GAMAYUN

Type	: Super Challenger
Builder	: Versilcraft, Italy
Built	: 1998
Registry	: Hong Kong license
Official Nos	: 34376
Classification	: Built to BV (lapsed)
Weight	: MT
GT / RT	: 112 /51 0/100
Displacement	: Est 112MT
Construction	: Solid GRP
LOA	: 32.9m
Beam	: 7.0m
Draft	: 1.65m
Water	: 1 x stainless steel tank 2700 litres
Fuel	: 4 x steel tanks total 19,760 litres
Sewage tank	: 8 x GRP tanks for black and grey 2,680 litres
Engines	: 2 x 1850shp MWM Deutz TBD616-V16 (1135kW @2165rpm) with ZF BW255AP hydraulic gearboxes (ratio 2.535:1) and conventional shaft and drip proof oil lubricated stem gland driving 4 bladed propellers.
Generator	: 2 x Kohler 50CFOZ 63kVA Marine genset
Bow thruster	: Hydromarine reversible hydraulic
Stabilisers	: Hydromarine
Water maker	: Reverse osmosis Idromar.
Cranes	:1 x MorSaverio 1200kg on flybridge and 1 Mor Saverio 350 kg on foredeck

1.3 PROPULSION DETAILS:

Engine :2 x MWM Deutz TBD616-V16 1850shp @ 2400rpm. V 16 cylinder, 4 stroke, direct injected marine diesel engine with turbocharger and aftercooler.

Running hours : Port 998 Stbd 1089 (from ER engine control panel)

Gearbox : ZF hydraulic actuated Model BW255AP with ratio 2.535:1 minimum oil pressure 15.5bar and each with power take off hydraulic pump for bow thruster and stabilizer fins.

Transmission : 2 x 100mm stainless steel shafts with rigid coupling to gearbox and oil cooled and lubricated shaft seal. Each shaft is supported externally by two "I" brackets with cutlass bearings.

Propeller : 2 x 4 bladed NiAlBr propellers, Port LH, Stbd RH Pitch and diameter not found on propeller. Propellers are thin section high efficiency units possibly ISO O grade.

Controls : Two sets dual lever Mannesmann Rexroth pneumatic controls mounted on flybridge console and wheelhouse.

1.4 ELECTRICAL POWER GENERATION

Generator : Kohler 63kVA 4 cylinder naturally aspirated fresh water cooled diesel generator mounted with acoustic hood within machinery space.

Output :380V 63kVA 50Hz three phase

Running hours: Port 2956 hrs Stbd 2616 hrs

24V DC : Both main engines have single 24Vdc 125Ahr (?) alternators. Generators have 12Vdc, 30Ahr alternator.

Battery charger: 2 automatic voltage stabilizers rating unknown.

Shore power : 60kVA shore transformer with variable input and 380V output.

2 GENERAL DESCRIPTION & FINDINGS

2.1 Access and limitations of survey

2.1.1 The vessel underwater area was inspected by diving.

2.1.2 Internally access for inspection of bilge structures was gained in the machinery space, lazerette, crew accommodation and aft guest cabins.

2.1.3 No other fixed paneling was removed.

2.1.4 Machinery was run as detailed in the sea trail section.

2.2 Topsides

2.2.1 The yacht has white gel coat topsides with a dark blue stripe above the waterline. The gel coat is generally in fair condition with a good shine. Some discolouration of the gelcoat is noted particularly in way of the starboard quarter; further discolouration may be observed in sun light conditions. Minor nicks and scratches consistent with a vessel of this age were noted and could be repaired. The topsides were observed to be flat with no obvious warping. The dark stripe has been market with the position of the stabilizer fins.

2.2.2 The topsides feature a chine commencing at the bow above water line and running aft parallel to and approximately 30cm below the waterline. The chine was found to be smooth and straight.

2.2.3 An integral GRP swim platform is provided and is fitted with a stainless steel 4 rung boarding ladder stowed within the platform and extended by remote electrical control. Separate handrails are provided that are secured alongside the steps; all parts are in good condition. The transom bulwark centre part opens with dual hydraulic struts to provide access to the lazerette and engine room; the hatch opening is smooth and even. The teak laid swim platform was found to be in good condition with no repairs evident.

2.2.4 Two curved stairs provide access from the swim platform to the aft deck. The steps are provided with teak none slip treads and are in good condition. The hull to deck joint is capped by a well finished good condition teak cap rail. A two part paserelle boarding ladder is stowed behind the upper step starboard side and is hydraulically extended when required. Handrails are stowed separately in the forward hatch. The unit appears to have had little use and operated smoothly.

2.2.5 There are 5 opening oval ports and two opening round ports fitted in the topsides. Each side providing additional ventilation and light to the accommodation. The ports are stainless steel framed with toughened glass; no leakage was observed and seal rubbers appear soft and effective at sealing. Each port is provided with an in situ stainless steel deadlight.

2.2.6 Large air intakes and exhausts are provided for the machinery space and appear to have effective spray eliminators and flaps.

2.2.7 A number of above water line through hull fittings are fitted; all were visually inspected and found in good order with no detectable movement.

2.2.8 The main engine low power exhausts and generator exhaust outlets are moulded into the hull in way of the machinery space above the waterline and are in good order. A grp hull extrusion is provided to partially cowl the exhausts down towards the sea and reduce staining of the topsides.

