

## TECHNICAL SPECIFICATIONS



PROJECT NAME – METEOR

PROJECT NUMBER – MY13030

## **CONTENTS**

VESSEL PARTICULARS:	4
CONSTRUCTION:	4
HULL CONSTRUCTION:	4
SUPERSTRUCTURE CONSTRUCTION:	4
TANK CONSTRUCTION:	4
TANK CAPACITIES:	4
DECK EQUIPMENT:	4
MACHINERY:	5
PROPULSION SYSTEM:	5
STEERING:	5
FUEL SYSTEM:	5
LUBE OIL SYSTEM:	5
SLUDGE SYSTEM:	5
FRESH WATER SYSTEM:	5
DIRTY WATER SYSTEM:	6
BILGE/FIRE SYSTEM:	6
RAW WATER COOLING SYSTEM:	6
SCUPPER SYSTEM:	6
DECK WASH SYSTEM:	6
FIXED FIRE FIGHTING SYSTEM:	6
HVAC SYSTEM:	6
ELECTRICAL SYSTEMS:	7
ELECTRONICS:	7
NAVIGATION/COMMUNICATION EQUIPMENT:	7
AUTOMATION, CONTROL & MONITORING SYSTEM:	8
1-1 FUEL OIL MONITORING & CONTROL:	8
1-2 FRESH WATER MONITORING & CONTROL:	8
1-3 BLACK WATER MONITORING & CONTROL;	8
1-4 GREY WATER MONITORING & CONTROL;	8
1-5 NAVIGATION/EXTERIOR LIGHTS MONITORING & CONTROL;	8
1-6 BILGE & FIRE SYSTEM MONITORING & CONTROL;	8

1-7 ENGINE ROOM PRESSURE/TEMPERATURE MONITORING; .....	8
1-8 ONBOARD BATTERY MONITORING; .....	9
1-9 AC VOLT MONITORING AND POWER MANAGEMENT; .....	9
1-10 ALARM STORAGE & ENGINEERING PAGE;.....	9
1-11 Porthole and watertight door monitoring; .....	9
1-12 Main engines; .....	9
1-13 AIR CONDITIONING CIRCULATION WATER MONITORING;.....	9
ENTERTAINMENT SYSTEMS:.....	9
INTERIORS: .....	1 □
TENDER & SPORTS EQUIPMENT: .....	1 □
PAINT SYSTEM: .....	1 □

## **VESSEL PARTICULARS:**

VESSEL TYPE – TWIN PROPELLER DISPLACEMENT MOTOR YACHT  
LAUNCH DATE – 31/03/2018

CLASS – RINA C HULL • MACH Y<sub>CH</sub>; UNRESTRICTED NAVIGATION, EFP,DMS  
MCA COMPLIANT

SHIPYARD – MURAL YACHTS

NAVAL ARCHITECTURE – MURAL YACHTS

EXTERIOR DESIGN – MURAL YACHTS

INTERIOR DESIGN – MURAL YACHTS

LOA – 46.34M, (150.89`)

LH – 45.99, (150.89`)

LWL – 44.65M, (146.49`)

BMAX – 8.95M, (29.36`)

DRAFT – 2.75M, (9.02`)

DEPTH – 4.50M, (14.76`)

DISPLACEMENT (HALF LOAD) – 440MT

SPEED (MAX/CRUISING) – 16/12KTS

RANGE – 4800 NM @ 12KTS (APPROXIMATE)

