

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

(Received at London Office

24 APR 1952

Date of writing Report... 10... When handed in at Local Office... 26 MAR 1952... 10... Port of... NEWCASTLE-ON-TYNE.  
 in Survey held at... South Shields - Howden - Tyne Date... First Survey 27. 11. 51. Last Survey 7. 3. 52  
 (No. of Visits 24)

747 on the Machinery of the ~~Wood, Iron or Steel~~ SS. "BORGFRED"

Gross 1802 Vessel built at San Francisco, Cal. By whom Pacific Bridge Co.  
 Net 1500 Engines made at Alameda, Cal. By whom Pacific Bridge Co.  
 Main Power 330 MW. Boilers, when made (Main) 1948. (Donkey)  
 Owners SKibs A/S Borgholm. Owners' Address  
 (if not already recorded in Appendix to Register Book.)  
 Managers J. Gabrielsen. Port Farsund. Voyage  
 If Surveyed Afloat or in Dry Dock Both.  
 (State name of Dock.) Tyne Dock Engineering Co.  
 Main Boilers 2 WTB  
 (SPE.)  
 Donkey Boilers  
 Main Pressure 250 LB.  
 Main Boilers SPE. 220 LB.  
 Donkey Boilers

Report No. Port BS.  
 Particulars of Examination and Repairs (if any) TS: Comp. of LMC MS. O.F. Conversion: SRL

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

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.

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

Has the Surveyor personally gone inside each Main Boiler separately and made a through 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: STABP 17. 2. 52. PORT. 20. 2. 52

Has the Surveyor examined the Safety Valves of the Main Boilers? Yes. To what pressure were they afterwards adjusted under steam? MAIN 250 LB/D SPE. 220 LB/D

Has the Surveyor examined the Safety Valves of the Donkey Boilers? Yes. To what pressure were they afterwards adjusted under steam?

Has the Surveyor examined all the manholes, doors and their fastenings of the Main Boilers? Yes. and of the Donkey Boilers?

Has the Surveyor examined the drain plugs of the Main Boilers? Yes. and of the Donkey Boilers?

Has the Surveyor examined all the mountings of the Main Boilers? Yes. and of the Donkey Boilers?

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

Has the shaft now been changed? No. If so, state reasons. Has the shaft now fitted been previously used? Yes. Has it a continuous liner? Yes.

Is an approved oil retaining appliance fitted at the after end? Yes. State date of examination of Screw Shaft 1. 2. 52. State the wear down in the bush Close fit.

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.

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

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

Work Done: TS: Completion of LMC MS. Vessel placed in dry dock. Examined and found or placed in order the following machinery items: Propeller, tailshaft (drawn in) stern bush, sea connections (opened out) and outside

mountings: main engine cylinders, pistons, slide valves and chests; HP top and bottom end bearings, independent pumps, pumping arrangements (tested), main and auxiliary condensers (tested) windlasses

and the electrical installation. The main steam pipes examined and hydraulically tested as per Rules.

BS: Main boilers examined throughout with superheater, mountings, manholes doors

and fastenings and found or placed in safe working condition. Boilers subsequently examined under

steam and safety valves adjusted to pressures stated above.

O.F. Conversion: The vessel has been fitted for oil fuel burning at this time in accordance

with the approved Plans and Rule Requirements. The suction and pressure lines tested as per Rules.

The installation and the deck control gear in connection with the O.F. and steam smothering installation

examined and tested under working conditions and all found satisfactory. Particulars of the installation

are as follows: A second-hand 2nd "Babcock & Wilcox" Unit comprising 2 oil heaters, suction and

General Observations, Opinion, and Recommendation:— The machinery of the vessel, see continuation sheet

(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 CS 3,34

is now seen in efficient condition and eligible in our opinion to remain as classed with fresh

records of LMC MS. 10,51: BS. 3,52: TS (CL) 2,52 and notation "Fitted for oil fuel 3,52, F.P. above 150°F"

subject to the L.P. cylinder repair being examined before the end of March 1953 and the steering gear

union shaft and bush being specially examined and dealt with before the end of March 1952.

Survey Fee (per Section 23) TS 3 0 0. Fees applied for 23 APR 1952

Special or Repair Fee (if any) LMC 24 0 0. Received by me, 19

Travelling expenses (if chargeable) O.F. Conversion 30 0 0. TUES. 27 MAY 1952

Committee's Minute ELECTRICAL SS FEE 10 0 0.

Assigned See Lbm 8583

Delivered to T. Morris J. W. Night  
 Engineer Surveyor to Lloyd's Register of Shipping.



Port of **NEWCASTLE-ON-TYNE**

SHEET: (1)

SS. "BORGFRED"

pressure filters. Heaters & pressure filters hydraulically tested to 500 lb./sq. in. DAT. Whoyls 28.12.51.  
 suction filters "Whoyls Test 300 lb. 29.10.43." Lightning up set and hand pump "Whoyls 2.1.43."  
 2 heavy pressure pumps Nos. 165829-30. 19.43 New furnace fronts and burners supplied by  
 Le "Associated British Combustion Ltd." Oil Fuel Transfer Pump. Weir No. 260218 - Size 4 x 3 1/2 x 9".  
 "White Fox" pneumatic system (sounding) fitted to the port & starboard settling tanks.

The Unit "Babcock & Wilcox" stated as admirably examined and found in good order.  
 The L.P. cylinder repair examined and found to remain efficient. A 5/8" dia.  
 hole now drilled at the end of the crack in both top steam exhaust port locks.

