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YACHT SURVEYOR

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REPORT
OF A CONDITION SURVEY
CARRIED OUT ON THE YACHT

"NEPENTHE"

**Condition surveys, Valuations, Damage assessment, Repair supervision, Consultancy
CONDITION SURVEY REPORT ON YACHT**

"NEPENTHE"

(19 pages, including cover)

The following survey was carried out on 14 May 2004 on behalf of :

Robert Fisher, Esq.,
 Les Fontaines, La Rue des Fontaines, Trinite, Jersey, Channel Islands JE3 5AQ

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GENERAL NOTES

Type of vessel: wooden cruising yacht
 Builder: Harry Feltham, Portsmouth, England
 Year: 1930 (*no documentation seen*)
 Registration: Part 1 British Registry, Official No. 164198,
 Registered Tonnage 5.94
 Construction: carvel-built hull believed of pitch pine on oak, with full keel and
 cast iron ballast section; wooden deck and superstructure
 Rig: gaff topsail cutter
 Engine: Lister-Petter Alpha 40 inboard diesel with shaft drive
 (new 1993, 40 hp / 29.8kW)

Approximate Dimensions:*(not verified precisely in course of survey)*

LOA 9.14 metres
 Beam 2.90 metres
 Draft 1.25 metres
Location

In accordance with instructions received from Mr Fisher (owner), the vessel was attended at the yard of East Coat Marine, Brightlingsea where she was seen ashore having been laid up since last autumn.

Conditions

Hull and deck access satisfactory externally, with minor limitations in way of hull and keel supports. Normal limitations internally in way of linings, some screw-fastened sole boards, internal ballast, engine, tanks and general fittings. Mast unstepped.

Purpose and Scope

Examination of the vessel was carried out on behalf of underwriters and insurance interests to determine the structural and material condition of the yacht and her equipment, and to provide a market valuation.

This report is a factual statement of the surveyor's examination as carried out and his opinion given in good faith as to the relevance of disclosed facts and defects so far as seen. It implies no guarantee against faulty design, latent defects, or suitability of the vessel for a particular purpose. The report is compiled for the confidential information of the client instructing the survey and that of his insurers, and no liability is accepted to any future holder of the report unless specifically stated; copyright is retained by the surveyor.

Limitations

Unless otherwise specified, no fittings, fastenings, or keelbolts were removed for examination. Portable traps and selected screw-fastened panels were opened up to facilitate inspection, but parts of the vessel which are covered, unexposed or inaccessible were not examined; it cannot, therefore, be reported that any such part of the vessel is free from defect. Deck openings and fittings were not hose-tested for leakage.

Mechanical condition of engine not covered under terms of survey, though installation assessed. Sails not seen. Spars and rigging, safety and navigational equipment, electrical installations and domestic appliances were assessed visually only, except where otherwise indicated.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

“NEPENTHE” was found to be a traditionally-constructed wooden cruising yacht of elegant and proven design, from the yard of a well-known builder. She has been in her present ownership for about fifteen years and is in remarkably good order for a craft of this age. It is clear that she receives regular and appropriate maintenance from her owners, as well as periodic attention to items requiring professional attention. In this respect much work has been carried out during the current ownership, including doubling or replacement of many of the steamed timbers on port side following storm damage sustained shortly before she was purchased, the fitting of a new engine in 1993, replacement of the sterntube and rudder hangings, and the establishment of an organised rota of keelbolt inspection and replacement. The vessel is laid up ashore each winter under an overall protective cover.

Thus during the course of the survey no major structural defects were noted, and - once her normal safety equipment has been placed aboard and one short length of flexible gas delivery tubing replaced as a routine precaution on grounds of age - “Nepenthe” would be considered to be in suitable condition for her designed purpose of sea sailing, and to represent a normal insurance risk. A few items in need of some attention or comment were seen, but most of these will have been attended to by the time of recommissioning (annual fitting out in progress at time of survey) and any which will not have been attended to - these being detailed in the relevant section of the body of the report - are not considered urgent and so may be completed during the coming sailing season or in course of next winter’s refit. A valuation is appended.

Hull planking and reinforcing members were found generally to be in sound condition, and although some very localised degradation was noted beneath the forward berths in the aft end of the apron and in the heel’s of adjacent timbers, further deterioration will be inhibited once the area has dried out sufficiently and remedial measures will be carried out professionally during next winter. The deck and superstructure was also found to be in good order, and at time of survey protective coatings on the hull and locally on deck were receiving attention in course of maintenance. The ballast keel appears to be secure, and keelbolts have been renewed in rotation over the years.