NUMBER OF GUESTS -10

NUMBER OF CREW – 9

## **CONSTRUCTION:**

### **HULL CONSTRUCTION:**

SHELL – A GRADE STEEL

STRUCTURE – A GRADE STEEL

DECKS – TEAK ON TOP OF A GRADE STEEL

### **SUPERSTRUCTURE CONSTRUCTION:**

SHELL – ALUMINIUM 5083 H111

STRUCTURE – ALUMINIUM 5083 H111

DECKS – TEAK ON TOP OF ALUMINIUM

### **TANK CONSTRUCTION:**

FUEL OIL TANKS – A GRADE STEEL

FRESH WATER TANKS – A GRADE STEEL

GREY WATER TANKS - A GRADE STEEL COATED WITH INTERLINE

BLACK WATER TANKS - A GRADE STEEL COATED WITH INTERLINE

### **TANK CAPACITIES:**

FUEL OIL TANKS – 56081LTR (APPROXIMATE), 7 TANKS

LUBE OIL TANK – 782LTR (APPROXIMATE) 1 TANK

SLUDGE TANK – 1024LTR (APPROXIMATE) 1 TANK

FRESH WATER TANKS – 14813LTR (APPROXIMATE) 2 TANKS

GREY WATER TANKS – 12796LTR (APPROXIMATE) 2 TANKS

BLACK WATER TANKS – 11686LTR (APPROXIMATE) 2 TANKS

### **DECK EQUIPMENT:**

WINDLASS – 2 X DATA DZC 3300 HKR-20K, MAX CONTINUOUS PULL 3300KG

ANCHOR – 2 X 275KG HHP, POOL N ANCHOR

CHAIN - 17.5MM STUD LINK, 200M + 200M  
CAPSTAN - 2 X LOFRANS T4000  
BOLLARDS - 316L STAINLESS STEEL, CUSTOM MADE  
FAIRLEADS - 316L STAINLESS STEEL, CUSTOM MADE  
CLEATS - 316L STAINLESS STEEL, CUSTOM MADE  
STANCHIONS - 316L STAINLESS STEEL  
PORTLIGHTS - 16 X SCM OBLO T.S. 400MM WITH STORM SHUTTER & MICRO SWITCH  
WINDSHIELD WIPERS - 7 X SPEICHI HEAVY DUTY UNITS  
PASSARELLA - OPACMARE TRANSFORMER 3383.6 (6 STEPS) 5 50KG CAPACITY  
PANTOGRAPH DOOR - BOFOR CUSTOM  
SLIDING SALON DOOR - 2 X BOFOR CHROME/GLASS AUTOMATIC DOOR WITH BRAKE

#### **MACHINERY:**

##### **PROPELLION SYSTEM:**

ENGINES - CUMMINS KTA38-M2 1200BHP @ 1800 RPM  
GEARBOX - ZF W3355 (4:1) WITH TROLLING VALVE & TRAILING PUMP  
GAS THROTTLE - ZF 4 STATIONS, WHEELHOUSE + 2 WING STATIONS + ENGINE ROOM  
FLEXIBLE COUPLING - RUBBER DESIGN ERD 110SA  
THRUST BEARING - RUBBER DESIGN TB04  
PROPELLER SHAFT - AQUAMET, 120MM DIAMETER  
SHAFT SEAL - ELICHE RADICE  
STERNTUBE - STEEL OD 244MM  
SHAFT BEARINGS - NITRILE RUBBER BEARINGS  
SHAFT BRACKETS - STEEL V-BRACKET  
PROPELLERS - MIBRAL FIXED PITCH 63" DIAMETER SIP MARINE  
EXHAUST TYPE - WET EXHAUST WITH BYPASS SYSTEM  
EXHAUST HOSES - TRIDENT OR SCAMO  
SILENCERS - CENTEK GRP UNDERWATER MUFFLER & SEPERATORS FOR GENSETS

##### **STEERING:**

STEERING SYSTEM - MARSILI ELECTRO-HYDRAULIC SYSTEM  
RUDDER - 2 X STEEL SEMI SPADE RUDDERS  
BOW THRUSTER - TRAC 24", 125HP HYDRAULIC SYSTEM  
STABILIZER - TRAC 370 ZERO SPEED 4 WINGLETS  
ELECTRIC MOTOR - 15KW AC MOTOR TO DRIVE PTO WHEN ENGINE IS NOT RUNNING

##### **FUEL SYSTEM:**

FUEL TRANSFER - GIANNESCHI ACB 331/B B 230/400V 50Hz T 1,5kW  
FUEL FILTER - SEPAR  
PIPING/VALVE MATERIAL - 304 STAINLESS STEEL  
VALVES - ELECTRONIC VALVES IN TRANSFER SYSTEM  
FUEL FILTRATION - ALFA LAVAL MIB303 230V 50Hz

