

ON DUTY FOR THE CHIEF ENGINEER

Marine Control Services

Automation solution provider to the marine industry!





- Established in 2002
- Modern facilities in Drammen, Norway
- Background from major marine automation suppliers
- 25 years experience with marine automation
- Partner with Stein Sohn from 2002 to 2010
 - Vista Automation system (version 4)
- Partner and co-founder in new company – Rockson 2010
 - More than 450 references in new builds and retrofits
 - World-wide network of service partners
 - Evolution IAS system launched 2021
- Achilles JQS qualified from 2016

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The company Marine Control Services AS

MCS marine
control services



Evolution IAS



Evolution IAS: Vessel Automation System

- Conning Overview
- Power & Energy Management
- Aux Engines & Main Engines
- Gear & Propulsion
- Aux Systems
- Tank Sounding
- FO Economy

Evolution IAS: Customer Reference List

- 450 vessels sails with Evolution IAS
- Ferries, Fast Ferries, Yachts, Fishing Vessels, Fish Service Vessels, Wind Service Vessels, Tugs, Tankers, Bulk Carriers etc.

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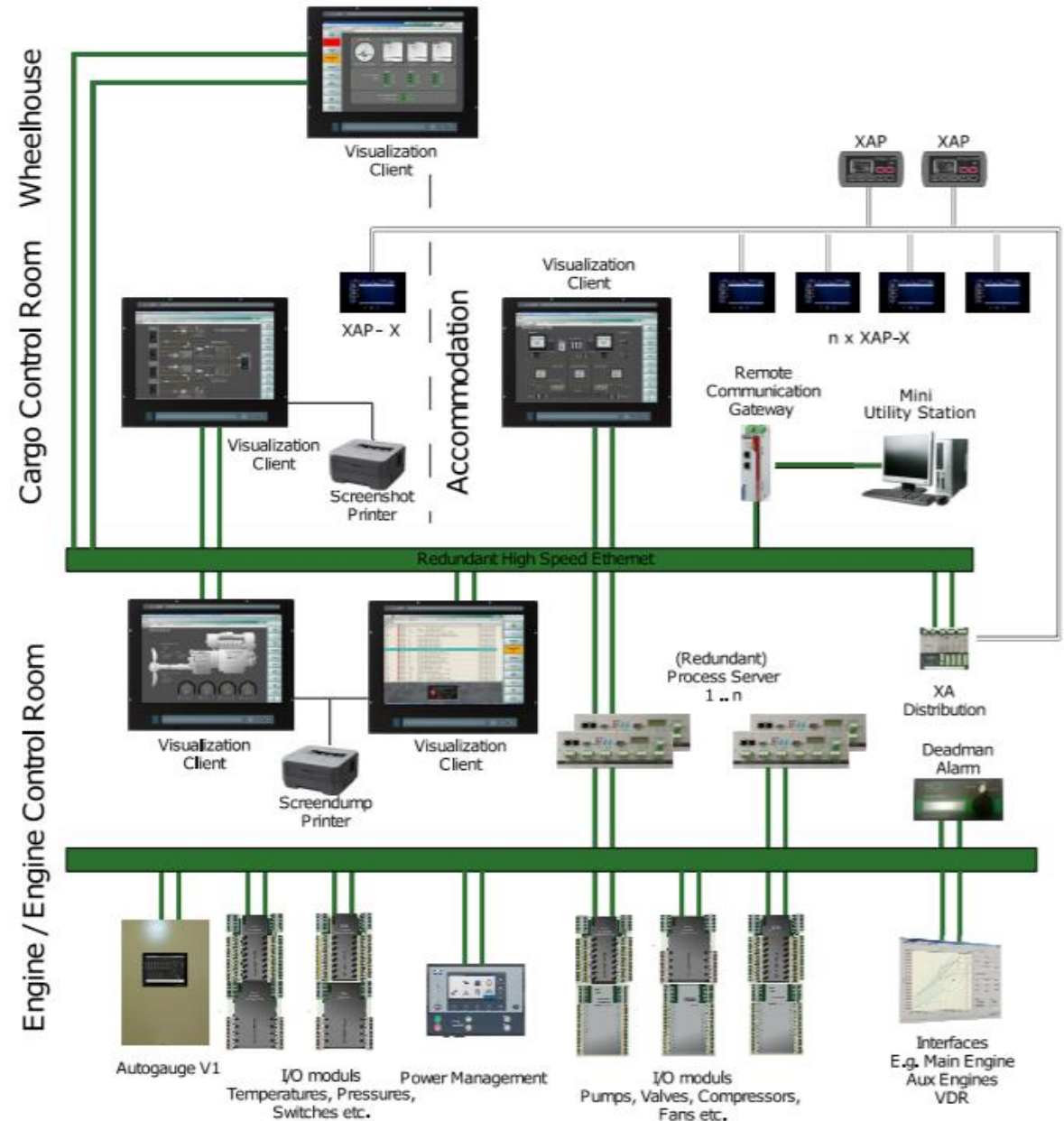
Automation Solution Provider for Vessels

MCS marine control services

Evolution IAS

- Outstanding automation system designed to meet the toughest demands in the maritime environment
- Scalable from small Alarm & Monitoring to large Integrated Alarm, Control and Monitoring Systems

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Last Alarm: 2021-07-09 14:06:11 XA 11.36032.02 LPCS HPU PUMP #1 STARTED, BOOST AI:

Main Engine Overview

SCR

UREA INJECTION REQUEST

MANUAL REGEN **REGEN BLOCK**

Temp Out **365 °C**

Press Out **1.66 mbar**

Press In **3.64 mbar**

Temp In **354 °C**

UREA FLOW **22.2 kg/h**

NOZZLE AIR PRESS **3.90 bar**

SOOTBLOWING AIR PRESS **9.7 bar**

TURBO CHARGER

SPEED

11790 rpm

LUBE OIL PRESS **1.92 bar**

LUBE OIL TEMP OUT **71.7 °C**

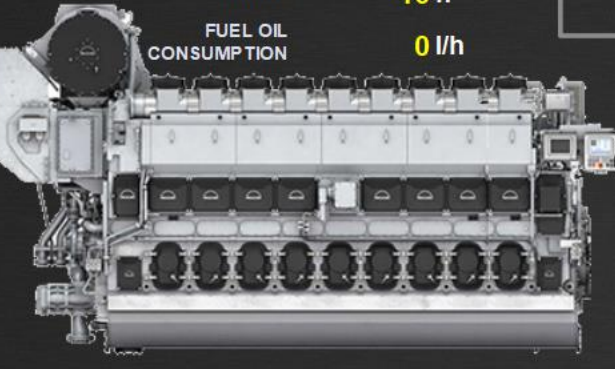
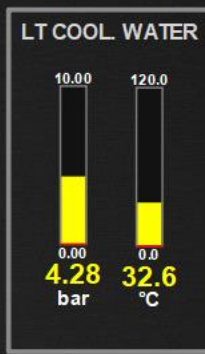
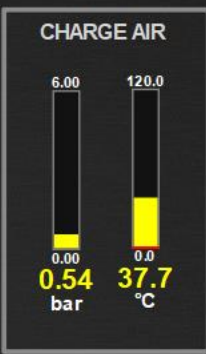
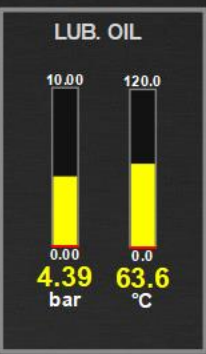
WASTE GATE POSITION **0.0 %**

ENGINE SPEED **751 rpm**

F.O. INDEX **27.3 %**

HOURS **16 h**

FUEL OIL CONSUMPTION **0 l/h**

AIR

STARTING AIR	7.3 bar
CONTROL AIR	7.40 bar
EMCY STOP AIR	25.9 bar
INTAKE AIR	35.1 °C

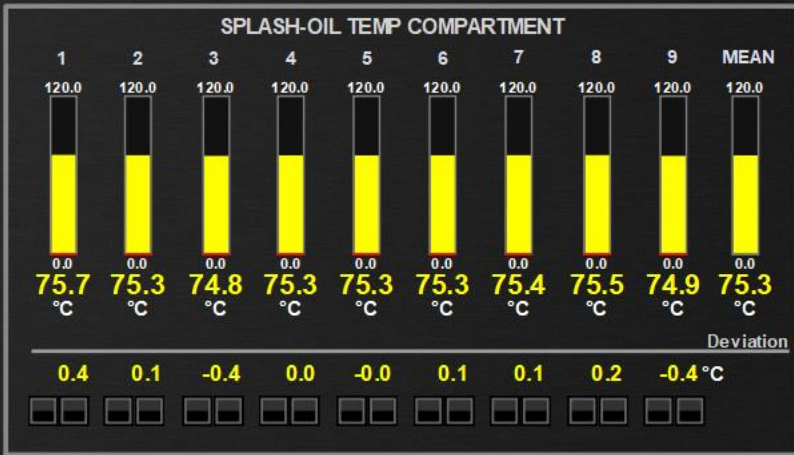
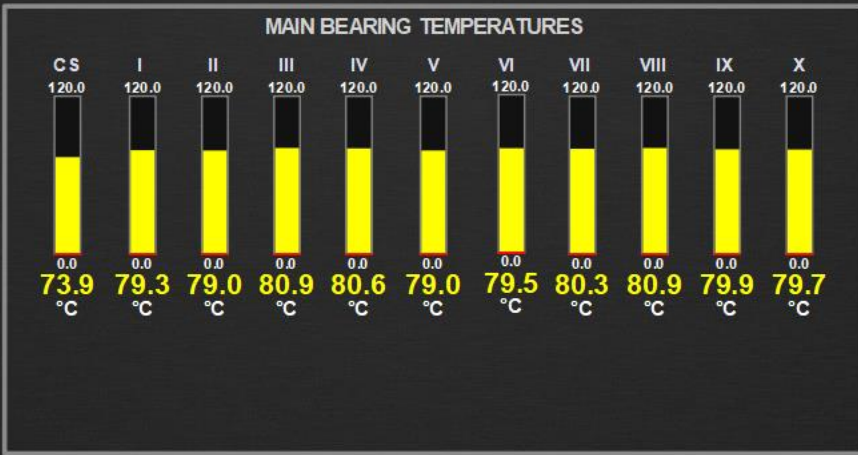
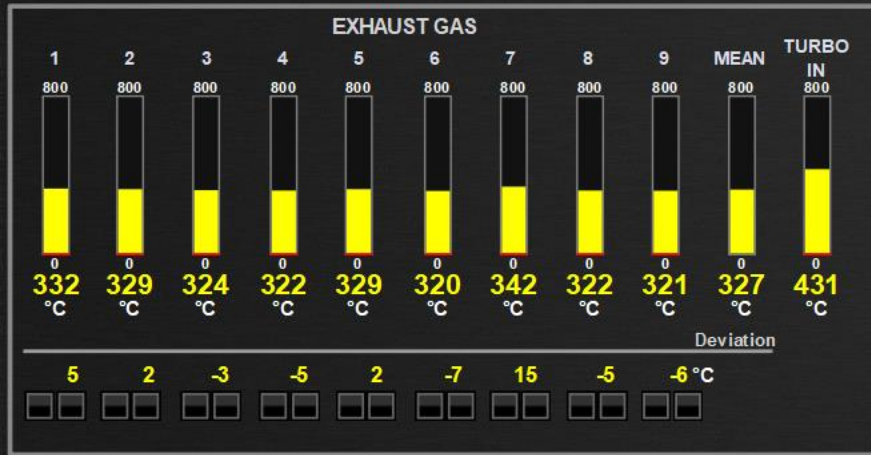
RESET ALARMS