Unless indicated otherwise the structural and material condition of skin fittings and seacocks, deck fittings, chainplates, hatches, portlights and other attachments was considered to be satisfactory. The wooden spars (comprising mainmast, separate topmast, boom, gaff and long bowsprit) were found to be in good condition, and were also being recoated routinely at time of survey. Standing and running rigging were seen to be in sound condition, and although sails were not seen on board they are said to be in reasonable or good condition and to have been valeted periodically (see section E.5.)

The mechanical condition of the engine is not covered under the terms of survey, but its standard of installation is considered to be satisfactory and the engine was fitted about eleven years ago to replace an earlier unit. At time of survey it had not yet been de-winterised in preparation for recommissioning, but its visual condition is good, as is that of sterngear and ancilliary components. Electrical installations are also in satisfactory condition.

The accommodation provides berths for up to four crew in two cabins. It has traditional appeal, and furnishings were found in good cosmetic order. Basic domestic amenities of freshwater system, marine toilet, cooker and solid-fuel heating stove are provided. "Nepenthe" carries appropriate ground tackle, bilge pumps and a GRP tender, and although most deck gear, safety equipment and navigational/communicational equipment was not seen (in safe storage ashore at time of inspection) it is believed that an appropriate inventory is carried on board while the yacht is in commission.

Further detail is laid out under sub-headings in the following sections:

[Unless otherwise stated, structural members and equipment when mentioned under the headings which follow were examined visually as fitted and where accessible, and appeared to be in satisfactory material condition so far as could be ascertained without opening up or dismantling. They were also considered to be of adequate scantling and material bearing in mind the type of vessel, her age, construction and standard of maintenance.

Any recommendations given are intended as a guide only, and further information can be provided if required; additional suggestions concerning items of routine maintenance may appear in the main section of the report, but are not intended to be comprehensive or exhaustive in this respect.

Where actual figures are given, S.I./metric units have been used where possible for uniformity, but Imperial units may also appear when dictated by traditional usage or manufactured dimensions. The abbreviations "s/s" (stainless steel), "m/s" (mild steel), "a/a" (aluminium alloy) and "y/m" (yellow metal, indicating an undetermined bronze/brass/gunmetal alloy) may appear, but do not necessarily imply corrosion-resistant quality.]

A. HULL

A.1. Construction

Traditionally-constructed carvel hull with rounded stem, transom stern, round bilge form and relatively shallow full-length keel (with cast iron ballast section - see section B). Hull planking is believed to be of pitch pine (or possibly larch), steamed timbers (ribs) and main centreline members of oak, and fastenings of copper and bronze (see sections A.2., A.3., A.4.)

The vessel was found to be supported by six wooden shores on either side, by a longitudinal timber member beneath either bilge in way of ballast areas (each of these also supported by six shores) and by blocks beneath the keel. The hull was sighted

from various angles within the limitations imposed by yard perimeters and adjacent craft, and appeared free from major distortions such as hogging, sagging, etc. (the long ballast keel presumably helps to maintain shape to some extent), and although slight angularity is evident at some plank seams in way of formerly fractured timbers, added internal reinforcement should inhibit further change of shape effectively.

A.2. Hull skin

The hull skin was examined visually, by sounding and by light spike-testing in selected locations (limitations internally in way of ballast and linings, this also applying to A.3).

Above waterline

Hull topsides are painted in cream, apart from the boottopping stripe in blue and the sheerstrake and its part-round rubbing strakes which are coated with a brown-coloured protective stain. At time of inspection topsides and transom had been rubbed down to remove any flaking paint and to provide a key, and flexible stopping compound had been applied to plank seams wherever found to have opened slightly. These areas will be rubbed down to fair profile and spot-primed before a fresh topcoat is applied (preceded by an undercoat if found necessary).

Inspection of hull planking both internally and externally revealed no areas of significant rot or softening, and if the very small areas of bare timber exposed within the forecabin bilge are representative of the remainder of hull planking it is probable that planking is of pitch pine.

Below waterline

The red antifouling paint was generally found to be well adhered, though flaking locally in places (the hull's underbody not yet having received preparation for the application of fresh antifouling paint after spot-priming of any areas of bare timber). Plank seams have not opened excessively, and although normal leakage can be expected for a few days after relaunching until hull timber swells again, no areas were considered to require recaulking or refastening, and several long-standing shakes noted in centreline members in places (e.g. in the wooden keel) do not appear of concern.

