

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

(Received at London Office

No in  
eq. Book. Survey held at Kiel

eg. Book. Survey held at Kiel Date. First Survey 14th April Last Survey 16th October 53  
05 on the Machinery of the ~~XXXXXXXXXX~~ Steel twin screw m.v. "BROWNS BAY" (No. of Visits 74)

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Tonnage {	Gross	1722	Vessel built at	Ardrossan	By whom	Ardrossan Dockyard Ltd.	Year	1948	Month.
	Net	781	Engines made at	Glasgow	By whom	British Polar Engines Ltd.	When	1948	
Nominal Horse Power {	MN	512	Boilers, when made (Main)	-		(Donkey)	When	1948	

. of Main Boilers -  
 of Deck Boilers 1  
 Owners. Henry P. Lenaghan & Sons Ltd.  
 Managers -  
 Owners' Address -  
 (if not already recorded in Appendix to Register Book.)  
Belfast

If Surveyed Afloat or in Dry Dock both at Kieler Howaldtswerke  
 (State name of Dock.) Kiel.

Donkey Boilers 120 lbs Report No. _____ Port _____ Docking, TS, LMC, DBS and _____		CHARACTER. * for Special Survey. Date of last Survey and of _____		years signed now repaired.	Machinery and Boiler Surveys
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Periodical Surveys, (including date of N.B., if any)

\* 1,51

Damaged by Fire 3.52

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

a damage report made by anyone else? If so, by whom? .....

Donkey " yes

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

donkey 11.5.53 re-ex'd for later date of survey  
 latest date of internal examination of each boiler.....  
 on 1.8.53 Present condition of funnel(s) good  
 the Surveyor examine the Safety Valves of the Main Boilers? -

Q To what pressure were they afterwards adjusted under steam? -  
A Yes  
Q To what pressure were they afterwards adjusted under steam? 120 lbs/□"

Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? ..... , and of the Donkey Boilers? **yes**

Surveyor examine the drain plugs of the Main Boilers? ..... , and of the Donkey Boilers? **-**

Has the screw shaft now been drawn and examined? yes Has it a continuous liner? no Is an approved oil retaining device used? yes

shaft now been changed? yes If so, state reasons port shaft cracked  
starboard shaft  
taken as spare Have the shafts now fitted been previously used? no they  
no  
 approved oil retaining appliance fitted at the after end? yes State date B&S 10 6 53  
no

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

insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? yes

*e parts, when referred to by numbers, should be counted from forward. Auxiliary machinery should be referred to by position in Machinery Space.*

Survey is not complete, state what arrangements have been made for its completion and what remains to be done. complete.

DONE - Vessel placed in dry dock, P&S propellers, screw shafts, stern tubes and bushes, sea connections

LMC The following machinery parts have now been opened out, examined and found or placed in good order.

condition:- P&S main engines, all cylinder covers with valves, liners, blocks, pistons, and rods are in good condition and round or placed in good condition.

bushes, connecting rods, crank- thrust- and intermediate shafts, together with their bearings. Attached scavenge pumps in their entirety.

Both starting air compressors in their entirety.

Bilge and ballast pump.  
General service pump.

Salt water cooling pump (main)

Fresh water cooling pump (main)

**al Observations, Opinion, and Recommendation:—**  
(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Particular Specifications.)

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 140 lb., FD, &c.)

CS 3,34 The machinery of this vessel, as now seen, is in good condition.

Classification with records of † LMC 10.53, TS (OG) N 6.53 and DBS 10.53.

ee (per Section 29) ..... Reclassificat. 130.10. 0  
Fees applied for .....  
Repair Fee (if any) ..... 105. 0. 0

Required

(per Section 29.)  
 Rpt. Equipment see Rpt.13  
 g expenses (if chargeable) 31. 0. 0  
 Received by me, 19  
 TUESDAY 24 NOV 1953  
 [Signature]  
 Engineer Surveyor to Lloyd's Register of Shipping.

tee's Minute. . . . .  
+ LMC 10.53

Roth S. (N) 6, 53 (with final indentment) DB 10 53

002846-002852-0152

*Insert Character of Ship and Machinery precisely as in the Registers Book.*



For LMC etd. - Salt water cooling pump (aux.)  
 Fresh water cooling pump (aux.)  
 Both L.O. pumps  
 O.F. transfer pump  
 Feed water pump and injector  
 Both L.O. coolers  
 1 main and 1 aux. fresh water cooler  
 All (4) air receivers and mountings. All steam pipes (tested). Cascade tank.  
 Valves, cocks, pipes and strainers of pumping arrangement  
 Electrical installation  
 Windlass, steering gear and capstan  
 Both O.F. daily service tanks.

For DBS Donkey boiler examined internally and externally, together with its mountings, manhole doors and their fastenings. Safety valves adjusted under steam to the above stated pressure. O.F. burning appliances examined under working conditions and found good. Fire extinguishing arrangement verified. Control rods checked.