##### **LUBE OIL SYSTEM:**

LUBE OIL PUMP - GIANNESCHI FQ 15 230/400V, 50Hz WITH 2 INLET + 7 OUTLETS

##### **SLUDGE SYSTEM:**

TRANSFER PUMP - GIANNESCHI FQ 15 230/400V, 50Hz WITH 2 INLET + 7 OUTLETS

##### **FRESH WATER SYSTEM:**

HYDROPHORE - GIANNESCHI 2 JET 518 B EL/PUMPS C.E. 24V + 230/400V 50Hz  
WATER MAKER - 2 X HRO HORIZON SEAFARI 1800-2, 284LTR/HR, 380V, 2.3kW  
BOILER - 2 X GIANNESCHI BOILER 200 LT 230/400V T 3+3kW INOX  
HOT WATER CIRCULATION PUMP - GIANNESCHI Z30 TOP1801-1/4" 230/400V T 50Hz  
PIPING/VALVE MATERIAL - PPP-R

**DIRTY WATER SYSTEM:****MACERATOR PUMPS:**

BLACK WATER – GIANNESCHI BMA-S 32/125A1 V230/400 3PH 50HZ

GREY WATER – GIANNESCHI MVI80 230/400V TR. 50HZ 1.5kW

TANK WASH PUMP – GIANNESCHI ACB 331/B B 230/400V 50HZ T 1,5kW

SEWAGE TREATMENT – HAMANN HLCP Ø2 SLIM 5200LTR/DAY 380V, 3kW

MULTIPHASE PUMP – HAMANN 1.5kW

SLUDGE PUMP – HAMANN 0.75kW

EFFLUENT PUMP – 0.75kW

TOILETS – 11 X TECMA BREEZE, SOFT CLOSE, 230V 0.7kW

PIPING/VALVE MATERIAL – PVC GIRPI

**BILGE/FIRE SYSTEM:**

BILGE PUMP – GIANNESCHI ACB 631/B 400/690V 3PH 50Hz 9,2kW 1450RPM

FIRE PUMP - GIANNESCHI ACB 631/B 400/690V 3PH 50Hz 9,2kW 1450RPM

EMG. FIRE PUMP – V2XRD DIESEL PUMP 3kW

AUTOMATIC BILGE PUMPS – RULE

PIPING/VALVE MATERIAL – UNDERWATER CUNIFE, ELSEWHERE 316 STAINLESS STEEL

VALVES – ELECTRONIC VALVES IN BILGE SYSTEM

**RAW WATER COOLING SYSTEM:**

PIPING – CUNIFE

**SCUPPER SYSTEM:**

PIPING – 316L STAINLESS STEEL DN65 SCH80

**DECK WASH SYSTEM:**

PUMP – GIANNESCHI WPS IDRO ECOJET 2 BB 230/400V T 50HZ

WATER PRESSURE PUMP WILL SUPPLY FRESH WATER AT SEVERAL OUTLETS

**FIXED FIRE FIGHTING SYSTEM:**

SYSTEM TYPE – ULTRAFOG (IN ENGINE ROOM AS WELL)