A.3. Reinforcing members

(a) Longitudinal

Conventional centreline structure of stem, forefoot, apron, keel, hog, deadwood, horn timber and transom knee, in satisfactory condition wherever seen apart from some very localised degradation (believed to be electrochemical in nature) at the aft end of the apron immediately forward of the forecabin berth's part-bulkhead in way of a ferrous bolt, as well as in the heels of some adjacent timbers (see below).

Beamshelves of approx. 70 x 50mm scantling are fitted at the sheer. A single bilge stringer of approx 98 x 20mm is fitted on either side, the port stringer believed to have been renewed or partially renewed when port timbers were doubled (see below).

(b) Transverse

Steamed timbers (ribs), believed to be of oak and of approx 37 x 25mm scantling, are fitted at 150-180mm centres and were mostly found to be in satisfactory condition given the extensive doubling and localised renewal of timbers which was carried out professionally early in the current ownership, this including several timbers at the sharp tuck of the bilge beside and forward of the stern gland on either side of the hull, some on starboard of the forecabin, and at least twenty-four part-length doublers fitted on port side within the forecabin and saloon (these of appropriate scantling, though slightly smaller than original timbers). Electrochemical degradation of timber was noted very locally in the heels of a few timbers beneath the forecabin berth, particularly on starboard side one timber forward of the degraded area of apron (see above).

Sawn wooden floors are fitted across the centreline, these generally of 60mm thickness fitted at about 900mm centres beneath the saloon, of 75mm thickness forward of the mast compression post and 38mm above the apron, all in satisfactory condition wherever seen.

Plywood bulkheads and part-bulkheads are fitted (presumably not original), a conventional breasthook inside the stemhead, quarter knees at the transom, and there are reinforcing pads in way of the beaching leg mounts on either side of the hull (these currently bunged, no beaching legs seen in course of survey).

Recommendation

The degradation noted in the aft end of the apron and the heels of some adjacent timbers does not appear of great structural concern, so (unless any leakage develops in this area while the yacht is in commission) repair may be left until it can be fitted into the programme of maintenance during next winter's laid-up period. At this time any defective timber should be cut back to its full extent in order to determine the appropriate method of repair, a solvent preservative applied to any remaining timber, then sound timber scarphed into the hog and new sections of timbers scarphed in or doublers fitted beside existing timbers (the former neater, the latter stronger) with new fastenings provided to restore former strength.

[Note: I cannot state the precise cause of this problem, but the degradation appears to be electrochemical in nature and may result from the presence of the ferrous apron bolt in this location, the remainder of apron bolts apparently being of yellow metal and plank fastenings copper – see also H.6. regarding cathodic protection. This area of bilge was found still to be wet as some salted water is intentionally left within the bilge during the laid-up period and the vessel's attitude means that it is of reasonable depth in this location, whereas once she is afloat this area becomes dry. In the meantime, therefore consideration should be given to inhibiting further deterioration to some extent (once the affected timbers have dried) by applying a solvent preservative liberally, perhaps preceded by the localised application of an acidic solution (e.g. vinegar) in an attempt to neutralise the current alkalinity in this area.]

A.4. Fastenings

The majority of plank fastenings to timbers, stringers and beamshelves are of riveted copper nails, with roves fitted at their inboard ends. These fastenings cannot be removed readily in the course of survey, but so far as could be assessed visually and from sighting of their heads they appear to be in satisfactory condition and to be holding well (no evidence of undue plank movement was noted). The fastenings of planking hood ends are believed to be of yellow metal, those of forward and aft hood ends said to have been fitted in the form of silicon bronze wood screws early in the current ownership (as additional rather than replacement fastenings). As no plank movement or cause for concern was evident no screwed fastenings were removed for inspection in course of survey, though this procedure should form part of a normal programme of maintenance during future years.

Floor bolts and most apron bolts (see A.3.) are of yellow metal (bronze) of 3/8 inch (9.5mm) diameter, and stem bolts are of mild steel (presumed galvanised originally) of 0.5 inch (12.5mm) diameter, in satisfactory condition wherever seen, though stem bolts show some superficial rust at their inboard ends which should be cleaned off and repainted to inhibit further corrosion (see B.2. regarding keelbolts).

A.5. Bilge

Bilge areas are generally painted in grey Danboline (or similar), with coatings mostly in good order (spot-prime any bare areas in course of maintenance, e.g. where sole boards have abraded planking and timbers within the forecabin). Soft pitch has been applied in places beside the apron, and soft pitch and some concrete beside the horn timber aft in order to prevent puddling of bilge water in areas where rot might be encouraged.