2.2.10 A large, well made and fitted stainless steel protection plate is provided on the bow to prevent anchor damage. The plate extends some 300mm below the waterline. No anchor chain damage was observed on the bow. Anchors are stowed in the partially recessed hawse and appear secure. The anchor locksre drain port and starboard side through a slit drain; no staining was evident.

2.3 Underwater areas inc through hulls

2.3.1 Underwater through hull fittings were inspected during the dive and found in order. During internal inspection all through hull valves were open and closed and found to operate freely, no leaks were evident. We were advised that the main engine and generator seawater butterfly type sea valves have been renewed in February 2007

2.3.2 In addition the echo sounder and speed transducer penetrate the bottom on the port side forward; these were carefully inspected and found in good order.

2.3.3 Two small stainless steel spade rudders are fitted aft of the propellers. The blades are straight and true. Rudder bearing clearances appear to be acceptable with detectable movement being less than 1mm. No cavitation damage was found on the rudders; however the anti fouling has been eroded from the blades over much of the lower part. Anodes are securely mounted to the blade upper flange and are in good condition.

2.3.4 The rudders and trim tabs appear electrically bonded to the shaft "I" brackets and anodes. Anodes are provided on the transom, trim tabs, propellers, rudders and bow thruster. All anodes were noted to be almost new with adequate remaining life with the exception of the bow thruster anode which requires replacement at the earliest opportunity.

2.3.5 Two, apparently Nibral, four bladed propellers of unknown manufacturer but obviously high quality type ISO grade 0 or 1 are fitted; neither propeller had the diameter or pitch visible. Propeller overhang from the aft bearing is reasonable at approximately 30mm and hull to propeller tip clearance is approximately 10% of blade diameter which will minimise hull vibrations. The propellers were inspected still coated with a hard calcium scale but appear in good order with no obvious cavitation or tip damage; the propellers should be cleaned and maintained free of growth for maximum efficiency. The propeller is keyed to the shaft. A ring type anode is attached to the aft boss of each propeller and these appear virtually new. Propeller nut retaining split pins are in place.

2.3.6 Both of the 100mm diameter stainless steel propeller shafts are supported by two recessed flange, through bolted, "I" brackets. All cutlass bearings are well within acceptable limits with little measurable wear. The water inlet to each bearing is clear. The brackets are recessed into the hull with no evidence of movement observed. Both shafts are lightly encrusted with a calcium deposit and should be cleaned and polished.

2.3.7 Main engine high power exhaust is through the hull bottom slightly outboard and well forward of the shafts. The moulded outlet includes an aft "eyebrow". The moulding showed no evidence of movement or overheating either externally or internally. The moulding extends into the engine room to approximately the normal at rest waterline.

2.3.7 The yachts bow thruster is tunnel mounted forward. This is a direct reversing hydraulic unit; it appears of adequate power and functioned well leaving and returning to the berth. The blades are clean and with adequate tip clearance. The zinc anode is fully depleted and should be replaced at the earliest opportunity.

2.3.8 The yachts bottom was found clean of all but a very light slime. No collision or grounding damage or unevenness was observed. The keel is straight and true. The existing anti fouling is in good condition. Minor growth was observed in two patches on the keel, probably where the vessel rested on the blocks during the last refit.

2.3.9 No blistering was observed under water.

2.3.10 Two large stainless steel trim tabs are fitted; each operated by a dual oil hydraulic pistons. The actuators are easily accessed and function correctly. Flap position is provided at the wheelhouse position but can be operated from both helm stations. Anodes are fitted to the tabs and are in new condition.

2.4 Deck

2.4.1 The main deck consists of the aft deck with access to the saloon, side decks with access to the flybridge and the foredeck.

2.4.2 All decks are teak laid with any fasteners concealed and wooden screw plugs not used. The teak and sealant is in excellent condition with no excessive grain relief evident. All decks were firm to walk on with no observed "bounce".

2.4.3 The side decks are wide enough to be comfortable and well protected by a high bulwark capped with well varnished teak rail and high polish stainless steel guard rail/ hand hold. Large bulwark mounted mooring cleats are well designed and protected to ensure they do not hook up persons walking by.

2.4.4 Tank filling connections are provided in small recessed lockers set into the superstructure. The arrangement appears satisfactory although there is no spill collection area.

2.4.5 The side decks step up to the foredeck; at this point the stainless steel tube type guard rail height is increased to maintain the feeling of security. Two large fender stowage features are provided as part of the guard rails. The rails fully enclose the bow and mount the foremast with anchor light. All railing was found to be securely fixed with no evidence of movement.

2.4.6 Side decks are covered by the full width flybridge deck above. Drainage is provided along the side deck and functioned well in the heavy rain experienced during the inspection.

2.4.7 The foredeck houses two jet ski's securely fitted to teak wood cradles. The jetski's are hoisted by the single Mor Saverio 350kg SWL 24Vdc crane. The crane is well secured and during operation no deflection in the foredeck was noted. There is no recent test report for the crane. The crane is operated by a removable handheld control normally kept under cover.

2.4.8 Two stainless steel recessed trays carry the two vertical Lofrans 24Vdc windlasses. The anchor chain self stows to the split chain locker immediately under. The tray ensures that dirt from the anchor chain can be washed overboard without flowing aft. Both anchors have a well made snubber fitted. During anchor testing the deck was noted to vibrate but no more than is usual. The anchor winch brake was tested against a slow pull astern for both anchors and held well; both brakes readily released after testing.

2.4.9 The windlass also mount the vertical warping drums for mooring operations. Large diameter bullseye type fairleads and well mounted mooring cleats are provided for the mooring lines. These cleats are through bolted and are firmly attached with no evidence of movement.