**HVAC SYSTEM:**

BRAND – CRUISAIR

CHILLER – 6 X TWC72ECK-DDC 380V, 72000BTU/HR, TOTAL 432000BTU/HR

COOLING 9A, HEATING 11.7A

**FANCOILS:**

GUEST CABIN 1 – AT12HVZ, 12000BTU/HR, 0.7A

GUEST CABIN 2 – AT12HVZ, 12000BTU/HR, 0.7A

GUEST CABIN 3 – AT12HVZ, 12000BTU/HR, 0.7A

GUEST CABIN 4 – AT12HVZ, 12000BTU/HR, 0.7A

CREW MESS – AT18HVZ, 18000BTU/HR, 1A

LAUNDRY – AT12HVZ, 12000BTU/HR, 0.7A

CREW 1 – AT9HVZ, 9000BTU/HR, 0.7A

CREW 2 – AT9HVZ, 9000BTU/HR, 0.7A

CREW 3 – AT9HVZ, 9000BTU/HR, 0.7A

CREW 4 – AT9HVZ, 9000BTU/HR, 0.7A

MASTER CABIN – 3 X AT18HVZ, 54000BTU/HR, 3A

GALLEY – 2 X AT18HVZ, 18000BTU/HR, 2A

MAIN SALOON – 4 X AT24HVZ, 96000BTU/HR, 4A

WHEELHOUSE – 2 X AT18HVZ, 18000BTU/HR, 2A

UPPER SALOON – 4 X AT18HVZ, 72000BTU/HR, 3A

CAPTAINS CABIN – AT12HVZ, 12000BTU/HR, 0.7A

FRESH AIR UNIT – 2 x AT24HVZ-1.5kW + AT36HVZ-FC-1.5kW 84000BTU/HR  
SEA WATER PUMP – 2 x P711380V  
CIRCULATION PUMP – P715 3HP  
DIGITAL CONTROLLER KIT – 23 x PLTX-HVSTAT  
ER FANS – 1 x GIANNESCHI ELL/AP 805/8/35° 230/400V 3PH 50Hz 5,5kW 1450 RPM WITH 24V FIRE DAMPER AND MIST ELIMINATOR AND 1 x GIANNESCHI ELL/AP 715/0-8/35° 230/400V 3PH 50Hz 3kW 1450 RPM WITH 24V FIRE DAMPER AND MIST ELIMINATOR  
LAZARETTE FANS – 2 x GIANNESCHI ELL 250/2 230/400V T WITH 24V FIRE DAMPER

### ELECTRICAL SYSTEMS:

ONBOARD ELECTRICITY – 380V, 230V, 24V, 12V  
GENERATORS – 2 x KOHLER, 80kW @ 1500RPM 3 PHASE  
NIGHT GENERATOR – 1 x KOHLER, 50kW @ 1500RPM 3 PHASE

#### BATTERIES:

ENGINE STARTER BATTERIES – 8 x MASTERVOLT AGM 160AH 24V  
GENERATOR STARTER BATTERIES – 4 x MASTERVOLT AGM 130AH 24V  
NIGHT GENERATOR STARTER BATTERIES – 2 x MASTERVOLT AGM 130AH 24V  
SERVICE BATTERIES – 4 x MASTERVOLT MVG 200AH 24V  
EMERGENCY BATTERIES – 4 x MASTERVOLT MVG 200AH 12V  
VHF BATTERIES – 4 x MASTERVOLT MVG 200AH 12V

#### CHARGERS:

ENGINE STARTER – 2 x MASTERVOLT MASS 24/50A 220V  
GENERATOR STARTER – 3 x MASTERVOLT MASS 24/25A 220V  
SERVICE – MASTERVOLT MASS 24/75A 220V  
EMERGENCY – MASTERVOLT MASS 24/75A 220V  
VHF – MASTERVOLT MASS 24/50A 220V  
FREQUENCY CONVERTOR – ATLAS 90 OR 90kVA SHORPOWER SPA  
CATHODIC PROTECTION – CATHELCO ICCP 20A MINITEK, CURRENT DENSITY 35MA/M2  
ANTIFOULING SYSTEM – CATHELCO ANTIFOULING SYSTEM

### ELECTRONICS:

#### NAVIGATION/COMMUNICATION EQUIPMENT:

##### NAV STATION:

WHEELHOUSE – SIMRAD ARGUS 19" APPROVED DISPLAY  
GPS – SIMRAD MX6XX  
Echosounder – SKIPPER GDS101  
SPEEDLOG – SKIPPER EML224  
AUTOPILOT SYSTEM – SIMRAD AP70 IMO S  
INMARSAT – SAILOR 6110 MINI-C GMDSS SYSTEM  
MF/HF – SAILOR 6000SERIES 150WDSC CLASS A  
PRINTER FOR GMDSS – SAILOR H1252B/TT-3608A  
ALARM PANEL – SAILOR 6101

