

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

(Received at London Office)

6 JUN 1950

Date of writing Report 29TH MAY 1950 When handed in at Local Office 5 - JUN 1950 Port of NEWCASTLE-on-TYNE

Survey held at North Shields Date First Survey 6TH MAR Last Survey 11TH MAY 1950
(No. of Visits 13)

683 on the Machinery of the Wood, Iron or Steel S.S. "OAKBY" (ex "Ocean Pride" - 47)

Gross 7140 Vessel built at Portland, ME By whom Todd-Bath Iron S.B. Corp. When 1942 6
Net 4383 Engines made at Hamilton, O. By whom General Machinery Corp. When 1942 6
Nominal 505MM Boilers, when made (Main) 1942, 6 mo. (Donkey) -
se Power }
f Main Boilers 3 SB (SPT) Owners Ropner Shipping Co, Ltd. Owners' Address -
(if not already recorded in Appendix to Register Book.)
f Donkey Boilers - Managers - Port WEST HARTLEPOOL Voyage -
n Pressure -
Main Boilers 220 lb/sq. in. If Surveyed Afloat or in Dry Dock Both
(State name of Dock.) Smiths Dock Co. Ltd.
Donkey Boilers -

Report No. - Port -Particulars of Examination and Repairs (if any) +LMC, Conversion to oil fuel.

Special Surveys, when held, must be reported in detail and verification in the terms of the Rules. State clearly the cause of Repairs, if any, 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.

Where 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 -

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 " " " " " " " " " " " "

What parts of the Boilers could not be thus thoroughly examined? -

At 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? -

Latest date of internal examination of each boiler -

Present condition of funnel(s) efficient
220 lbs/sq. in.

Did the Surveyor examine the Safety Valves of the Main Boilers? Yes

To what pressure were they afterwards adjusted under steam? -

Did 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? Yes and 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? Yes and of the Donkey Boilers? -

Has the screw shaft now been drawn and examined? No Has it a continuous liner? - Is an approved oil retaining appliance fitted at the after end? -

Has the shaft now been changed? - 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 - State the wear down in the stern bush 1/8"

Is electric light and/or power fitted? Yes If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes, (see attached report.)

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 Complete

Now Done: Vessel placed in drydock, examined propeller and outside fastenings of sea connections, seawater valves (opened), after end of stern bush and all found, or placed, in good condition.

For +LMC:- The main engine examined opened up, H.P., M.P. and L.P. cylinders, pistons, rings, rods, valves and valve chambers, top and bottom end pins and bearings, crankshaft (lifted) and main bearings, bedplate, H.D. bolts and chocks, thrust block, shaft and bearings, tunnel shafting and plunger bearings, main and auxiliary condensers (tested), attached pumps viz: air, bilge and sanitary; unattached pumps viz: Circulating, ballast, general service, aux. condenser circulating, two

General Observations, Opinion, and Recommendation:- The machinery of this vessel, is in

(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 or +LMC 9,11 or +LMC 140 lb., FD, &c.)

good condition and eligible in my opinion, to remain as classed in the Register Book, with fresh record of +LMC 5, 50 and fitted for oil fuel 5, 50 F.P. above 150°.

Survey Fee (per Section 29) +LMC £ 32 0 0
ELECT. LMC. £ 5 0 0
O.F. CONVERSION. £ 15 15 0
Special Repair Fee (if any) £ 10 0 0
(per Section 29.) ELECT. REPAIRS. £ 3 0 0
CRANKSHAFT REPAIR (SUNDL. Acc.) £ 8 8 0
Vetting expenses (if chargeable) £ - 0 0

Fees applied for

-5 JUN 1950

Received by me,

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FRI. 23 JUN 1950

+LMC 5, 50

Fitted for oil fuel 5, 50 F.P. above 150°F.

CERTIFICATE WRITTEN.

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S.S. "BARBY." CONT'D

feed; and the pumping arrangements tested by pumping out.

The two dynamo driving engines, the fan engine, the steering engine and the windlass.

The steam pipes examined and a selected number over 3" bore, hydraulically tested to twice the working pressure, as required by the Rules, and found efficient.

Boilers:- The three main boilers, examined internally and externally, together with their superheaters, safety valves, mountings, manholes, doors and fastenings.

The safety valves adjusted under steam at above stated pressure.

Wear and Tear Repairs.

Main engine crankshaft, which had at some previous time been running hard against the after sides of the main bearing shells, was found badly scored and with traces of fused metal on the forward sides of the forward webs of each crank, in way of journal shrinks. Deflection and wear down readings were found to be excessive.