2.4.10 The anchors self stow in the near vertical stainless steel hawse pipe. The hawse pipe is fitted with a large bore solenoid operated wash water connection. In addition a deck fresh water hose is provided at the bow; water pressure was very good.

2.4.11 Foot lighting is provided for night operations. The Tannoy talk back system worked well with communication with the bridge being clearly understood.

2.4.12 The chain lockers are accessed from a hinged teak finished hatch forward of the windlasses. The hatch is well dimensioned giving good access to the locker which also houses a fire hydrant and hose.

2.4.13 The sloping coach roof terminates at the foredeck in a pair of double sofa seats either side of a very large hydraulically operated aft hinged hatch. The hatch opened smoothly and the hold space is used to contain all the deck and swimming gear.

2.4.14 The sloping area above the hatch is gelcoat finished and provided with mattresses as a sunbathing area.

2.4.15 The coach roof outboard of the hatch provides several smaller deep lockers used for mooring lines and one for the yachts gas bottle storage. The gas bottle system does not comply with normal safety requirements for a yacht of this size and should be reviewed.

2.4.16 The port side deck has a recessed access to the flybridge outside stairs and also is slightly restricted when the galley watertight side door is opened. Boat hooks are mounted under the cap rail on port and starboard side decks. The securing arrangement is adequate for good conditions.

2.4.17 The aft deck has been provided with rattan type furniture and is a comfortable seating area. The aft part of the flybridge deck extends over the deck to give a reasonable dry area even in heavy rain. The deck is accessed from the swim platform by two attractively curved steps.

2.4.18 The centre portion of the transom and part of the deck open hydraulically as a single hinged unit to give access from the swim platform to the lazerette. The hatch closes on a rubber seal and is provided with a gutter drain. When in the closed position it is located by two short fixed pins. No safety securing devise is provided.

2.4.19 The aft deck access the saloon via an unusual half round glass double sliding door. The door opened smoothly and is held safely in position when open.

2.4.20 The stainless steel tube guard rail and high bulwark on the side decks are extended around the aft deck with simple stainless steel gates being provided to the swim platform.

2.4.21 Vertical Lofrans 24Vdc capstans are provided outboard of the gates with good lead from aft and quarter leads. The capstans and cleats mount below a hinged quarter capping arrangement and are normally well concealed. All mooring gear worked efficiently while docking ad undocking. Aft deck Tannoy talk back worked well and voices could be clearly heard n both directions.

2.4.22 A cctv camera is provided to monitor the aft deck from the wheelhouse; the picture was very clear. A hot and cold fresh water shower is provided at the top of the swim platform steps to starboard.

2.5 Flybridge

2.5.1 The yachts flybridge is a very large area devided aft by the Targa into tender stowage with crane, a central guest entertainment area and the helm station forwad.

2.5.2 The fly bridge features a comfortable helm and navigators sofa and a guest seating area for approximately 20.

2.5.3 Access to the flybridge is from port side deck via open stairs or from the wheelhouse via a acrylic motorized sliding curved hatchway. Both access provide good footing and are well provided with sturdy grab rails.

2.5.4 The flybridge deck is none slip moulded gelcoat with some none slip painted areas. The deck finish is good, being clean and unstained. A large soft patch is provided aft of the Targa to enable engines to be readily removed. The soft patch is delineated by a teak wood trim.

2.5.5 The helm station is well equipped for daylight operation in good weather conditions; there is no radar or chart plotter to hand but most other controls and instrumentation are duplicated. The helmsman has excellent all round visibility however he cannot see the stem when docking and is reliant on the crew. Instruments are well protected under a clear acrlic sliding screen and is also fitted with a white cover when not in use. The magnetic compass is not protected and requires renewal due to ultra violet degradation. The helm position is comfortable and weather protected by the forward acrylic screen and a Sunbrella bimini (not rigged at time of inspection). The bimini will be rigged on a folding stainless steel frame which appears well made and substantial.

2.5.6 The Targa mounts the yachts antenna including radar, Nera, GPS and navigation lights. The mast mounting is securely fatsened and no vibration was felt in this structure when at full power. VHF and SSB whip antenna are mounted outboard of the Targa and can be readily accessed. The radar antenna appears to be sufficiently high above the helm position to present no microwave safety issue.

2.5.7 The Targa also provides an aft edge to the passenger area awning system which is again a white Sunbrella type canvas cover on folding stainless steel frame. This awning is in fair condition and leaks when wet.

2.5.8 All flybridge furniture is fixed white grp mouldings. Seat covers are in reasonable condition. An out-door cooking facility is provided and mounts sink with hot and cold water, barbeque and undercounter fridge. All equipment is functional although minor repair to the cabinet door was required.

2.5.9 Aft of the Targa is a 1200kg SWL electric Mor Saverio electric crane used to handle the two tenders. The crane operated well and no movement of the deck was noted during lifting of one boat. There does not appear to be a recent test certificate for the cranes.

2.5.10 The two Zodiac tenders are well secured to the aft part of the flybridge on teak stands with substantial tie downs. There is no protective rail aft of the tenders. A central simple stainless steel mast carries the stern lights.

2.5.11 The sides of the flybridge are well protected by high sides and fitted with stainless steel frames windscreen. The screen is in fair condition and well secured.

2.6 Internal structures & outfit

CHOO CHOO has a very spacious accommodation arrangement with main deck being used for the very large saloon, lounge area and dining area with guest cloakroom and galley forward.