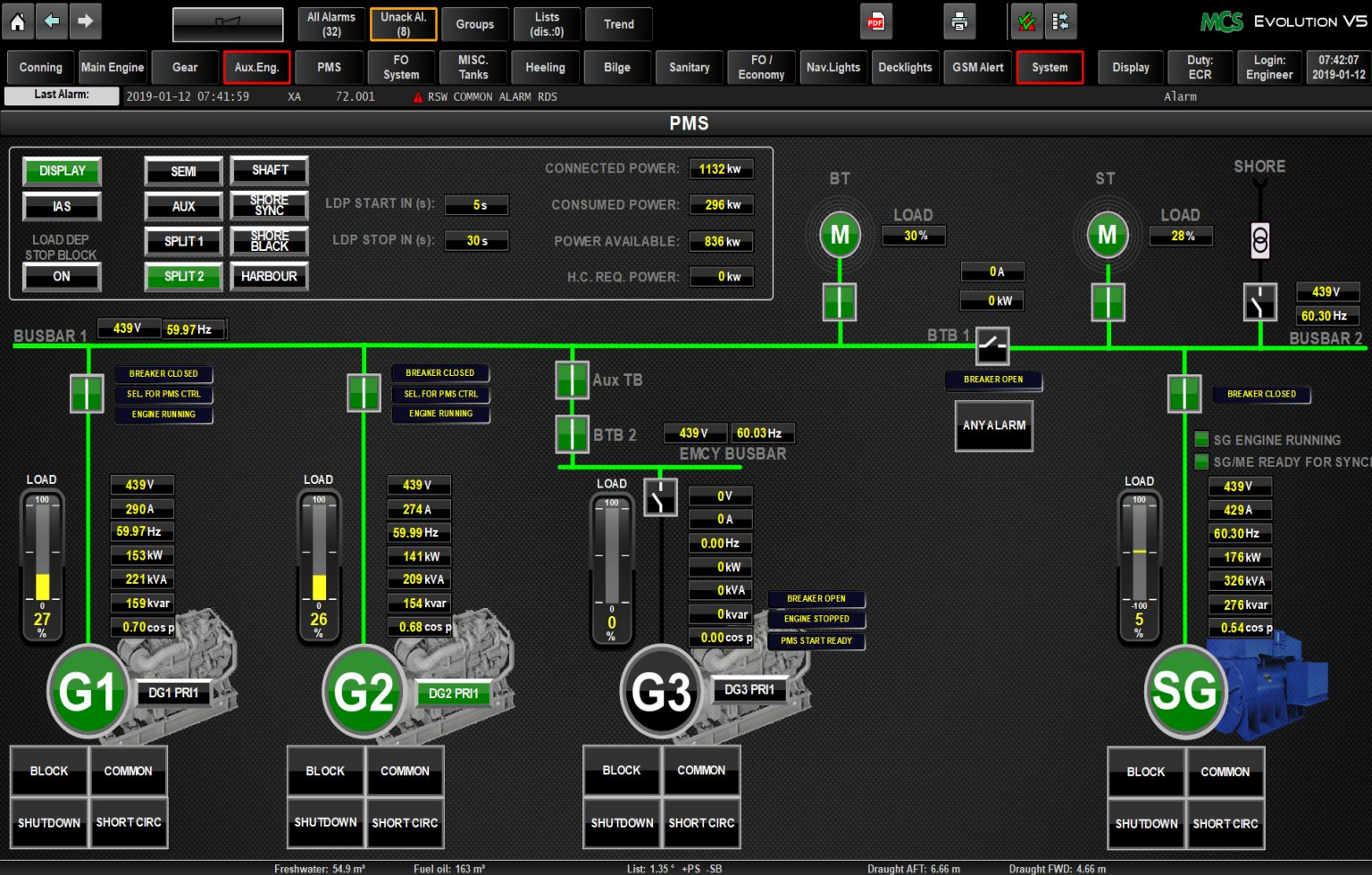
ICAF COMMON ALARM

ENGINE RUNNING

SCR OPERATION ACTIVE

HTCW PRE-HEATING MODULE	HT WATER STBY PUMP
LT WATER STBY PUMP	FO. AIRPUMPING
FO. PUMP 1	FO. PUMP 2
GREEN OIL FUEL	LO ME STBY PUMP





- PMS & EMS integrated in Evolution IAS
- Safety system for diesel and generator protection
- Diesel engine control
- Loadsharing
- Customized solutions

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Evolution IAS - Power & Energy Management