#### Machinery Repairs (Owners' Account)

P&S main engines and auxiliary machinery completely dismantled and re-assembled.  
 3 cylinder covers renewed, all other covers dressed and hydraulically tested.  
 All fuel injection valves renewed, all other valves dressed.  
 P. main engine No. 8 cylinder jacket, one crack metalocked. (tested)  
 P&S ME - all pistons dressed, all piston rings and all gudgeon pins and bushes renewed.  
 All connecting rod palms and all top surface of crank pin bearings machined flat.  
 4 crank pin bearings re-metalled. All other bearings dressed and adjusted.  
 P&S crank- thrust- and intermediate and screw shafts examined in lathe, for truth.  
 All coupling flanges and both thrust shaft collars machined flat.  
 All thrust and intermediate shaft journals machined true, all thrust and intermediate shaft bearings re-metalled. All coupling bolts renewed.  
 All moving parts and P&S crank and straight shafting re-aligned.  
 P&S main engine bed plate chocks and holding down bolts renewed.  
 P&S main engine driven scavenge pumps thoroughly overhauled, 500 scavenge valves renewed.  
 P&S stern tubes re-bored for alignment, P&S stern bushes (forward and aft) renewed.  
 Aft oil gland rings renewed, forward rings dressed.  
 P&S screw shafts renewed (Forging Rpt. attached). Existing starboard screw shaft machine true and placed on board as spare.  
 P&S attached L.O. pumps, gear wheel shafts and bushes renewed.

#### Auxiliary Machinery

P. forward and aft auxiliary engines: All cylinder covers, valves, liners and pistons dressed, all piston rings renewed, all camshaft bearings re-metalled, all crankshaft main and bottom end bearings adjusted.

S. forward auxiliary engine, all cylinder covers, valves, liners and pistons dressed all piston rings renewed, all camshaft bearings and all crankshaft main and bottom end bearings re-metalled, crankshaft pins and journals ground.

S. aft emergency auxiliary engine and generator (10 KW) renewed by one 2 cyls. 4 S.O. Deutz engine, No. 1377751-52, Type F2M 417, HP. 24, N = 1000 and one 16 KW DC generator. Makers: Hans Still, Hamburg, No. 515693, Type GA 230 GK/42, 230 V, 69.5 A, n = 1000

Note: Owing to difficulty in getting a Lloyd's Register tested oil engine from stock, the Owners have decided to take the above mentioned oil engine, which has been tested by G.L. The engine has been opened out and examined, the cylinders and covers hydraulically tested to 10 ATM and the crankshaft brinell tested and all found in good order.

Both starting air compressors, all piston rings renewed, all crosshead pins and bearings renewed, both crankshafts machined, crank shaft bearings re-metalled, 2 complete suction valves and all valve springs renewed.

All air coolers tested, gear wheels and shafts of attached salt water cooling pumps renewed. Salt water cooling pump (main) impeller shaft, sealing rings and bushes renewed.

Fresh water cooling pump (main) impeller and shaft machined, sealing rings, bushes and ball bearing renewed.

Salt water pump (aux.)  
Fresh water pump (aux.) ) impellers, impeller shafts, sealing rings, bushes and ball bearings renewed.

Bilge and ballast pump and general service pump impellers and shafts machined, sealing rings and bushes renewed, impellers of self priming parts renewed, housings machined.

Both L.O. stand-by pumps, gear wheel shafts renewed, neck bushes and glands re-bushed. O.F. transfer pump spindles and bushes dressed.

Sanitary pump impeller shaft, sealing rings and bushes renewed.

Feed water pump piston and bucket rods machined, neck bushes and glands re-bushed, piston and bucket rings renewed, valve chest dressed.

Main and auxiliary fresh water coolers tested.

Both L.O. coolers tested

All O.F. and L.O. filters tested, 2 L.O. filter casings renewed.

All (4) starting air receivers, a number of leaky rivets and seams caulked, all receivers hydraulically tested on completion.

P&S daily service tanks have been renewed in accordance with approved plans Nos. SKR and MR 3422, dated 3.9.53.

A number of bilge and ballast lines renewed, all pipes and valve chests of pumping arrangement overhauled and hydraulically tested on completion of repairs.

Windlass and steering gear thoroughly overhauled. Telemotor with steering wheel on board and telemotor lines to steering engine entirely renewed and tested.

Sundry minor repairs effected.

Main and auxiliary machinery including pumping arrangement, windlass and steering gear examined under working conditions on completion of repairs and left in good order.

Electrical Installation - All motors and dynamos have been re-wound and tested in accordance with Rules requirements with satisfactory results. The switchboard, all control gears, cables and fittings throughout the vessel have been renewed in accordance with approved plans No. MKE 815 and 817, dated 10.8.53 and MKE 821 dated 28.8.53, which are attached, together with the new Rpt. 13, No. 913, which cancels the existing Rpt. 13, No. 72960.

#### Boiler Repairs

A number of smoke tubes expanded.  
 Circumferential seam (top) and a number of rivets caulked. Donkey boiler hydraulically tested on completion and left in good order.