Saloon areas are separated by screens and or furniture and the galley can be closed of by a door. Access to the crew accommodation is from the galley, and guest cabins from the saloon via two sets of stairs.

No emergency escapes routes are provided from the lower deck. A fire detection system is provided through-out the vessel to warn of any serious fire situation.

The vessel is fully air conditioned with individual fan coil units feed from a central chilled water circulation system.

2.6.1 Saloon/Dining Area

The saloon consists of two areas; the aft saloon accessed from the aft deck at the same level via a large tempered glass sliding door and the lounge area which is in turn separated from the dining area by a finely finished partition furniture with art work feature.

The floor is a mixture of inlaid granites, high quality teak woods and carpet. All is in good condition.

The headlining is a leatherette type off white lining with a large number of halogen down lighters. The lining is reported to have been recently renewed and is in good condition throughout the yacht.

Soft furnishing, seats covers, curtains and other items are in good order. The teak and other wood furniture is in good condition with no significant damage observed.

The lounge table is motorized with adjustable height and variable width and length; this operated well. Seating is provided for at least 10 around this table. The table leg appears to house the air conditioning outlet.

There is a considerable amount of valuable art work on the vessel; mainly in the lounge, what is to remain is unknown.

Good quality TV and entertainment systems are provided in the lounge area.

Stowage is reasonable within this area.

2.6.2 Galley

The galley is located portside forward of the saloon and guest cloakroom. The square galley features a central work top, large work surfaces and a full wall of various storage spaces, fridges and laundry equipment.

The galley deck is teak wood finished. The deck head is well made, white painted paneling with well laid out lighting.

The double sink is set into the corner with a single lever tap, water pressure and drainage is good. The green granite work surface and sinks are in good condition.

All electrical equipment is functional and consists of:

Vertical fridge and freezer
Candy undercounter dishwasher
AEG washing machine
AEG electric oven
Tumble drier – condensing type
Classic compactor
Goodway microwave
Sharp TV and music centre
Extract hood
Lavazza coffee machine

The galley has crew entrance from the port side deck via a parallelogram hinged lever single watertight door. This door swings open flush against the accommodation when opened but does intrude into the side deck area. No leaks were found in way of the door seals and the hinges performed well with no measurable droop.

Access to the crew accommodation is via a spiral stair case at the forward part of the galley.

2.6.3 Crew Accommodation

The crew accommodation consists of three cabins for a total of 4 berths; all are ensuite and of unusual shape due to the position in the bow. The starboard forward cabin bathroom is forward of the collision bulkhead and is accessed via a watertight door. The door and seals are in good order. It was not possible to determine if the collision bulkhead is breached in other positions.

The condition is fair and in line with that to be expected in a vessel of this age.

All w/c and water supplies operated correctly.

Cabins have round ports provided with stainless steel deadlights.

Each cabin has a limited amount of storage space and an installed sound system.

The crew lobby area is carpeted and this was lifted to give access to the forward bilge and bow thruster compartment. Structures in this area were closely inspected and no damages or evidence of problems were noted. The hydraulic connections for the bow thruster are in good order and no oil leaks found.

The bow thruster bilge is provided with a Rule 2000 submersible pump with float switch and float switch high level alarm. These tested satisfactorily.

Two toilet pumps and several small tanks (see tank plan attachment 1) are located in this space but require the accommodation screwed ply deck to be removed for access.

2.6.4 Owners accommodation

Owners accommodation is accessed from forward of the cloakroom down a very well finished set of steps to a lobby, Owners suite is aft and a second guest suite is forward.

Guest accommodation is accessed via separate well finished teak curved stairs from the saloon leading to a small lobby with one double cabin and one with twin beds; all ensuite.

Stairs are well provided with handrails and carpeted steps are firm and easy to use. Halogen step lights are provided and look well executed.

Ventilation is good and no mildew was observed in any area. The bilge areas were not inspected due to the fuel tank location.

Master Cabin

The master cabin is very well executed with a centrally placed king size bed in the full width room. A narrow but very well equipped bathroom and toilet facility is provided to starboard. Within the room a desk, two walk in wardrobes, and a dressing table are provided from high quality teak and other veneer woods.

The under sole space is fully occupied by the main fuel tanks.

The carpets are in very good condition and the bathroom teak timber flooring is excellent. The room is well air-conditioned and very well lit with well placed halogen lights.

Two opening oval ports are provided in the room with further ports in the bathroom. The port side forward port was noted to be leaking and the seals require attention before the fine wood finish is damaged.

The port wardrobe house the Owners safe.

The room has been fitted with an extensive entertainment system including TV, CD and DVD player and radio, this functioned well.

The off white leatherette headlining is in good condition.

The ensuite w/c includes a large shower access to a full size bath tub Jacuzzi, twin sinks and w/c with bidet. All equipment worked well and is of very good appearance and cleanliness.

Water pressure is good and drainage of the shower floor is good.

Guest cabin

The guest cabin is also a full width cabin but is reduced forward due to the yachts bow shape. The king size bed is well placed and adequate dressing area and wardrobes are provided.

The bathroom is simpler with single wash basin, toilet and shower. Water pressure is good and the toilet vacuum flush was in order.

A TV and CD player are provided and these operated well.

Aft guest accommodation

The more simple but still well finished ensuite aft guest accommodation consists of two cabins, port a double and starboard a twin single bed arrangement.

Cabins are in good condition with all equipment including lights and air conditioning functioning well.