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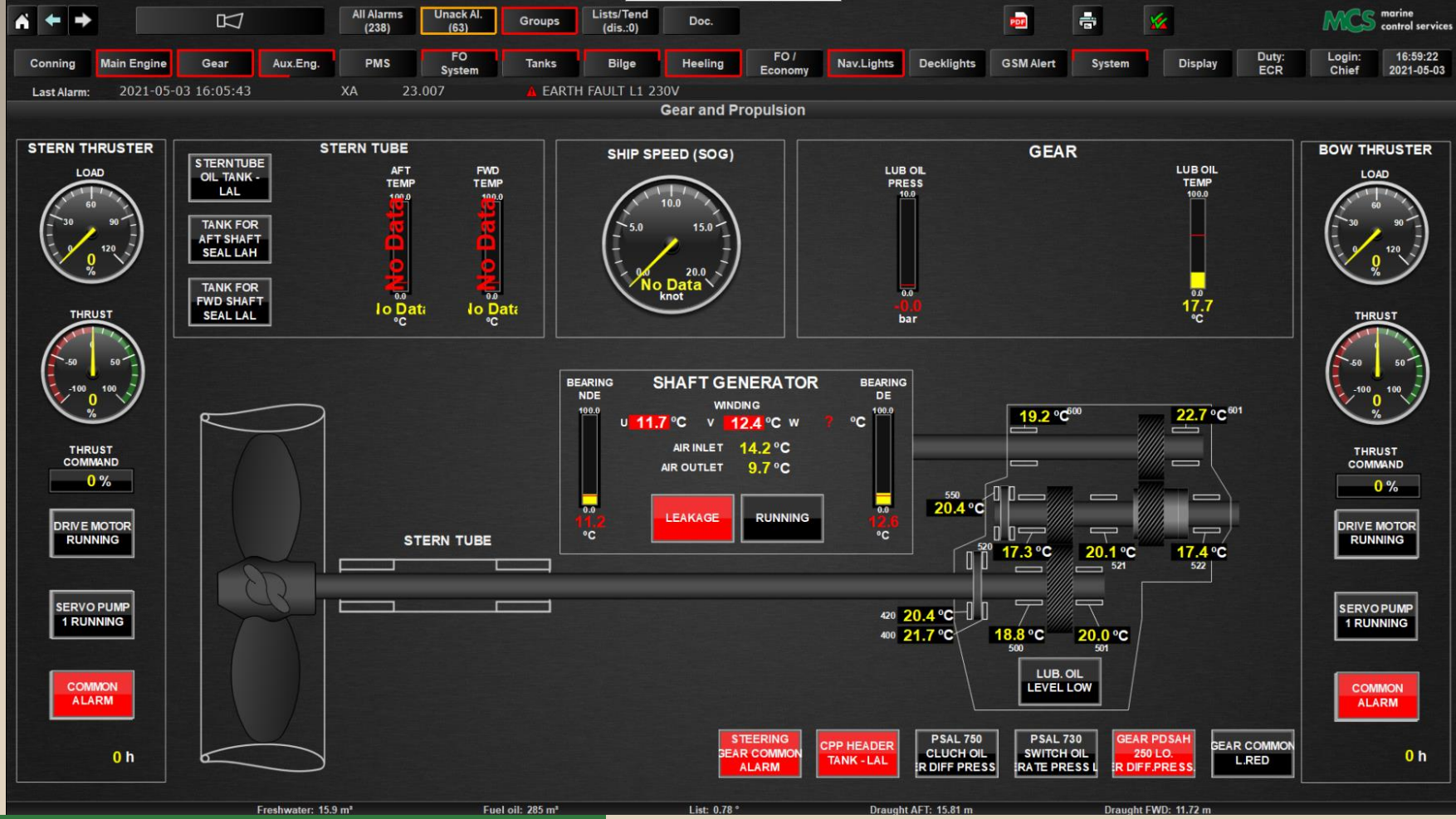
Evolution IAS - AUX Engines



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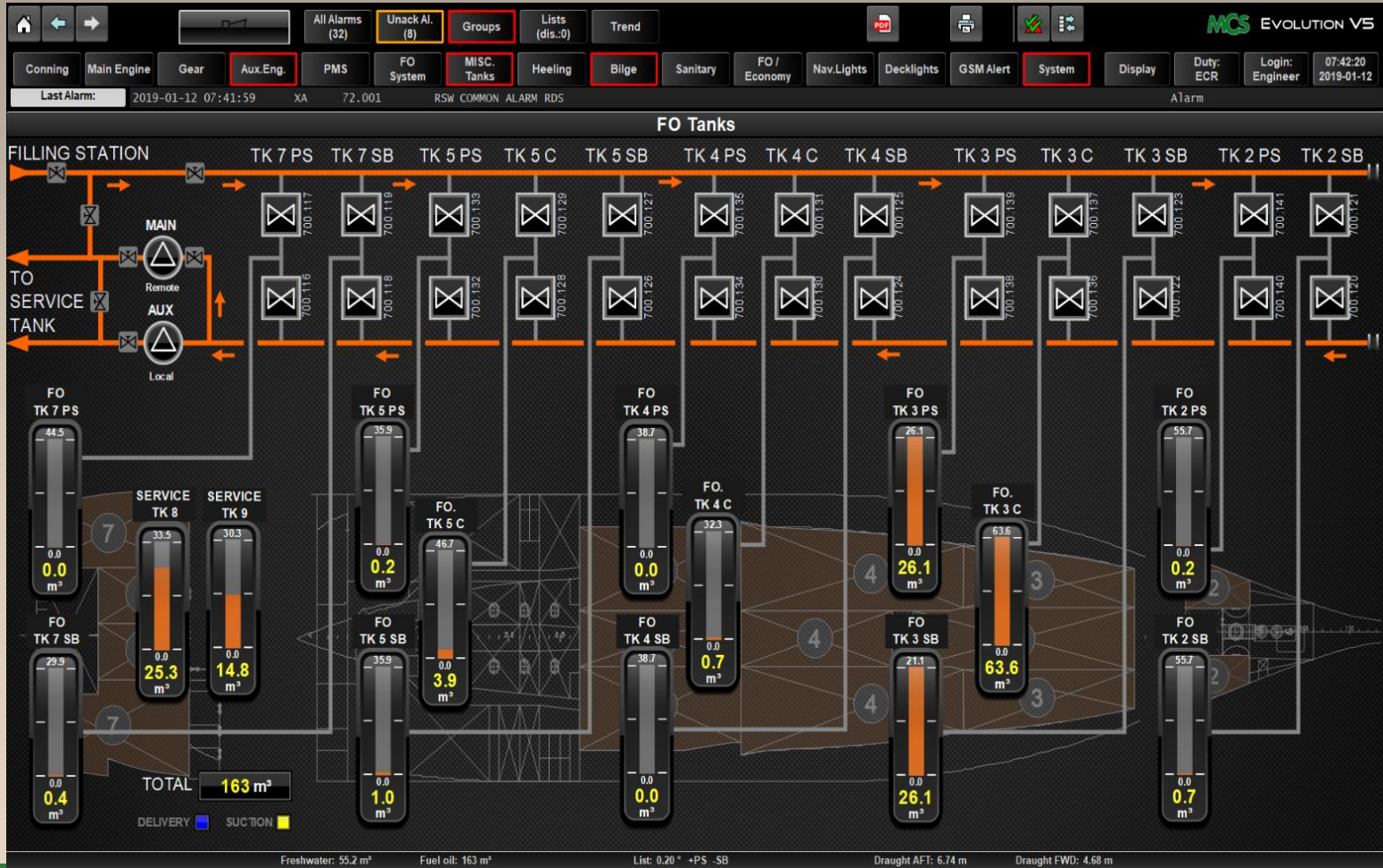
Evolution IAS - FO Economy