A.6. Skin fittings and seacocks

Apparently in satisfactory condition so far as could be assessed without dismantling, with seacocks freely moving, though in the course of routine maintenance all seacocks and skin fittings should be dismantled periodically for inspection and serviced or renewed as found necessary.

Below waterline

y/m engine seawater intake with external strainer, remotely-operated ball seacock
and close-coupled internal strainer

y/m toilet inlet with external strainer and cone-valve seacock.

y/m toilet outlet with cone-valve seacock.

through-hull depthsounder transducer (port forward bilge)

[Former toilet inlet and outlet apertures forward on starboard side have been bunged, as have beaching leg apertures above waterline]

Above waterline

y/m engine exhaust with ball valve seacock (remote operation by means of lever in cockpit well)

y/m cockpit drains (2)

y/m electric bilge pump discharge

plastic electric bilge pump discharges (2)

plastic manual bilge pump discharge (1)

plastic sink drain

B. KEEL & BALLAST

B.1. Keel structure

A shallow cast iron ballast keel about 6.5 metres in length and of an estimated 900 kg weight is fitted beneath the wooden keel, its landing seam showing no evidence of undue movement and the keel said to have been rebedded fully shortly before the current ownership. There is superficial rust on both exposed sides and the underside of the keel in places, this to be cleaned off and corrosion-inhibiting coats of primer applied before the keel is coated with antifouling paint.

B.2. Keelbolts

The keel is secured to the hull by means of eight ferrous keelbolts (believed of wrought iron) these fitted with washers and nuts at their inboard ends, with the exception of the aftmost bolt whose securing nut is located behind a removable wooden pad on the deadwood. No evidence of movement, undue leakage or other problem was noted, and the following record of withdrawal and renewal of keelbolts was seen (keelbolts numbered from forward):

No. 1 – 06.2001

No. 2 – 02.1993

No. 3 – 05.1997

No. 4 – 05.1999

No. 5 – 08.2003

No. 6 – 05.1993

No. 7 – 08.2003

No. 8 – 09.1999

B.3. Internal ballast

Pigs of lead trimming ballast are fitted beneath the saloon sole, with a few also beside the mast compression post and one or more pigs close forward of the stern gland. This internal ballast has no dedicated means of securing other than the sole boards above, and although this is desirable to ensure that there is no possibility of movement in extreme conditions, the existing arrangement has clearly proved to be satisfactory during many years of cruising.

C. STEERING GEAR

C.1. Rudder

Partly-balanced wooden rudder, with brown protective stain on rudderhead and cheeks, blue painted boottopping stripe, and red antifouling paint on blade (to be overcoated with fresh antifouling before relaunching). The rudder was found to be in sound condition (no inspection made of timber condition within rudderhead slot) and in addition to the rudder straps below is provided with yellow metal (bronze) reinforcing straps above the heel gudgeon.

The rudder is supported by one pair of yellow metal (believed gunmetal) gudgeons with separate pintle and s/s cotter pin on the upper transom, a second pair of gudgeons with pintle on the transom at the static waterline, and by a stainless steel heel pintle recently remounted securely on the aft end of the ballast keel with corresponding yellow metal heel gudgeon on rudder. No excessive sideplay at rudder hangings.

C.2. Tiller

Wooden tiller with brown protective stain coatings and rope-bound handgrip, in sound condition.

C.3. Autopilot/Self-steering

None fitted, but a pinrail on the aft coaming permits the tiller to be secured and adjusted to the vessel's balance and the long-keeled configuration should permit the yacht to steer herself on some points of sailing.

D. DECK**D.1. Deck and coachroof****(a) Deck**

Of tongued-and-grooved timber (probably pine) on sawn deckbeams and half-beams. Foredeck beams are typically of about 60 x 48mm scantling at 410-460mm centres, and non-ferrous (believed bronze) tie-rods are fitted between beamshelves and carlines in way of sidedecks. Lodging knees are fitted at outboard ends of two deckbeams in way of the tabernacle and one beneath the foredeck, these secured by copper rivets and added at the current owner's instruction, presumably to stabilise the deck assembly where slight movement and separation had occurred between beamshelves and the outboard end of deckbeams.