Toilets flushed readily and water supply and drainage was good.

Lighting levels is good.

Access to the stabilizer actuators is made below the starboard single bed and in the port side bedside locker in the double cabin. Limited access to the bilge is possible, however all appeared in order.

Although these cabins are adjacent to the engine room the engine noise even at full power was not excessive.

3. NAVIGATION & CONTROL EQUIPMENT

3.1 Wheelhouse

The wheelhouse is accessed from the main deck via three steps. The forward and side view is excellent through large sloped windscreen and large side windows. The windscreens are provided with wipers and washers all of which worked well during sea trials. No leaks were found on the window seals.

The following equipment is provided and was operated satisfactorily except as stated:

Taiyo Fax TF 721 weather fax
Autohelm Nav plotter – not functioning
Raymarine RC 435 chartplotter
JRC Raster scan radar JMA-2254
JRC radar JMA 3810
AP3003 autopilot
Autohelm sounder
Autohelm speed
Autohelm wind
Galaxy magnetic compass 4" – fluid cloudy & no recent deviation card
LCD switched from navigators table with Tsumani 99 charts

Raytheon Ray 430 Loudhailer
Sailor HF SSB RE 2100
Sailor DSC watch receiver
Shipmate RS8300 radio phone
NERA phone

Steering wheel and well padded adjustable helm chair
Rexroth Hydromarine stabilizer fin control
CCTV – aft deck and engine room
Rayline remote operated searchlight
Wiper control
Hydromarine bow thruster control
Mannesmann Rexroth pneumatic engine control
Trim tab gauges
Rudder angle indication
Fuel tank level gauges
Sewage tank level control and indication
Engine cooling water temperatures, oil pressures engine and gearbox and rev indication.
Horn
Shore telephone.

Aft of the navigators sofa is the navigators table and seat. The computer located in this position prints to a printer located below the electrical panel. The well laid out electrical panel includes navigation light control and bilge alarms.

The access to the flybridge is via an electrically operated sliding hatch this worked smoothly and is rapid opening and closing.

Good stowage is provided for the main manuals carried for engine gearbox and generators

3.2 Flybridge

The following equipment is provided and was operated satisfactorily except as stated:

GPS Nav 398
AP3003 autopilot
Autohelm sounder
Autohelm speed
Autohelm wind
Galaxy magnetic compass 4" – fluid cloudy & no recent deviation card
Raytheon Ray 430 Loudhailer
Shipmate RS 8300 VHF
Windlass control and chain indicator – not functioning
Steering wheel and well padded adjustable helm chair
NFU steering joystick
Rexroth Hydromarine stabilizer fin control
Hydromarine bow thruster control
Mannesmann Rexroth pneumatic engine control
Trim tab gauges
Rudder angle indication
Engine cooling water temperatures, oil pressures engine and gearbox and rev indication.
Horn

MSES

4. SAFETY ITEMS

4.1 Anchors

Two approximately 250kg stockless Danforth type painted anchors are provided; they are kept stowed ready for action in the hawse pipes. The anchor is connected via a stainless steel swivel to a approximately 120m of 1/2" galvanized chain. Two vertical Lofrans 24Vdc windlasses with local control are provided and work well and the chain self stows.

4.1 Bilge pumping

Four automatic Rule 2000 bilge pumps are provided; the pump in the engine room failed to operate in automatic.

A large volume 220Vac electric bilge pump with separate compartment suctions is provided.

Both main engine sea suctions can be changed to draw from the engine room bilge as an emergency bilge system.

All bilges are provided with high level float switches. The system did not test satisfactorily. Once repaired will be a very effective means of monitoring the bilge condition.

All bilge pumps discharge overboard so the normal small amounts of oil must be kept out of the bilge.

4.2 Detection equipment

4.2.1 Radar reflector

No radar reflector is provided. The provision of an adequately sized (cross sectional area) radar reflector should be considered.

4.2.2 Navigation Lights

Navigation lights are adequate and were tested satisfactorily.

4.2.3 Sound signal

The horn tested satisfactorily.

4.2.4 Others

Providing shapes in accordance with International regulations should be considered.

4.3 Firefighting Equipment

4.3.1 Fire blanket

No fire blanket is provided in the galley area, this may be required by the insurance company underwriting the yacht.

4.3.2 Fire extinguishers

A comprehensive outfit of fire extinguishers is provided with almost every space including bedrooms having one or more extinguishers. All extinguishers bore inspection labels and are valid until Aug 2007.

4.3.3 Engine extinguishing system

A CO2 manual fire extinguisher is provided with three cylinders mounted in the lazerette and release from the starboard aft deck. The CO2 cylinders bore inspection labels and are valid until Aug 2007. Controls are provided to shut engine room inlet and exhaust dampers but these were not tested as crew were unfamiliar with the system. The dampers appear not to have been recently tested and may not operate correctly and we recommend this be rectified.

4.3.4 Fire detection system

A fire detection system is installed with controller and alarm in the wheelhouse and detector heads in all spaces.

4.2.5 Fire hydrant system

A small 220V ac driven fire sea water pump is provided in the engine room adjacent to the bilge pump. Hydrants and hoses with nozzles are provided in the lazerette and chain locker.

4.3 First aid kit

A first aid kit was noted.

4.4 Lifejackets

Sufficient buoyancy aids are onboard and appear in good order. No children's life jackets are on board.

4.5 Man over board recovery equipment

Two lifebuoys are carried both mounted on the flybridge a MOB light is provided on each buoy.

