

REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office)

10 OCT 1949

Date of writing Report 13th Sept. 49 When handed in at Local Office 19 Port of AmsterdamNo. in Survey held at Amsterdam Date. First Survey 2nd June Last Survey 5th Sept. 19 49
Reg. Book. 65936 on the Machinery of the Wood, Iron or Steel SIS Ledum (No. of Visits 25)

Tonnage { Gross 3895 Vessel built at Flensburg By whom Flensburgs Schiffsb. Ges. When 1919
 Net 2200 Engines made at Flensburg By whom Flensburgs S.G. When 1919
 Nominal 536 Boilers, when made (Main) 1919 (Donkey) —
 Horse Power — Owners Rederi S/B Redund Owners' Address —
 No. of Main Boilers 2 Managers — (If not already recorded in Appendix to Register Book.)
 No. of Donkey Boilers — Port Mariehamn Voyage Sho
 Steam Pressure — # Surveyed Afloat and in Dry Dock A.D.M.
 in Main Boilers 105 lb (State name of Dock.)
 in Donkey Boilers —

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER. * for Special Survey. Date of last Survey and of Periodical Surveys.	Years assigned now expired	Machinery and Boiler Surveys (including date of N.B., if any)
100A1-6,48		BS 4,47
Shells with freeboard		LMC 6,46
S.S. Ant. 6,46 (1st)		TS 0,47d
1st & Shells old		
2nd old in fore hold		

Last Report No. — Port —Particulars of Examination and Repairs (if any) CONVERSION TO F.O. BURNING, BS and Part MS.

Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined —

Was a damage report made by anyone else? If so, by whom? —Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? yes" " Donkey " " " —If not, state for what reasons —What parts of the Boilers could not be thus thoroughly examined? —What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? —State latest date of internal examination of each boiler from 2/6 to 9/7 all boilers several times during repairsPresent condition of funnel(s) goodDid the Surveyor examine the Safety Valves of the Main Boilers? yesTo what pressure were they afterwards adjusted under steam? 105 lbDid the Surveyor examine the Safety Valves of the Donkey Boilers? —To what pressure were they afterwards adjusted under steam? —Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? yesand of the Donkey Boilers? —Did the Surveyor examine the drain plugs of the Main Boilers? —and of the Donkey Boilers? —Did the Surveyor examine all the mountings of the Main Boilers? yesand of the Donkey Boilers? —Has the screw shaft now been drawn and examined? yesHas it a continuous liner? yesIs an approved oil retaining appliance fitted at the after end? noHas shaft now been changed? no If so, state reasons —Has the shaft now fitted been previously used? —Has it a continuous liner? —Is an approved oil retaining appliance fitted at the after end? —State date of examination of Screw Shaft 25-9-49

State the wear down in the

stern bush LV. renewed Is electric light and/or power fitted? yes If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? —Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? —

Engine parts, when referred to by numbers, should be counted from forward.

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done. At this occasion of conversion to oil fuel burning the opportunity was seized to have an important part of the machinery passed for survey. The Owner requests whether this may count for the next Machinery Survey which is due 6,50 and should appreciate to hear your remarks on this point.

Vessel placed in dry dock; tailshaft drawn, transported to workshop and placed on lathe, continuous liner and forward end of shaft slightly skimmed, shaft examined and found in satisfactory condition. Neck bush & gland bush of sternland, and all lignum vitae renewed. Found stern tube & stern bush in order. Propeller (built-up type) examined and found cast iron die badly cracked inside of taper hole; a new cast iron die has been made and the 4 existing bronze propeller blades (being found in order) were fitted to same. Fitting of thus repaired propeller to taper end of tailshaft verified and found in order. Found that only one spare propeller blade is on board; an additional bronze spare propeller blade has now been ordered in his country and will be supplied shortly. Sea connections opened out, examined and found or made in order. Please see continuation sheet

General Observations, Opinion, and Recommendation: The machinery is in a good condition.

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, BS 9,11, B&MS 9,11 & LMC 9,11 or & LMC 140 lb., FD, &c.)
 CS 9,34,

I am of opinion that this vessel is eligible to remain as classed with fresh record of BS 7,49 and notation of Tailshaft seen 8,49, subject to one spare propeller blade being supplied at first available opportunity.

Survey Fee (per Section 29) £ 520.- Fees applied for 6-10 19 49
 CONVERSION FEE £ 300.-
 Special Damage or Repair Fee (if any) £ 250.-
 (per Section 29.)
 Travelling expenses (if chargeable) £ 14.- Received by me, —

Committee's Minute —Assigned —

TUES. 15 NOV 1949

As now, subject

5.8.49

BS 9,49

Fitted for oil fuel re.

Engineer Surveyor to Lloyd's Register of Shipping.