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Evolution IAS - Gear & Propulsion Overview



- Control for valves, fans, compressors.
- Process regulators (PID)
- Single/standby pump control
- Sequential restart after blackout
- Automatic functions for Ballast, bilge, fuel oil
- Fuel consumption and performance monitoring

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Evolution IAS - Auxiliary Systems Control



All Alarms (354)
Unack Al. (4)
Groups
Lists (dis.:0)
Trend
Doc.
MCS marine control services

Conning
Main Engine
Gear
Aux.Eng.
PMS
FO System
Tanks
Bilge
FO / Economy
Nav.Lights
Decklights
GSM Alert
System
Display
Duty: EGR
Login: Chief
13:34:06 2020-07-07

Last Alarm: 2020-07-07 13:33:53 XA 99.018 EVOLUTION V5 SWITCH U21-2 LAN 2 (B) ALARM

Decklights

FLOOD LIGHTS

G. 01 FOREMAST, FWD

G. 02 FOREMAST, AFT

G. 03 WHEELHOUSE FWD

G. 04 WHEELHOUSE SIDES

G. 05 WHEELHOUSE AFT

G. 06 GALLOW, FWD

G. 07 GALLOW, AFT

DECK LIGHTS

G. 08 GALLOW, BOAT DECK

G. 09 BOAT DECK

G. 10 TRAWLDECK

G. 11 FWD HELTERDECK

OTHER

G. 12 BOAT DK. CENTER

G. 14 LOGO LIGHT

LIGHT GROUPS

ALL LIGHTS

ALL FLOOD LIGHTS

ALL DECK LIGHTS

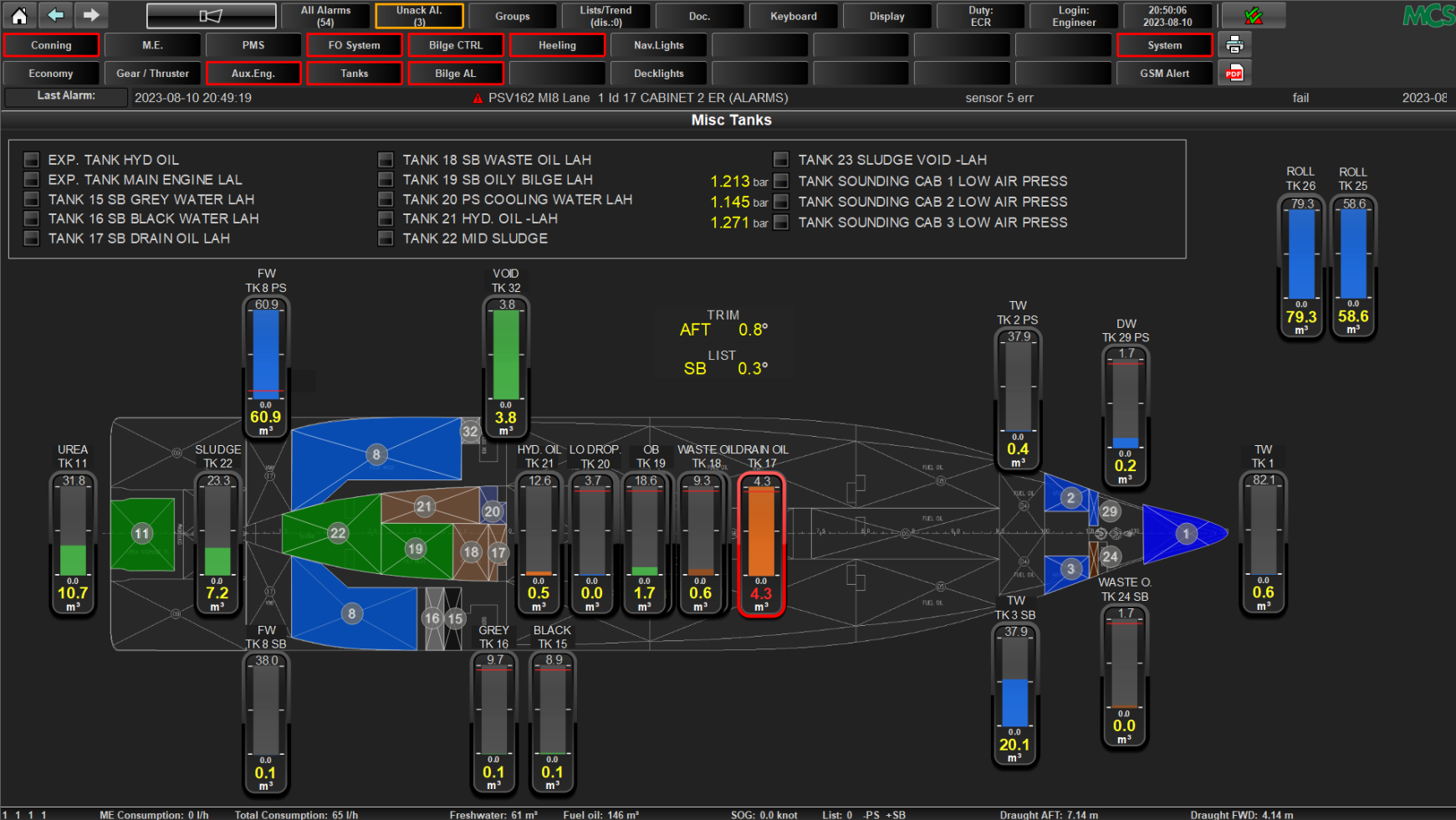
G. 15 COLORED

Freshwater: No Data Fuel oil: No Data List: -0.06 ° +PS -SB Draught AFT: No Data Draught FWD: No Data

- Single light control
- Group control
- Artificial feedback

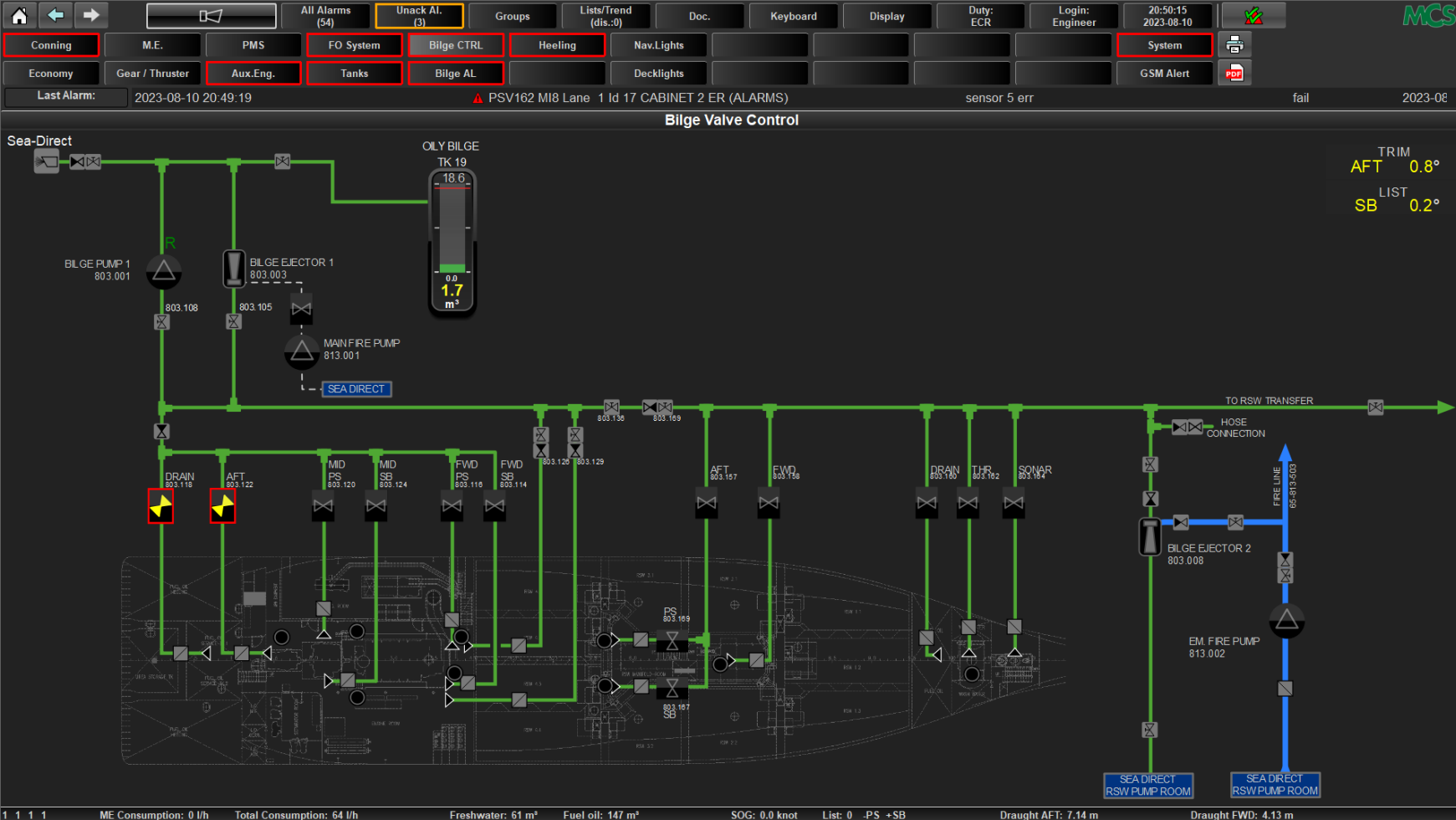
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Evolution IAS – Deck Lights



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Evolution IAS - Tanks



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Evolution IAS – Bilge Valves Control