A four rung stainless steel ladder is electrically extended from its stowage in the swim platform and hinged to assist recovery from the water.

4.6 Navigational equipment

5 Charts and documents

Up to date charts and tide tables are not on board. Two magnetic steering compasses are provided but no deviation table was observed and compasses are in poor condition. Several pairs of binoculars are provided.

5.2 The engine and gearbox mountings were inspected and found well installed on properly installed strengthened bedplates.

5.3 The engines are installed below the saloon with a single hatch from the aft deck and a door from the lazerette. All-round access can be readily achieved. The engines and compartment cleanliness was noted to be good. Engine gauges were only tested as far as indicated in the seatrial. Engine alarms were not tested.

5.4 Engine and transmission oil levels were checked. Gearbox oil is clear and at the correct level. Engine oil appeared to be new and no sample was therefore taken. Cooling water hoses appear to be in good order with adequate hose clips.

5.5 The engine exhausts are of the wet type; exhaust components are flanged or connected by heavy duty reinforced rubber hoses with correct clamps. The dry section of each exhaust is insulated and protective clad with stainless steel spiral cladding. The main engine exhausts main outlet exit the vessel underwater below the engine room.

5.6 Each engine is provided with a three 1000MA Racor coalescing filter of unknown filter size. A further smaller Racor is provided for the generator. The Racors are provided with clear bowl for water and sludge collection. Bowls were clear before and after sea trails.

5.7 Both engines are fitted with a dual belt driven 24V alternator. The 4 x 12Vdc 200Ahr lead acid batteries are located in two banks of two batteries between the engine longitudinal bearers between the engines. Battery isolation switches are provided. The battery terminals are adequately protected against short circuit and movement.

5.8 The engine transmission is via ZF BW255AP hydraulic gearboxes with what appears to be a straight out shaft. The shaft between gearbox and mechanical shaft seal is well protected from accidental contact.

5.9 The gearboxes are rigidly mounted to the engine. No movement was observed when engaging gears. No oil leaks were observed.

5.10 Both gearboxes are fitted with a hydraulic power take off used to drive the bow thruster and stabilizer fins. The hydraulic couplings are free of oil but lightly corroded. We recommend all steel couplings on marine hydraulic should be wrapped with Denso anti corrosion tape.

5.11 The shafts are sealed by a mechanical lip seal arrangement lubricated and cooled by an oil system. There was no leakage observed.

5.12 Fuel is carried in three storage and one day fuel tanks. Fuel is transferred via transfer pumps or the Alfa Laval purifier MB303S-13 rated at approximately 600 litres per hour. The purifier was started and operated easily with no undue vibration.

6 GAS SYSTEM, PLUMBING , W/C, TANKAGE & AIRCONDITIONING

6.2 Gas is carried on board in small deck locker integral to the coach roof. The locker is poorly ventilated and no remote shutoff devise or gas alarm is provided. Gas cooker auto flame failure devise was not tested.

4.8.2 Steering

The steering system is hydraulic and operation is smooth and positive from both wheelhouse and flybridge. The operation with autopilot was good. The vessel maneuvered well with twin engines and bow thruster.

4.7 Propulsion

A number of main engine spares including spare oil and fuel filters are on board. Consideration as the quantity and extent of on board emergency spares should be made based on the expected cruising requirements of the vessel.

4.8 Pyrotechnics

A suitable set of flares including hand held flares, red parachute flares and orange smoke signals is available however all pyrotechnics have exceeded their storage life and should be renewed.

4.9 Communications

4.9.5 VHF

VHF transceivers fitted at the wheelhouse and flybridge helm station were found to be in satisfactory condition and easy to operate.

4.9.6 EPIRB

No EPIRB, SART, or Navtext is fitted. This should be reconsidered if the yacht is used offshore or on long passages.

4.9.7 Searchlight

A remote control searchlight is provided.

4.12 Liferaft

Two 12 man life rafts in rectangular canisters are lashed on the flybridge outside the rail on port and starboard side. While a good storage position release in an emergency may be very difficult. The rafts have been tested and have certificates

4.13 Fenders and mooring lines

The fenders and mooring lines are in good condition and adequate for this vessel size.

5 ENGINE, TRANSMISSION & FUEL SYSTEM

5.1 The 2 x 1850shp MWM Deutz TBD616-V16 (1135kW @2165rpm) turbocharged and aftercooled diesel engines appear in good order. The service history of the engine is unclear as only limited documentation is available.

MSES

1. VESSEL PARTICULARS

1.1 M.Y. "CHOO CHOO" is a light displacement planning hull, twin screw, motor yacht constructed of solid glass reinforced plastic (GRP) with inside and flybridge helm and navigation stations.

1.2 The principal particulars given below are as provided by onboard documentation and from registration records. Those checked are indicated as such. Historical details for this report are not verified by MSES.