##### VHF DSC:

WHEELHOUSE – SAILOR 6000 SERIES CLASS A  
HANDHELD – 3 x SIMRAD AXIS50 GMDSS APPROVED  
WEATHER STATION – AIRMAR 150WX  
LOUDHAILER – SIMRAD  
WATCH ALARM SYSTEM – RAYTHEON BNWAS  
AIS – SIMRAD MX535 CLASS A  
SART – 2 x SIMRAD SA70 SART

EPIRB – SIMRAD EG70 AUTO GPS EPIRB  
RADAR 1 – SIMRAD ARGUS 12U6XP 12KW  
RADAR 2 – SIMRAD BROADBAND 4G RADAR CLOSED DOME  
NAVTEX – JRC NCR333  
OVERHEAD MAGNETIC COMPASS – CASSEN & PLATH TYPE 21  
GYRO COMPASS – SIMRAD GC80 EXP  
GYRO REPEATER ANALOGUE – SIMRAD HR80  
GYRO REPEATER DIGITAL – SIMRAD DR76  
CCTV SYSTEM – 1 X CAMERA IN ER 1 LOOKING AFT (CABLING READY FOR MORE CAMERAS)  
INTERCOM SYSTEM – ZENITEL ETB-5 PACK

#### **AUTOMATION, CONTROL & MONITORING SYSTEM:**

##### **1-1 FUEL OIL MONITORING & CONTROL:**

FUEL OIL TANK LEVEL MONITORING VIA BARGRAPH AND NUMERIC DISPLAY  
FUEL OIL TANK LOW LEVEL & HIGH LEVEL ALARMS, AUDIO & GRAPHIC ALARMS  
ALARMS TO BE LOGGED IN THE SYSTEM  
CONTROL OF FUEL OIL TRANSFER PUMP FUEL FILTRATION SYSTEM AND VALVES

##### **1-2 FRESH WATER MONITORING & CONTROL:**

FRESH WATER TANK LEVEL MONITORING VIA BARGRAPH AND NUMERIC DISPLAY  
FRESH WATER TANK LOW LEVEL & HIGH LEVEL ALARMS, AUDIO & GRAPHIC ALARMS  
ALARMS TO BE LOGGED IN THE SYSTEM  
MONITORING OF WATER PRESSURE PUMP AND SYSTEM PRESSURE

##### **1-3 BLACK WATER MONITORING & CONTROL;**

BLACK WATER TANK LEVEL MONITORING VIA BARGRAPH AND NUMERIC DISPLAY  
BLACK WATER TANK HIGH LEVEL ALARM, AUDIO & GRAPHIC ALARMS  
MACERATOR PUMP TO BE STOPPED WHEN TANK LEVEL IS LOW  
CONTROL OF VALVES TO DIRECT BLACK WATER OVERBOARD OR TO HAMANN SYSTEM  
CONTROL OF MACERATOR PUMP  
ALARMS TO BE LOGGED IN THE SYSTEM

##### **1-4 GREY WATER MONITORING & CONTROL;**

GREY WATER TANK LEVEL MONITORING VIA BARGRAPH AND NUMERIC DISPLAY  
GREY WATER TANK HIGH LEVEL ALARM, AUDIO & GRAPHIC ALARMS  
MACERATOR PUMP TO BE STOPPED WHEN TANK LEVEL IS LOW  
CONTROL OF VALVES TO DIRECT BLACK WATER OVERBOARD OR TO HAMANN SYSTEM  
CONTROL OF MACERATOR PUMP  
ALARMS TO BE LOGGED IN THE SYSTEM

##### **1-5 NAVIGATION/EXTERIOR LIGHTS MONITORING & CONTROL;**

NON FUNCTIONING NAVIGATION LIGHTS TO BE SHOWN ON DISPLAY  
ALARMS OF NAVIGATION LIGHTS TO BE LOGGED IN SYSTEM

##### **1-6 BILGE & FIRE SYSTEM MONITORING & CONTROL;**

CONTROL OF BILGE & FIRE PUMP  
BILGE LOW LEVEL AND HIGH LEVEL ALARMS FOR ALL COMPARTMENTS  
CONTROL OF ELECTRONIC VALVES  
ALARMS TO BE LOGGED IN SYSTEM