LocalTime	MpFc	MpNo	MpText	MpVar	State	Time
2023-08-10 20:47:21	XA	52.1004.5	START AIR COMPRESSOR 2 - FAULT		Alarm	2023-08-10 20:47:21
2023-08-10 20:47:20	XA	52.1003.5	START AIR COMPRESSOR 1 - FAULT		Alarm	2023-08-10 20:47:20
2023-08-10 20:46:29	XA	13.1001.4	▲ GEAR LO STBY PUMP - FAULT		Alarm	2023-08-10 20:46:29
2023-08-10 20:44:35	LAL	42.0005	▲ TK 10 PS FO SERVICE 1 LAL		Alarm	2023-08-10 20:44:35
2023-08-10 20:43:29	XCI	41.0122	▲ BILGE VALVE ENG.R 803.122 AFT		FB Fail	2023-08-10 20:43:29
2023-08-10 20:43:29	XCI	41.0118	▲ BILGE VALVE ENG.R 803.118 DRAIN WATER		FB Fail	2023-08-10 20:43:29
2023-08-10 20:43:29	XCI	42.FOV01	▲ FO VALVE MAIN PUMP OPEN		FB Fail	2023-08-10 20:43:29
2023-08-10 20:43:29	LIAH	51.2110V	▲ TK 17 SB - DO DRAIN OIL - VOLUME	V: 4.3 L: 4.1 m ³ (H)	High	2023-08-10 20:43:29
2023-08-10 20:43:20	LAH	41.0029	▲ BILGE ALARM 419 VENTILATION ROOM		Alarm	2023-08-10 20:43:20
2023-08-10 20:43:09	XA	01.0009	▲ ME ETHERNET COMMUNICATION COMMON ALARM		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:09	XA	63.0030	▲ SAUNA HELP ALARM		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:09	XA	98.010101A12	▲ SCR POWER UNIT MAIN SWITCH		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:09	XA	01.0005	▲ ME_TC WASHING COMMON ALARM		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:09	XA	42.1003.3	▲ ME FO STBY PUMP - FAULT		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:09	XA	52.1009.5	▲ HYD CW PUMP 2 - FAULT		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:09	XA	41.0042	▲ BILGE WATER SEPARATOR - COMMON ALARM		Alarm	2023-08-10 20:43:09
2023-08-10 20:43:08	XA	23.0048	▲ S2 24VDC EARTH FAULT		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:08	XA	63.0001	▲ START AIR PRESSURE LOW		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:08	XA	51.0001	▲ EXP TK AIRCONDITION - LAL		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:08	XA	63.0028	▲ CHILLER UNIT COMMON ALARM		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:08	XA	24.0001	▲ THD FILTER COMMON ALARM		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:08	XA	63.0005	▲ P10 VENT COMMON ALARM		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:08	XA	63.0022	▲ ALARM OIL LEAKAGE FISH PUMP CRANE		Alarm	2023-08-10 20:43:08
2023-08-10 20:43:07			▲ PSV162 M18 Lane 1 Id 17 CABINET 2 ER (ALARMS)	sensor 4 err	fail	2023-08-10 20:43:07
2023-08-10 20:43:06	XA	23.0026	▲ RMS_RDS COMMON ALARM		Alarm	2023-08-10 20:43:06
2023-08-10 20:43:06	XA	41.1120.01	▲ SUBM. BILGE PUMP SCALES - FAULT		Alarm	2023-08-10 20:43:06
2023-08-10 20:43:06	XA	41.1121.01	▲ SUBM. BILGE PUMP WET LAB - FAULT		Alarm	2023-08-10 20:43:06
2023-08-10 20:43:06	XA	23.0025	▲ RMS_PLANT COMMON ALARM		Alarm	2023-08-10 20:43:06
2023-08-10 20:43:06	XA	63.0032	▲ OIL LEKAGE CRANE FWD (AFT)		Alarm	2023-08-10 20:43:06

1 1 1 1 ME Consumption: 13 l/h Total Consumption: 42 l/h Freshwater: 61 m³ Fuel oil: 146 m³ SOG: 0.0 knot List: 0 -PS +SB Draught AFT: 7.13 m Draught FWD: 4.13 m

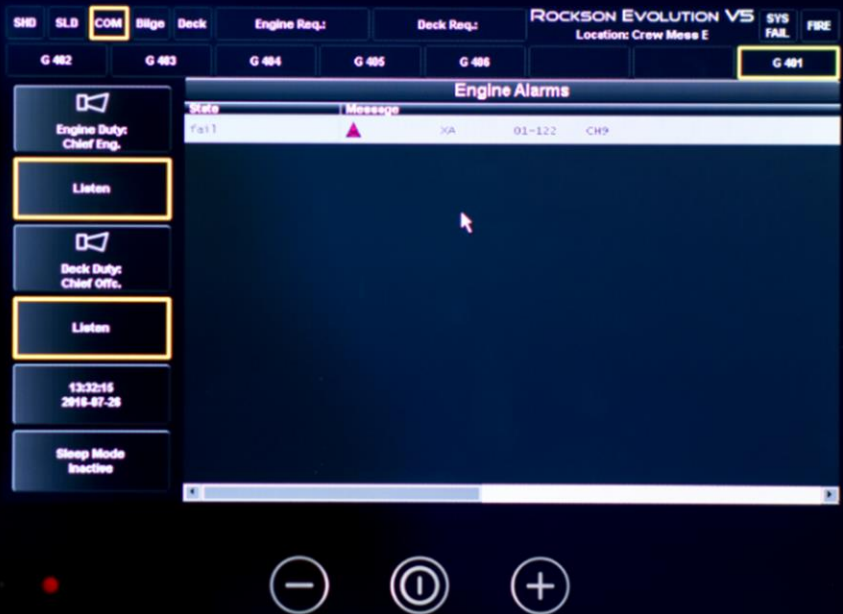
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Evolution IAS – Alarm List



Features

- ✓ 7" Panel PC, Graphic client for XA server
- ✓ Graphic display with multi language status description
- ✓ Alarm group page
- ✓ Acoustic acknowledge button and dimming
- ✓ Duty function, listen function for duty monitoring
- ✓ Fire and system fail indication
- ✓ Flush or wall mounting installation
- ✓ Connector for bedroom buzzer