Name	: CHOO CHOO
Type	: Super Challenger
Builder	: Versilcraft, Italy
Built	: 1998
Registry	: Hong Kong license
Official Nos	: 34376
Classification	: Built to BV (lapsed)
Weight	: MT
GT / RT	: 112 /51 0/100
Displacement	: Est 112MT
Construction	: Solid GRP
LOA	: 32.9m
Beam	: 7.0m
Draft	: 1.65m
Water	: 1 x stainless steel tank 2700 litres
Fuel	: 4 x steel tanks total 19,760 litres
Sewage tank	: 8 x GRP tanks for black and grey 2,680 litres
Engines	: 2 x 1850shp MWM Deutz TBD616-V16 (1135kW @2165rpm) with ZF BW255AP hydraulic gearboxes (ratio 2.535:1) and conventional shaft and drip proof oil lubricated stern gland driving 4 bladed propellers.
Generator	: 2 x Kohler 50CFOZ 63kVA Marine genset
Bow thruster	: Hydromarine reversible hydraulic
Stabilisers	: Hydromarine
Water maker	: Reverse osmosis Idromar.
Cranes	:1 x MorSaverio 1200kg on flybridge and 1 Mor Saverio 350 kg on foredeck

1.3 PROPULSION DETAILS:

Engine :2 x MWM Deutz TBD616-V16 1850shp @ 2400rpm. V 16 cylinder, 4 stroke, direct injected marine diesel engine with turbocharger and aftercooler.

Running hours : Port 998 Stbd 1089 (from ER engine control panel)

Gearbox : ZF hydraulic actuated Model BW255AP with ratio 2.535:1 minimum oil pressure 15.5bar and each with power take off hydraulic pump for

6.3 Fresh water is carried in a two stainless steel tanks located below the sole in the lazerette. The tanks appear to be securely installed. No leaks could be observed.

6.4 The hot water heating consists of two 150 litre capacity 2000W 220V ac heaters mounted horizontally within the engine room. No leaks were noted and hot water seemed adequate.

6.5 The fresh water pump is located in the engine room and water pressure is good in all showers and at the galley.

6.6 A reverse osmosis water maker is fitted, this was not tested and appears to be about 1.5MT per day output. Condition of the unit at last shut down, ie if it has been preserved or not was not established.

6.7 The toilet system is two vacuum pump systems operated by pumps discharging to either the common centrally located sewage holding tank or directly overboard. The system worked well at all toilets. Grey water tanks are provided to collect shower, air conditioning condensation and other clean drains and are automatically discharged overboard. Tank arrangement is provided in attachment 1.

6.8 Two sea water pumps are mounted in the engine room a deliver sea water to the three air conditioning compressors mounted in the lazerette. Chilled water circulating pumps expansion tanks and vents are mounted in the lazerette. Chilled water pipes were noted to be sweating slightly and will require regular cleaning.

6.9 Air temperatures through out the vessel were acceptable however it should be noted that air temperature was only about 24 deg on day of trail.

6.10 A small capacity air compressor is provided within the lazerette. This is used to top up pressure tanks and for general service and worked well when tested.

6.11 A high pressure dive air compressor with outlet manifold for four bottles is fitted in the lazerette. This compressor was not tested but is reported to be in good order.

7. ELECTRICAL SYSTEMS

7.1 The vessel has a two 4 cylinder John Deere diesel powered Kohler generators each 63KVA 3 phase at 380V. The generator and engine are located in the machinery space aft and outboard of the main propulsion engines. An insulated sound enclosure is provided over each unit.

7.2 The engines utilise a fresh water cooling circuit and have a Racor filter installed in the fuel supply. Instrumentation is adequate and the engine has inbuilt protections to shut down in case of low lubricating oil pressure etc; this was not tested.

7.3 The generators started easily with little smoke and handled large load changes without significant frequency variation. Sound levels within the accommodation when anchored were very low.

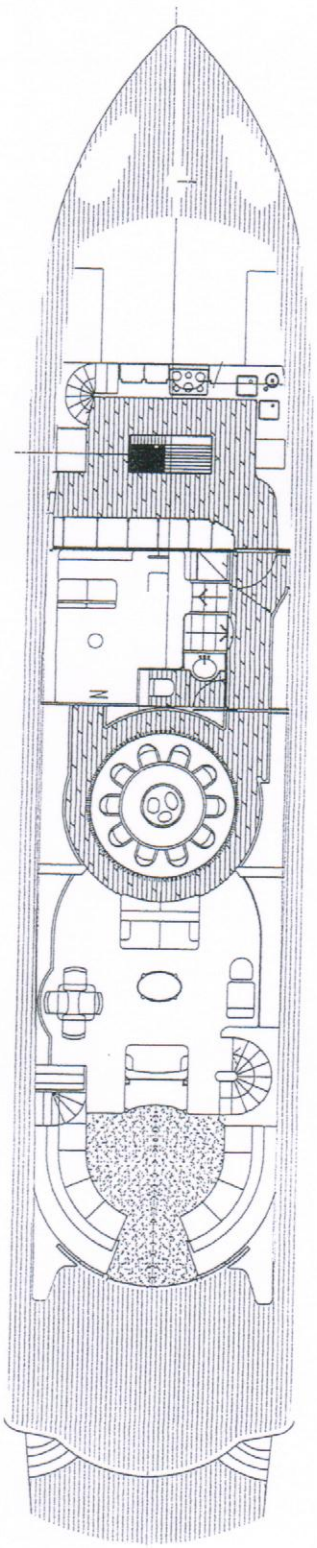
7.4 No oil, water or exhaust leaks were noted.

