermal magnetic circuit breaker
- Adjustable earth leakage protection (time & sensitivity) standard in M5 and AS5, with thermal magnetic protection
- Battery charger (standard on gensets with automatic control panels)
- Heating resistor (standard on sets with automatic control panels)
- Battery charger alternator with ground connection
- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)
- Battery Switch (Opcional).

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MÔ TẢ ĐÁNH GIÁ (0)

MODEL : PDS655S

Phần nén khí

Hãng sản xuất: AIRMAN

Lưu lượng khí nén : 18.5 m3/phút

Áp suất mở : 0.7 MPa

Kích thước đầu ra : 3/4”x2; 2”x1

Thể tích bình khí : 0.189 (m3)

Phần động cơ

Hãng sản xuất: HINO

ENG.Model: J08C-V

Công suất động cơ: 160/2500 (PS/rpm)

Chế độ làm mát : Bằng nước

Kích thước tổng thể: DxRxC : 3650 x 1685 x 2070 (mm)

Khối lượng : 3190 kg

Xuất sứ : Nhật Bản