The crankshaft was lifted out of the vessel and forwarded to Messrs. Geo. Clark (1938) Ltd., Sunderland, to be tried in lathe and repaired as found necessary.

Extract from Sunderland Surveyor's letter dated 26TH April, 1950; reports repairs effected to crankshaft, as follows:-

"Crankshaft cut adrift.

Old dowel holes in webs welded up and webs re-bored for pins and journals. All journals and pins renewed, re-shrunk in old webs and finished complete.

Old coupling bolts re-conditioned and refitted." (See Sunderland Forgings Cert. N° F14077.)

Crankshaft subsequently returned to Messrs. Smiths Dock Co. Ltd., North Shields, and re-installed.

[CONT'D ON FOLLOWER SHEET]

S. S. "OAKBY" CONTP

all crankshaft main bearings now re-metalled, crankshaft bedded down in true alignment, top half bearings adjusted and closed up, all in good order.

Seavalses, chests cleaned out and coated, spindles freed and repacked, valves ground in and all closed up in good order.

H.P. valve chamber now re-bored and fitted with new set of rings, due to wear.

M.P. piston rod machined, due to wear.

H.P. piston rod machined, due to wear.

H.P., M.P., L.P., valve rods machined, found scored.

H.P. top end pins, found worn, now machined and bearings re-metalled.

Thrust block and shaft (found scored on collar faces) removed ashore and forwarded to Messrs. Michell Bearings Ltd., and totally overhauled and placed in good condition and refitted to place in true alignment.

Main condenser cleaned on steam and water sides, water ends and doors coated, tubes re-packed with "cranes" packing at owner's request.

aux. condenser cleaned on steam and water sides and water ends and doors coated. Water end division plate, wasted, now renewed.

Attached air pump, bucket grooves worn out on one side, now recut; head valve plate, found eroded in way of seats, now machined and new valves (Kinghorn type) fitted.

Attached bilge pump, delivery valve and seat worn and fitted, seat now machined and valve renewed; ram (worn) now machined.

Attached G.S. pump, suction valve and seat, found worn, seat machined and lid renewed.

Main circulating pump, engine cylinder re-bored and fitted with new piston, crankshaft journals machined and bearings re-metalled and refitted, all due to wear.

Ballast pump, piston and bucket rings renewed and S. & D. valves renewed and seats machined, all due to wear.

General service pump, found holed in way of water end chest and now fitted with

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complete new water end.

Port main feed pump, water end liner, found worn and now renewed.

Starboard main feed pump, chamber liner worn and now bored out and new bucket rings fitted, valve seat landings found wasted and now bored out and fitted with lantern seats.

Port dynamo engine, cylinder bored out and fitted with new piston and rings, piston and valve rods renewed, top end pin renewed and bottom end bearing retalled, all due to wear.

Starboard dynamo engine, piston valve chamber bored out and new piston valve fitted, valve rod renewed, top end pin renewed, crankshaft journals machined and bearings retalled and refitted, all due to wear.

Fan engine, piston valve spindle found worn, now renewed, and end pedestal bearing found excessively worn down and shaft scored, bearing now retalled, shaft journal dressed and shaft and bearings adjusted in true alignment.

Steering engine, control valve liner and starboard piston valve liner both now renewed due to erosion across bottom port edges, both piston rods (worn) now machined and top end pins dressed and brasses adjusted, due to wear.

Windlass, valve rods found worn were now renewed and wear ridges on valve faces ground off, piston rings renewed and bearings and guides adjusted.

For other repairs to Windlass, see report 8, accompanying this report.

Main injection pipe to main circulating pump, was found fractured, in way of branch piece, pipe now removed ashore rebrazed where fractured, and subsequently examined under hydraulic test of 50 lbs/sq. in, seen to be satisfactory and refitted to place.

Boilers. Upon examination of each boiler found a large number of plain and stay tubes and a number of screw stays, defective due to corrosion wastage on water sides. Some of

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the tubes were also found to be thin, at combustion chamber ends, and leaking. Cold seams were also found to be leaking.

The following renewals and repairs were now effected:-

PORT BOILER.

In port chamber - 24 stay tubes and 71 plain tubes renewed and 6 combustion chamber screw stays renewed.

In centre chamber - 21 stay tubes and 69 plain tubes renewed and 4 chamber back screwstays renewed.

In starbd. chamber - 24 stay tubes and 71 plain tubes renewed and 4 chamber back screwstays renewed.

On shell - front circumferential seam re-caulked where leaking and one bridal stay, on front plate, recaulked and nut rejoined.

CENTRE BOILER.