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Evolution IAS - XAP-X

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Navigation: All Alarms (354) Unack Al. (4) Groups Lists (dis.:0) Trend Doc. MCS marine control services

System: Main Engine Gear Aux.Eng. PMS FO System Tanks Bilge FO / Economy Nav.Lights Decklights GSM Alert System Display Duty: ECR Login: Chief 13:34:21 2020-07-07

Last Alarm: 2020-07-07 13:33:53 XA 99.018 EVOLUTION V5 SWITCH U21-2 LAN 2 (B) ALARM

GSM Alert-System Mimic

SMS ALERT ON/OFF

SELECT

Set Priority 2
Needs Select

SELECT

Set Priority 3
Needs Select

SELECT

Gr.	Xp Gr.	Test	Alarm Status	Activate
01	x11	TST	FIRE ALARM	SEND GROUP 01
02	x12	TST	FIRE ABNORMAL ALARM	SEND GROUP 02
03	x13	TST	BILGE ALARM	SEND GROUP 03
04	x14	TST	BLACKOUT ALARM	SEND GROUP 04
05	x15	TST	AUX. GENERATOR ALARM	SEND GROUP 05
06	x16	TST	PROV. FREEZ. ALARM	SEND GROUP 06
07	x17	TST	OTHER ALARM	SEND GROUP 07
08	x18	TST	SPARE	SEND GROUP 08
09	x19	TST	SPARE	SEND GROUP 09
10	x20	TST	SPARE	SEND GROUP 10
VOICE				SEND VOICE AL

SMS ALIVE NOTIFICATION

SEND ALIVE SMS

SEND EVERY:
7 Day

AT TIME(UTC):
12:00:00

CURRENT TIME (UTC):
: : 0

RESET DAY COUNTER:

DAYS LEFT BEFORE NOTEFICATION: 0

VOICE ALARM DELAY
S: 0
Count: 0

NEXT PRI. DELAY
S: 300
Count: 0

No Data No Data No Data No Data

No Data No Data

SERVICE MODE FOR CHANGING PHONE NUMBER:

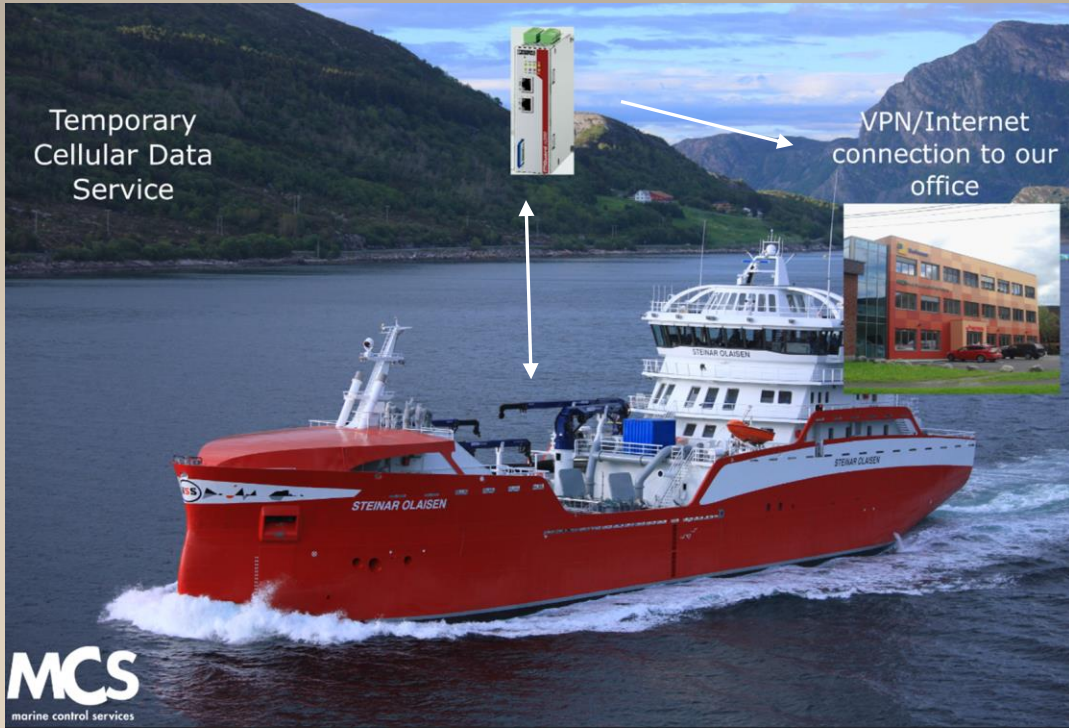
SERVICE MODE

Freshwater: No Data Fuel oil: No Data List: -0.06 * +PS -SB Draught AFT: No Data Draught FWD: No Data

ON DUTY FOR THE CHIEF ENGINEER

Evolution IAS – GSM Alert System





- Remote assistance permanently installed onboard
- Automation system can easily be updated, changed or maintained by the use of MCS remote assistance
- MCS service engineer makes use of the satellite system and communicates directly with the automation system onboard
- The Remote assistance system is designed to ensure safe and reliable access for maintenance and diagnostics of the Evolution IAS range of automation products

Saves time, travel and money

Very short response time

ON DUTY FOR THE CHIEF ENGINEER

Evolution IAS - Remote Assistance

MCS marine control services





On duty for the chief engineer!



- User friendly HMI
- State of the art technology
- The most robust I/O system there is
- Redundancy on all levels available
- **Best service, taking into account**
 - cost (initial and long term)
 - response time (Remote assistance)
 - long term availability of spare parts
 - experienced team of engineers

ON DUTY FOR THE CHIEF ENGINEER

Why Choose MCS Evolution IAS?