Externally the decks have a cream-coloured non-slip paint coating of thick, flexible paint (similar to Dekaplex) these coatings as well as the brown protective stain coatings on toe rails found generally to be in good order with no appreciable opening of plank seams noted.

b) Superstructure

Traditionally constructed superstructure with hardwood (perhaps mahogany) coamings, the port coaming believed to have been renewed shortly before the current ownership commenced. Coamings were found to be in good structural condition, with internal and external brown stain coatings intact and only very localised minor splits seen in places (not of structural concern). A wooden moulding is fitted at the upper edge of coachroof coamings, but there is none at the deck joint which was found to be tight and free from evidence of leakage.

The tongued-and-grooved planked coachroof (probably pine) is supported on sawn coachroof beams typically of about 42 x 40mm scantling fitted at 390-450mm centres, these found in satisfactory condition (coachroof beams have not been cut through in way of the skylight, and additional support for the coachroof is provided by tubular steel grab posts fitted between coachroof beams and hull at either end of the saloon table. The coachroof has been clad externally in plywood, this renewed during the current ownership and found to be in sound condition with cream non-slip paint coatings in good order.

D.2. Cockpit

Aft cockpit with rainproof and splashproof sole self-draining via hoses led to above-waterline skin fittings (sole coamings and lazarette locker hatch not fully watertight in the event of flooding of the cockpit, but existing self-draining arrangements are a considerable improvement on the open cockpit which it is presumed the vessel had originally. Cockpit coamings are braced by galvanised mild steel brackets to the deck, and there are removable lids over lockers beneath sidebenches and sole. An additional splashproof fabric cover is fitted over the engine beneath the forward sole hatch. Brown protective stain coatings on the plywood / timber cockpit coamings, benches and sole (incorporating wooden slats) are in good visual condition.

D.3. Deck openings

Hatches

Brown-stained sliding plywood/timber main hatch on yellow metal runners, with hinged plywood/timber washboards and secure hasp, staple and padlock.

Brown-stained hinged plywood/wooden forehatch with secure clasps and intact seal.

Traditional hinged hardwood / toughened glass skylight fitted over the saloon, provided with protective bars and a removable acrylic cover with clear window panels.

Portlights

4 yellow metal (bronze) opening portlights are fitted in either side of the coachroof, one in its forward face and two in its aft face, their seals apparently in satisfactory condition and securing clamps intact.

A fixed circular yellow metal portlight is also fitted in the port aft corner of the foredeck, and small rectangular acrylic lights (showing acceptable crazing through UV degradation) are fitted in the main hatch and forehatch. The skylight fitted over the saloon also provides light for the accommodation.

D.4. Deck fittings

Securely mounted, of adequate scantling and in good condition, including foredeck and aft deck bollards, deck and sheet cleats, fairleads, handrails, staysail horse, etc.

E. RIG

E.1. Spars

Wooden spars, believed pine, mostly with brown protective stain coatings in good order, though the following areas are painted in white: the mast heel and the masthead above hounds, the topmast heel and topmast head, the boom end, the gaff saddle and band, and the bowsprit heel and outboard end of the bowsprit.

Spars were seen on trestles at time of survey, but when the vessel is rigged the topmast may be housed in lowered position (its fid having a tripping mechanism operated remotely from the deck) and the bowsprit may be steeved up to reduce the vessel's overall length. Spars were found to be in good condition, with acceptable bends in gaff and boom. Spar fittings are also secure, including the galvanised mild steel topmast spreaders, mastbands and leathered gaff saddle (with parrell balls), two flexible stainless steel wire spans on the gaff for attachment of the peak halyard, the bowsprit sheave for traveller outhaul with copper band to prevent abrasion by the traveller, topmast heel sheave, wooden bee blocks on boom, etc.

The mast steps in a wooden tabernacle which extends about one metre above the deck, and also through the deck to the hull where its heel is close forward of the main bulkhead. Mild steel reinforcement is incorporated below the mast heel, and the longitudinal timber pad let into deck beams beneath the deck has been renewed during the current ownership.

The bowsprit heel locates in wooden foredeck bitts with galvanised mild steel reinforcement and pivot bolt, and a galvanised mild steel gammon iron is fitted at the stemhead.

E.2. Chainplates

Securely mounted:

Shrouds attach to three bronze strap chainplates mounted externally on either side of the hull and carried nearly to the static waterline, cap shrouds and topmast shrouds sharing a common chainplate.

The inner forestay attaches to the galvanised mild steel gammon iron at the stemhead, the outer forestay to the bowsprit crane iron and the bobstay to a mild steel eyebolt above waterline on the stem. Bowsprit shrouds attach to bronze chainplates on the sheerstrake, and running backstays to sheaves and Highfield levers on sidedecks (see below).