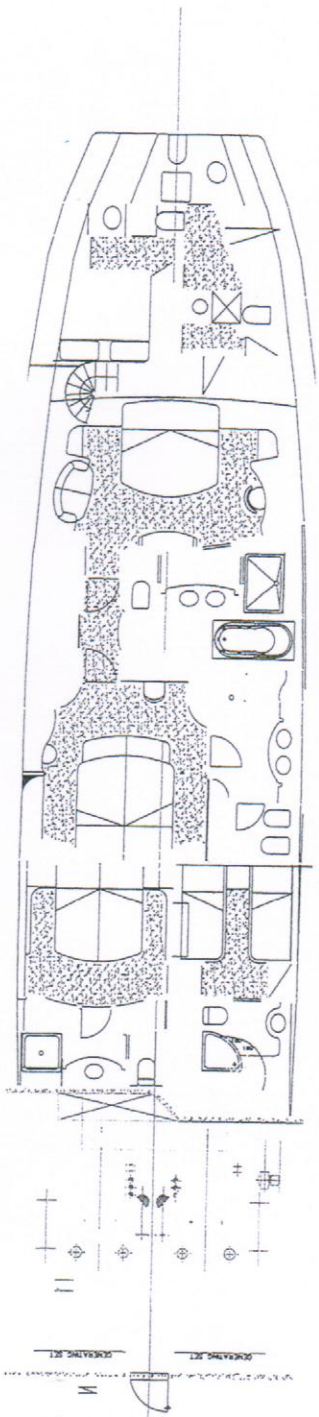
7.5 2380V ac shore power is provided through a transformer located in the lazerette A Polarity indicator is provided.. The shore power cable appears in good condition.

7.5 Electrical power is distributed at the switchboard located port side of the lazerette. All circuits appear to be functioning correctly.

7.6 Two battery chargers of unknown manufacture are mounted in the lazette to charge the house and engine batteries.

7.7 The house batteries consist of two banks of 6 x 2V dc cells connected series and mounted in a ventilated box under the swim platform. The battery terminals are well protected and greased.



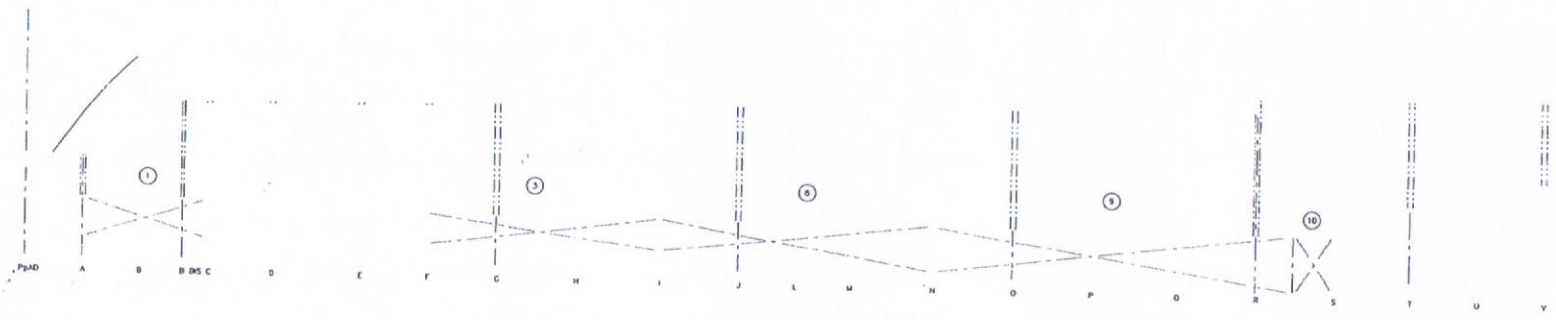


FRESH WATER δ = 1

N°	ORD.	VOLUME (m^3)	WEIGTH (tonn.)	NOTE
1	A-C	2.7	2.7	

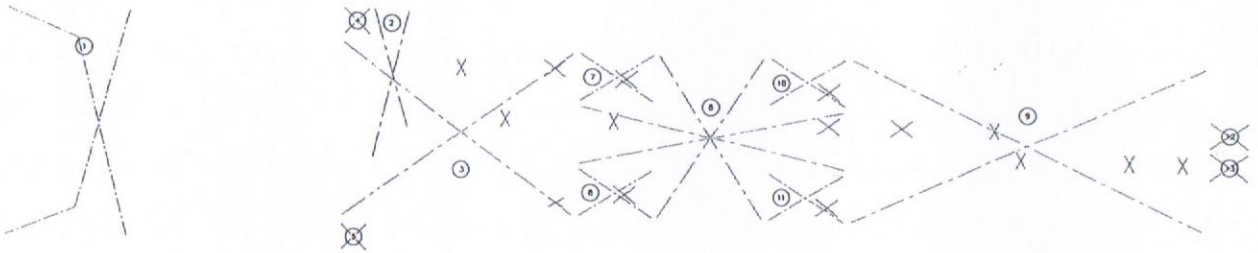
GASOIL δ = 0.85

N°	ORD.	VOLUME (m^3)	WEIGTH (tonn.)	NOTE
2		2200	1870	DAILY TANK
3	F-I	4700	3995	
6	I-N	4600	3910	
9	N-R/S	8200	6970	



VARIE

N°	ORD.	VOLUME (m^3)	WEIGTH (tonn.)	NOTE
4		40	40	ACQUE CHIARE
5		40	40	ACQUE CHIARE
7	I-J	500	500	ACQUE CHIARE
8	I-J	500	500	ACQUE NERE
10	M-N	500	500	ACQUE CHIARE
11	M-N	500	500	ACQUE NERE
12	R/S-S	300	300	ACQUE CHIARE
13	R/S-S	300	300	ACQUE NERE



COMET
SHIPYARD
VIA TRIESTE, 24 55049 VIAREGGIO (LU) TEL-FAX 0584-385039

Work order :	Date :	Firma :	Scale :	Doc.N°. : 90.07