In port chamber - 20 stay tubes and 71 plain tubes renewed; 2 chamber back screwstay nuts and 1 blower housing tube nut, found burned, now renewed.

In centre chamber - 21 stay tubes and 69 plain tubes renewed.

In Starbd. Chamber - 22 stay tubes and 71 plain tubes renewed and 2 burned screwstay nuts renewed.

STARBOARD BOILER.

In port chamber - 17 stay tubes and 71 plain tubes renewed and 4 chamber back screwstays renewed.

In centre chamber - 32 stay tubes and 69 plain tubes renewed and 8 chamber back screwstays renewed.

In Starbd. chamber - 15 stay tubes and 71 plain tubes renewed and 7 chamber back screwstays and one nut, now renewed.

On shell - boiler back cross seam inboard corner, found leaking and now seal welded.

All furnaces gauged (slight distortions) copy of readings taken with Mountings, of each boiler, cleaned, overhauled as found necessary, minor repairs effected and all left in good condition.

On completion of the above mentioned boiler repairs, each boiler was subjected to a hydrostatic test of 220 lbs/sq. in, examined under pressure and found tight and satisfactory.

For repair and tests of superheater elements,

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see certificate N° C 32519, herewith.

Oil Fuel Conversion:-

The three boilers, furnaces & fronts modified to burn oil fuel, duplex oil fuel unit, transfer pump, oil fuel pressure, filling, tank and oily bilge lines and valves, oily water separator, tank pneumatic gauges, steam smothering system under boilers, extended controls to deck, all tested and installed in accordance with the requirements of the Rules and the approved plans.

In this connection the following additional auxiliaries have been fitted:-

Duplex oil fuel unit, N° F 1625 made by Messrs WallSEND Slipway & Engr. Co. Ltd. (See Certificate N° C 32621 attached herewith.)

auxiliary lighting up set N° F 1625, made by Messrs WallSEND Slipway & Engr. Co. Ltd. (See Certificate N° 32620. attached herewith.)

Two, O.F. unit pumps, made by Messrs. G. & J. Weir, Ltd. N°s 237631 & 238844.

One, "Duplex" O.F. Transfer pump, made by Messrs. Lamont & Co. Ltd. N° 21861. Size 6" x 6" x 6".

One, "Victor" type, Oily water Separator, made by Messrs. Gwyn & Silley Weir & Co. Ltd, London. N° 662.

Copy of approved plan of "Oil Fuel Pipe Arrangement," herewith.

On completion, the main boilers were tested for accumulation and found satisfactory.

The oil burning arrangements were examined under working conditions and found satisfactory.

The steam smothering was tried and fire fighting equipment examined in place, and found efficient.

All extended controls examined in place and seen to be efficient.

R. W. Skinner.

SURVEYOR TO LLOYD'S REGISTER.
NEWCASTLE-ON-TYNE.



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— 'S.S.' "OAKBY" —

SURVEY OF ELECTRICAL INSTALLATION.

No. in Reg. Bk 20683. NAME OF VESSEL
 Capacity of Installation K.W. 2-15 KWS.
 Nature of Survey L.M.C. & REPAIRS.
 No. of Visits 4. 5 Where Surveyed NORTH SHIELDS.

THE ELECTRICAL INSTALLATION EXAMINED UNDER WORKING CONDITIONS.
 GENERATORS, CABLES AND ALL FITTINGS EXAMINED, AND THE FOLLOWING REPAIRS CARRIED
 OUT: GENERATORS CLEANED AND OVERHAULED, BOTH GENERATOR ARMATURES
 STAVED. MAIN SWITCHBOARD CLEANED AND OVERHAULED. ENGINE ROOM LIGHTING
 WIRING AND FITTINGS OVERHAULED. ENGINEERS ACCOMMODATION, MIDSHIPS
 ACCOMMODATION AND CREWS ACCOMMODATION WIRING AND LIGHTING FITTINGS OVERHAULED.
 NAVIGATION LIGHTS WIRING OVERHAULED. CARGO CONNECTION BOXES, CLUSTERS AND WIRING ALL
 OVERHAULED. DECK LIGHT FITTINGS OVERHAULED AND WIRING RENEWED AS FOUND NECESSARY.
 FLOODLIGHT FITTINGS AND WIRING OVERHAULED.

ON COMPLETION OF REPAIRS ALL CIRCUITS TESTED FOR INSULATION
 RESISTANCE. GENERATORS TESTED FOR GOVERNING AND COMPOUNDING. ALL FOUND
 SATISFACTORY.

P. Store
 18th May 1950.

SURVEYOR TO LLOYD'S REGISTER,
 NEWCASTLE-ON-TYNE.



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