E.3. Standing rigging

Gaff topsail cutter rig with standing rigging in stainless steel wire rope with Talurit crimped terminals (some soft eyes used at mainmast hounds).

Mainmast and topmast shrouds are in 1 x 19 s/s wire rope of 6mm diameter, the mainmast cap shrouds being in two sections interconnected by the topmast spreaders. Twin mainmast forestays to the hounds are of 8mm 7 x 7 s/s wire rope, and the forestay to the masthead of 7mm 7 x 7 s/s wire rope. The topmast forestay is of 5mm 7 x 19 s/s wire rope, and mainmast running backstays of 7mm 7 x 19 s/s wire rope with 6mm 7 x 19 whips attaching to them, then passing over a deck sheave and a block on the painted mild steel Highfield levers, with tail anchored back on the deck sheave. Bottlescrews are in galvanised mild steel of close-bodied type, the aft lower shrouds and twin forestays attached to chainplates by means of stainless steel shackles whose pins will be moused once the vessel has been re-rigged.

No defects were seen in the standing rigging which should continue to give service for some years yet, particularly as much of it is of wire of flexible construction which is less susceptible to fatigue than the standing rigging generally used with modern craft.

E.4. Running rigging

In polyester and polypropylene rope of both braided and three-strand construction, and some items in flexible stainless steel wire rope of 7 x 19 construction. In satisfactory condition wherever seen (the locally-abraded topmast uphaul is to be shortened or replaced before the mast is re-stepped). A bronze Wykeham-Martin roller-furling gear is used with the jib, the furling drum attaching to the bowsprit traveller.

Blocks used in running rigging are of wood, Tufnol and plastic, and pinrails are fitted on the tabernacle and adjacent to shroud chainplates.

E.5. Sails

Sails were not seen on board being in safe storage ashore at time of survey, but the mainsail, topsail, staysail and jib (with Wykeham-Martin roller-furling gear) are said to be in good condition, in tan-coloured polyester (terylene), a storm jib is said to be in virtually new condition (not used during current ownership), and a spinnaker in nylon sailcloth has hardly been used in recent years.

E.6. Winches

Tested, but not under load, and found in working order:

2 Tugh-Fittings sheet winches on coaming plinths
2 WIR bronze halyard winches on tabernacle

F. ENGINE & STERNGEAR**F.1. Engine installation**

A Lester-Petter Alpha 40 four-cylinder naturally-aspirated marine diesel engine with reduction gearbox is flexibly mounted on wooden bearers beneath the cockpit / companionway, and was fitted as a new unit in June 1993. Its standard of installation appears to be satisfactory, the engine is said to be in proper working order (still winterised at time of inspection), it is in good visual condition and with a nominal rating of approx 40 hp / 29.8 kW should give ample power for a craft of this size. Normal maintenance will be carried out in course of dewinterising and recommissioning the engine.

F.2. Engine ancillaries

Electric starting. Engine panel at companionway, with hour meter fitted on engine (reading 121 hours at time of survey, said not to be correct as this unit replaced an earlier hour meter but estimated total hours run only about 220 hours). Single-lever control in cockpit operating gear and throttle via flexible Morse-type cables, cable-operated stop mechanism and remote seawater intake closure at companionway, remote exhaust seacock operation in from cockpit. Belt-driven alternator and freshwater pump.

The engine is freshwater-cooled, with plastic header tank fitted on engine (antifreeze concentration not assessed). The raw water circuit has flexible hose led from a strainer at the intake seacock to the crankshaft-driven impeller-type raw water pump, and a siphon-breaking vent is fitted beneath the cockpit sidebench. Flexible water-cooled exhaust with in-line Vetus waterblock, looped being close beneath the aft deck before discharging at a transom skin fitting with seacock (and remote closure – see above).

F.3. Fuel system

A cylindrical stainless steel fuel tank of appropriate capacity is mounted beneath the port side of the cockpit, with flexible hose from deckfiller, sight gauge visible from accommodation (with tank drain and isolating valve at base) and flexible vent hose teed from the top of the sight gauge then led aft to a splashproof fitting on the outside of the cockpit coaming.

Isolating valve at tank (with remote closure), then armoured flexible fuel delivery tubing leads to an in-line Racor-type prefilter/watertrap before connecting to the engine-

mounted fuel lift pump. Mild steel fuel pipes on the engine lead via the engine-mounted filter and injection pump to injectors, flexible fuel return hose re-enters top of tank.