##### **1-7 ENGINE ROOM PRESSURE/TEMPERATURE MONITORING;**

ENGINE ROOM PRESSURE & TEMPERATURE MONITORING

HIGH TEMPERATURE ALARM  
LOW PRESSURE ALARM

**1-8 ONBOARD BATTERY MONITORING;**

ALL BATTERY GROUPS VOLTAGE MONITORING, HIGH & LOW LEVEL VOLTAGE ALARM  
ALL BATTERY GROUPS CHARGE AMP MONITORING AND HIGH AMP ALARM  
ALL BATTERY GROUPS DISCHARGE MONITORING HIGH & LOW VOLTAGE ALARM  
SERVICE BATTERY LIFE AT CURRENT AH USAGE TO BE SHOWN  
ALARM TO BE LOGGED IN SYSTEM

**1-9 AC VOLT MONITORING AND POWER MANAGEMENT;**

GEN 1 ON LINE  
GEN 1 OFF LINE  
GEN 2 ON LINE  
GEN 2 ON LINE  
GEN 3 OFF LINE  
GEN 3 OFF LINE  
SHORE POWER ON LINE  
SHORE POWER OFF LINE

**1-10 ALARM STORAGE & ENGINEERING PAGE;**

ALL ALARM WARNINGS TO BE STORED FOR FUTURE RETRIEVAL

**1-11 Porthole and watertight door monitoring;**

16 Portholes with micro switch to be monitored open/closed position  
All watertight doors&hatches to be monitored open/closed position

**1-12 Main engines;**

Exhaust pressure/temperature monitoring bargraph and numerical display  
Exhaust high pressure/temperature alarm  
Alarms to be logged in system

**1-13 Air conditioning circulation water monitoring;**

Circulation water temperature & pressure monitoring  
Low/high temperature alarm  
Low high pressure alarm  
Alarm to be logged in system

Automation panels to be placed in wheelhouse (24"), Captains cabin (12"),  
crew mess (12"), engine room on PLC panel (15")

**ENTERTAINMENT SYSTEMS:**

SATELLITE TV ANTENNA – INTELLIAN I9W  
INTERNET ANTENNA – INTELLIAN VSAT V80G  
TV's:

OWNERS CABIN – 32" (CEILING LIFT)  
GUEST CABIN 1 – 32" (CEILING LIFT)  
GUEST CABIN 2 – 32" (CEILING LIFT)  
GUEST CABIN 3 – 32" (CEILING LIFT)  
GUEST CABIN 4 – 32" (CEILING LIFT)  
CREW MESS – 32" (FIXED)  
UPPER SALOON – 75" (FIXED)  
SUN DECK – 65" (CEILING LIFT)

DECODERS – 10 x NEXT HD SATELLITE RECEIVER

**INTERIORS:**

FLOORS – TEAK PARQUE, COVERED IN TEAK OIL & CARPET  
CEILINGS – WHITE LACQUER  
WALLS – VENEER VARNISH, LACQUER AND FABRIC  
FURNITURE – VENEER & LACQUER  
TRIM – TEAK  
BATHROOM COUNTERS – NEOLITH  
BATHROOM SHOWERS – NEOLITH  
LIGHTING – BCM LED LIGHTING 230V  
FRIDGE – 2 X SUB ZERO  
DEEP FREEZE – 2 X LIEBHERR  
MICROWAVE – WOLF  
OVEN – 1 X WOLF + 1 X RATIONAL  
STOVE – 2 X WOLF  
ASPIRATOR – CUSTOM  
DISHWASHER – 2 X MIELE  
WASHING MACHINE – 2 X MIELE  
DRYER – 2 X MIELE

**TENDER & SPORTS EQUIPMENT:**

TENDER – 1 X 5.2M NORTHSTAR 90HP OUTBOARD  
SUN DECK CRANE – SANGUINETI 1500KG CAPACITY

**PAINT SYSTEM:**

HULL – INTERNATIONAL PERFECTION SYSTEM  
SUPERSTRUCTURE – INTERNATIONAL PERFECTION SYSTEM  
ANTI FOULING – INTERNATIONAL MICRON 77