004062-004066-0099 73

Lloyd's Register
Foundation

machinery of the 5 1/2 "LEDSUND"

MAIN ENGINE entirely opened out, cylinders with cyl. covers & pistons, slide valve chests with their slide valves, crossheads with top ends, guides & guide shoes, connecting rods with bottom end bearings, and reverse link gear with their rods examined and found or brought in efficient condition. The following repairs were carried out to these parts: HP piston rod renewed, MP & LP piston rods and MP slide valve rod skimmed on lathe, all 3 crossheads skimmed on lathe and top end bearings re-metalled.

Crankshaft lifted, examined and found with journals, crankpins, and eccentric sheaves & straps in efficient condition; the journals & crankpins, being found somewhat scored, have been dressed up by hand in place. Main bearings examined; found lower halves rather worn and upper halves still in good condition. Found bearing pockets in ME bedplate (after removal of lower halves) more or less pitted; same dressed up in place and brought in alignment by grinding.

Lower halves of bearings transported to workshop, side & bottom faces machined, side faces provided with liner plates (fitted with countersunk screws) side faces again machined to exact size in order to obtain a perfect fitting into bearing pockets, bearings provided with new white metal and re-fitted on board.

Thrustshaft examined and found collar faces & bearing journals badly scored; shaft transported to workshop, entirely skimmed on lathe, re-examined and found in order; both bearings of thrust block re-metalled and adjustable white metal plates of horse-shoes machined.

Alignment of crankshaft and thrustshaft afterwards verified and found in order.

ME driven air pump and both ramtype bilge pumps opened out, examined and found in good condition.

Blown's type reverse gear, emergency reverse gear (oil hand pump type), and turning gear transported to workshop, opened out, all parts examined and found or made in order.

SUNDRIES

Evaporator opened out, all parts examined and found or made in order; cast iron front-cover of casing (being cracked) renewed, coils annealed and hydro. tested.

Fan engine opened out, examined and made in order; pistons rod skimmed and gland & neck bushes renewed.

CONVERSION TO OIL FUEL BURNING:

A Duplex Fuel Oil Burning Unit, supplied by Messrs TODD. Ltd. London. Serial N° 1227, has been fitted, consisting of:

2 vertical F.O. burning pumps (Weir's) — 1 vertical F.O. transfer pump (Weir's) — 2 vertical F.O. heaters (being found marked: N° 11903. LLOYD'S TEST. TH. III. N° 278-279. CASING 500 LBS. COIL 500 LBS. 025-4-49) — balancing suction & discharge filters.

Further the usual TODD'S Starting-up unit, consisting of a hand pump and a F.O. Heating apparatus (heated by a paraffine burner) has been fitted.

The existing furnace fronts of the main boilers were maintained, only the furnace-doors being removed and replaced by TODD'S type burner front plates.

The F.O. settling tank was made in accordance with the approved plan and afterwards hydro. tested with satisfactory results.

Please see continuation sheet.

machinery of the "5/5 Ledsund"

The pumping arrangement has been converted into the Bilge-, Ballast- and Oil Fuel pumping arrangement as per approved plan, in accordance with Secretary Letter and Society Rules. Several parts of existing piping renewed or repaired where necessary, and valves examined and found or made in order. On completion the entire piping system has been hydr. tested in place with satisfactory results, as well as the newly fitted steam heating coils in DB tanks and settling tank.

The fire extinguishing appliances have been fitted in accordance with the approved plan and were tried with satisfactory results.

Electric lighting has been fitted under the boilers, protected as per Rules.

BOILERS:

All 3 main boilers examined internally and externally and found or brought in efficient condition by carrying out the following repairs:

PORT BOILER: Both Port & Starb. furnaces, being found rather deformed, have been jacked-up and were afterwards provided with half-circumferential girders (150 x 19 mm) fitted by EW upon the upper half of their corrugations No 3-6-9. In centre combustion chamber 32 rivets (being wasted) renewed in seam of bottom & back plate. 6 screw stays, 2 plain tubes and 2 stay tubes renewed.

CENTRE BOILER: 7 screw stays and 4 stay tubes renewed

STARB. BOILER: 8 screw stays renewed

ALL 3 BOILERS: All 9 combust. chamber top plates, being found corroded, have been cut out and replaced by new material, fitted by EW to side plates and riveted to tube- & back plates; the existing girders dressed up where necessary and re-fitted with new top screw stays.

All mountings and safety valves opened out, examined and found or made in order. On completion of these repairs the boilers have been hydr. tested (all insulation stripped) with satisfactory results. New insulation was thereupon fitted.

All 3 funnel dampers (one in each uptake) have been placed in open position and sealed against closing by fitting of welded strips.

On completion of the conversion and repairs the machinery, boilers and newly fitted oil fuel burning plant have been tried under full load for several hours and found in good working condition; the safety valves were adjusted under steam.