F.4. Sterngear

Flexible coupling to a stainless steel propeller shaft of 1.25 inch (31.8mm) diameter fitted with a three-bladed right hand yellow metal propeller of approx 16 inch (406mm) diameter, with y/m retaining nut and s/s cotter. The propeller appears to be in satisfactory condition and gave a reasonable ring when sounded. The retaining nut shows slight (though acceptable) dezincification – monitor condition at each haulout in future, and in course of routine maintenance withdraw propeller shaft periodically for routine inspection in case of pitting or crevice corrosion within sterntube or in way of bearings.

Yellow metal (bronze) sterntube with clear waterways, showing some play - though not excessive - at tailshaft bearing (believed of white metal or yellow metal type). Yellow metal stern gland with greaser (tighten / repack as found necessary in future).

G. SAFETY & GENERAL EQUIPMENT

G.1. Ground tackle

Satisfactory, comprising :

25 lb (11.3kg) CQR anchor with an appropriate length of 8mm galvanised short link chain (not ranged) whose inboard end is attached to a strongpoint by means of a pre-stretched polyester rope lanyard of sufficient length to extend through the chain pipe so that it could be cut from deck in an emergency.

This bower anchor is handled by means of a Clyde manual anchor windlass with rope drum, chain gypsy and brake, securely mounted on the foredeck and showing only very localised superficial rust in places.

Kedge anchors seen on board include a 7kg Danforth-style anchor with a short length of 8mm galvanised chain and a length of 16mm Anchorplait warp, and fisherman-type anchors of an estimated 15kg and 4kg. A bucket of spare 8mm galvanised chain was also seen on board, as well as a lead anti-snubbing weight.

G.2. Bilge pumps

Henderson MKV double-action manual bilge pump mounted below cockpit sidebench, with through-bulkhead operation. Reinforced flexible suction tubing from a strum box beneath engine, discharge led to an above-waterline skin fitting high in hull topsides. In working order.

Three submersible electric bilge pumps are also located in the bilge beneath the engine, comprising a Jabsco Maxi pump of 1460 gph nominal discharge capacity, a Rule 500 pump and a third pump of an estimated 1400 gph nominal discharge capacity beneath

the gearbox, this last pump not verified as operational. All pump discharges are led to skin fittings high in hull topsides.

G.3. Safety equipment

Not on board at time of survey, being in safe storage ashore :

Recommendation

It should be ensured that safety equipment appropriate to the number of crew and the intended area of operation is carried on board whenever the vessel is in commission - see, for example, Royal Yachting Association booklet C8, "Boat Safety Handbook" this should include lifejackets, safety harnesses, distress flares, fire extinguishers of minimum combined fire rating 13A/89B, fire blanket, foghorn, anchor ball, motorsailing cone, etc..

G.4. Inventory

Most deck gear and general equipment was not seen on board, being in storage ashore. Items seen include the following:

Sestrel bulkhead compass
clinometer
red ensign plus staff
various warps and fenders
boathook
deck mop,
bosun's chair
Henderson Handy portable dinghy / locker pump
winter cover with wooden strongback

G.5. Tender

3m GRP simulated clinker dinghy with white pigmented gelcoat, in reasonable condition.

H. ELECTRICAL SYSTEMS

H.1. Batteries

Three Vetus 12-volt heavy duty batteries, each of 108 Ah nominal capacity, are securely strapped beneath the cockpit (two engine-cranking batteries within plywood battery boxes with covers, and a domestic / service battery on port side. Batteries apparently retaining appropriate charge at time of inspection.

Batteries are charged by the engine-driven alternator, or by means of a wind-powered generator generally carried on board (not seen in course of survey and usually not mounted permanently)

H.2. Circuits and switches

12-volt DC

Battery isolating / selector switches are fitted at the companionway and within the engine compartment. Switch / fuse panel (of recent manufacture) fitted above chart table at port aft corner of saloon. Electrical cables appear to be reasonably ordered, and there are waterproof socket outlets in the cockpit and on the forward face of the coachroof

240-volt AC

None fitted.

H.3. Navigation lights

A sternlight is mounted on the transom and a portable anchor light with flexible cable and plug was also seen. Sidelights and steaming light were not on board at time of survey as they are in storage ashore, the former mounting on lightboards fitted to the rigging and their cables connected to socket outlets on the forward end of the coachroof. Mounting of steaming light not verified, but assuming that the lanterns above are carried whenever the yacht is in commission they would enable compliance with international regulations whilst under sail, power or at anchor.