It is recommended that these repairs be examined before the end of March 1953 - repair  
 considered efficient mean time. Ltr. 4 forwarded to Owners. Copy attached herewith.

Steering Gear See Cardiff Report Nos 57475 and 57505. The Owners' Superintendent stated  
 that as the steering gear had been opened out and examined at Cardiff he would request  
 that this item be accepted (for the port record of MS 10,51 as previously recommended)

See Falmouth Report 8. No. 11616

The steering gear pinion shaft and fittings  
 examined and the pinion shaft bush found to be worn. It was recommended that  
 the bush be renewed. These repairs were put in hand too late to be carried out before  
 the vessel sailed for Copenhagen and Oscarshamn. The Owners' Superintendent  
 stated that these repairs would be carried out at Oscarshamn, time permitting, or  
 on the return of the vessel to the U.K. in about 3 weeks time.

It is recommended that the steering gear pinion shaft and bush be specially  
 examined and dealt with before the end of March 1952. Steering gear tried under  
 working conditions and considered efficient mean time.

Ltr. 4 forwarded to Owners. + Cert B, placed aboard vessel. Copies attached herewith.

Repairs: - Bottom half of stern bush renewed. (WD found 1/2"). Sea connections overhauled.

Main engine: M.P. valve chest rebored and valve rings renewed. M.P. piston ring renewed. L.P. piston rings  
 and springs renewed. HP & LP crankshaft pins machined true and brasses adjusted.

Auxiliaries: Independent circulating pump: impeller shaft, found worn, renewed. Spare shaft  
 also made and placed on board. Auxiliary condenser circulating pump: Water end liners renewed,  
 Ford bucket rod renewed & piston rings renewed. Tank and bilge valves, bilge injection valve  
 overhauled. All independent pumps and dynamo engines overhauled, minor repairs effected.

Steering gear: Telemotor system renewed throughout, pipes, tanks transmitting and  
 receiving cylinders renewed and all, on completion, satisfactorily tested by Messrs Donkins & Co.

Windlars: main and top and bottom end bearings renewed

BS: 15 tubes renewed in the starboard boiler; 16 tubes renewed in the port boiler - tubes found  
 to be stoppered. Boilers cleaned by chemical process. On completion of repairs boilers hydraulically  
 tested. All mountings overhauled. Existing F.D. fans - 2 in each boiler, dispensed with and a  
 2nd hand reconditioned steam driven Howden F.D. fan complete with <sup>new</sup> air casing to boilers  
 installed at this time. All water gauge cocks renewed on boilers.

A 2nd hand reconditioned diesel generating set has been installed at this time in the port

'lineen deck: O.F. steel supply tank for the tank fitted, examined and found satisfactory.

This set has been installed for port use. (Newcastle Rpt 10. attached herewith No. C. 37783.)

A new sea suction valve fitted at port side of the engine room for the set and a new overboard  
 discharge valve for cooling water service now fitted. A new overboard discharge valve fitted on  
 the starboard side of the stokehold for O.F. transfer pump at this time.

A number of other minor repairs effected to the machinery and on completion the main  
 and auxiliary machinery tried under working conditions and found satisfactory.

(SEE CONTINUATION SHEET No. 2.)



SHEET No. 2.S.S. "BORGFRED"SURVEY OF ELECTRICAL INSTALLATION.No in Reg. Bk 35947 NAME OF VESSEL —Capacity of Installation K.W. Generators:- 2-25KW. 120volts. 1-15KW. 110volts (Diesel driven generator added, for use in port)Nature of Survey Special Survey. FIRST SURVEY 28<sup>th</sup> January LAST SURVEY 5<sup>th</sup> March,No of Visits 4 Where Surveyed South Shields No. OF VISITS four

A Special Survey of the electrical equipment was carried out, Generators, Cables, Fittings, and Main Switchboard examined.

The following repairs and modifications were carried out at this time:- Additional generator set fitted in compartment at top of engine room on port side, "Mawdsley" generator No 10052307. 15KW. 110volts 130 amps, 1100 R.P.M. driven by "Rister" diesel engine No 60/14877.

Generator connected to panel comprising D.P. Switch and fuses, Voltmeter, Ammeter, and Field Regulator, mounted in generator compartment. Panel connected to main switchboard through D.P. change-over switch, additional Voltmeter and Ammeter fitted on Main Switchboard. Cables and control gear in accordance with rule requirements.

Accommodation, Ford, Aft, and Bridge, partly rewired, alternative circuit wired for navigation lights. Motors overhauled as required, all faults on circuits and fittings rectified.

On completion of repairs installation seen under working conditions generators tested for compounding and governing, steam driven sets tried for parallel operation, circuit breaker trips tried, all circuits megger tested, and all found to be in order.

Certificate of 15KW generator set attached (No C 37783 Newcastle).

J. W. Wright  
SURVEYOR TO LLOYD'S REGISTER  
NEWCASTLE-ON-TYNE

New M.N. = 234.

Particulars of Machinery obtained for Ship's data book:

Total I.H.P. 1300. at 80 R.P.M.

Heating surface per boiler = 2400 sq. ft.

Superheater surface per boiler = 41 sq. ft.

∴ Total H.S. = 4882

D. W. Wright  
SURVEYOR TO LLOYD'S REGISTER  
NEWCASTLE-ON-TYNE