H.4. Cabin lights

Of filament type, including cockpit light. The mount for a gimballed brass lamp is fitted in the saloon together with a heat shield, but the lamp and glass chimney are presumed to be in storage ashore.

H.5. Electrical equipment

Other electrical/electronic items are mentioned elsewhere in the report.

H.6. Cathodic protection

A small circular sacrificial zinc anode is bolted directly onto the aft end of the ballast keel, with a stainless steel wire connection to the rudder's heel pintle, thence to the rudder's bronze heel gudgeon. No anode is fitted directly to the hull, this being sensible practice for a wooden vessel where inappropriate or excessive cathodic protection can cause damage to hull timber. In the anode's current location it will have only slight effect in inhibiting corrosion of the propeller (there being no direct electrical connection evident unless a keelbolt is bonded to the engine and connection thus made via the bridging strip fitted across the flexible shaft coupling), and the anode can be expected to waste fairly rapidly as it is not normal practice to bond steel or iron components (e.g. the ballast keel) into the same circuit as bronze and stainless steel components. However, given the large mass of the ballast keel it seems unlikely that any harm will result, or that this is the cause of the electrochemical degradation noted in the apron (see A.3).

[Recommendation](#)

Monitor rate of anode wastage whenever access permits, together with the general condition of below-waterline metal fittings. Any anodes incorporated within the engine's waterways should be changed when necessary according to manufacturer's directions.

I. DOMESTIC SYSTEMS

I.1. LPG installation

LPG cylinder not seen on board, but when the vessel is in commission it is secured within a sealed, vented plastic cylinder locker beneath the starboard sidebench, with drain teed into the cockpit drain which discharges at least 75mm above static waterline. A pressure regulator seen within the cylinder locker connects by a short length of flexible gas delivery tubing (to BS 3212/2, dated January 1998) to the main run of copper gas delivery tubing which leads forward to an in-line isolating valve at the galley. A second length of flexible gas delivery tubing (to BS 3212/2, dated 02/2000) makes final connection to the gimbaled cooker.

Plastimo Neptune gas cooker with two burners, grill, oven and fiddle / pan clamps. Flame-failure devices fitted to all burners. The arc of gimbaling is limited by the presence of a shelf beneath and by the lining close outboard, but this arrangement has presumably proved satisfactory in service.

Recommendation

Renew the length of flexible gas delivery tubing within cylinder locker as routine precaution on grounds of age, using recently-manufactured tubing to BS 3212/2 (and in future renew flexible hose at five-yearly intervals). In the course of routine maintenance all unions in the gas delivery line should be checked periodically for leakage.

I.2. Freshwater system

A stainless steel freshwater tank is mounted beneath the starboard side of the cockpit, with flexible hose from deckfiller and vent led to a skin fitting on the cockpit bulkhead.

Stainless steel sink with drainer, supplied by a Whale Flipper handpump and draining to an above-waterline skin fitting. A freshwater supply is also led to a tap beside the companionway step.

I.3. Toilet

A Blakes manual marine toilet is securely mounted in an enclosed compartment, with reinforced flexible inlet and outlet hoses looped close beneath the beamshelf before connecting to seacocks adjacent (the inlet provided with a siphon-breaking vent at its highest point). Believed likely to be found in working order, given routine servicing.

I.4. Heater

A small solid fuel stove is mounted on a steel tray on a marble (or similar) plinth in the saloon, the main bulkhead and adjacent surfaces being clad in marble (or similar) heat-resistant material. Stainless steel flue pipe led through the deckhead (not verified as having an airtight connection at stove), and a removable stainless flue extension of about 1m length is stowed beneath the cockpit and provided with an H-section rain-proof cowl.

J. ACCOMMODATION

J.1. Berths

Up to four berths in two cabins, saloon settee mattresses not seen on board, the forecabin berths provided with red vinyl covers on foam mattresses and the head of the port berth hinging against the hull when not in use to improve access to the forecabin.

J.2. Furnishings

Generally in good cosmetic order and having traditional appeal, including white-painted deckhead and inside of hull, varnished and stained bulkheads, coachroof coamings and cabin furniture (including drop-leaf table), bare (or oiled) hardwood sole (perhaps iroko) and companionway steps, wood-effect laminate-faced galley worktops, rust-coloured curtains and grey-painted bilges.

J.3. Ventilation

Apparently good, except perhaps in severe weather, with two hatches, one skylight and eleven portlights opening over the accommodation, two mushroom ventilators on the foredeck and one mushroom ventilator on the aft deck.

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