

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

(Received at London Office 19 NOV 1953)

NEWCASTLE-ON-TYNE.

Date of writing Report 16<sup>th</sup> NOVEMBER 1953 When handed in at Local Office 16<sup>th</sup> NOVEMBER 1953 Port of  
 No in Reg. Book. Survey held at HEBURN - ON - TYNE Date. First Survey 12<sup>th</sup> MAY 1953 Last Survey 6 NOVEMBER 1953 (No. of Visits 43.)  
 01459 on the Machinery of the ~~Wood, Iron or Steel~~ M.V. "ARNDAL" Year. Month. 1937 9

Tonnage { Gross 8503 Vessel built at NEWCASTLE By whom SWAN HUNTER & WIGHAM RICHARDSON LTD  
 Net 5011 Engines made at SUNDERLAND By whom W<sup>m</sup> DOXFORD & SONS LTD. When 1937  
 Nominal Horse Power Owners THE ADMIRALTY Owners' Address (if not already recorded in Appendix to Register Book.)  
 Port LONDON Voyage MALTA  
 No. of Main Boilers 1 Managers 1  
 No. of Donkey Boilers 2 # Surveyed Afloat or in Dry Dock BOTH (State name of Dock.) PALMERS HEBURN CO., LTD.  
 Steam Pressure in Main Boilers in Donkey Boilers 150 lbs

Particulars of Examination and Repairs (if any) DAMAGE. DOCKING. DBS PART LMC CS  
 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 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 details of any letters respecting this case.

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 offered not required

Is a damage report made by anyone else? If so, by whom? No

Did the Surveyor personally go inside each Main Boiler separately and make a through examination at this time? Yes

Did the Surveyor personally go inside each Donkey Boiler separately and make a through examination at this time? Yes

What parts of the Boilers could not be thus thoroughly examined? Not stated for what reasons

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? Not stated

What was the latest date of internal examination of each boiler? 27<sup>th</sup> MAY 1953; 24<sup>th</sup> JUNE 1953 Present condition of funnel? Efficient

Did the Surveyor examine the Safety Valves of the Main Boilers? Yes To what pressure were they afterwards adjusted under steam? 150 lbs / 10"

Did the Surveyor examine the Safety Valves of the Donkey Boilers? Yes To what pressure were they afterwards adjusted under steam? 150 lbs / 10"

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes and of the Donkey Boilers? Yes

Did the Surveyor examine all the manholes, doors and their fastenings of the Donkey Boilers? Yes and of the Donkey Boilers? Yes

Did the Surveyor examine the drain plugs of the Main Boilers? Yes and of the Donkey Boilers? Yes

Did the Surveyor examine the drain plugs of the Donkey Boilers? Yes and of the Donkey Boilers? Yes

Did the Surveyor examine all the mountings of the Main Boilers? No Has it a continuous liner? Yes Is an approved oil retaining appliance fitted at the after end? No

Did the Surveyor examine all the mountings of the Donkey Boilers? No Has it a continuous liner? Yes Is an approved oil retaining appliance fitted at the after end? No

Has the screw shaft now been drawn and examined? No Has the shaft now fitted been previously used? Yes Has it a continuous liner? Yes

Has the shaft now been changed? No If so, state reasons State date of examination of Screw Shaft State the wear down in the stern bush 3/32"

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

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

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

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done. The owners superintendent states that the LMC CS would be advanced as the opportunity occurs.

## LEITH REPORT N° 22998

Damage to the main engine crankshaft journals and crank pins stated to have been sustained following the engine room having been flooded to sea level, whilst the vessel was on passage in ballast from the River Tyne to Curacao on the 19<sup>th</sup> January 1952.

Now DONE FOR DAMAGE: - All (5) main engine crankshaft journals and all (4, Centre and 8 side) crank pins and bearings opened out examined and found as follows. (CONTINUED ON FOLLOWERS 1, 2 & 3)

General Observations, Opinion, and Recommendation: - The machinery of this vessel so far as was seen is in a safe working condition, eligible in our opinion to remain as classed, and have fresh record of DBS 7.53 now and LMC CS with date when the survey has been completed.

Survey Fee (per Section) 63-0-0  
 Special Damage or Repair 15-0-0  
 Travelling expenses (if chargeable) 10-0-0  
 Committee's Minute 10-0-0  
 Assigned 6-0-0

Fees applied for 19 NOV 1953  
 Received by me, J.W. Walker

J.W. Walker for W.G. Wilson & Self  
 Engineer Surveyor to Lloyd's Register of Shipping.

TUESDAY 22 DEC 1953

Lloyd's Register Foundation

002754-002761-0120



19 NOV 1953

NEWCASTLE-ON-TYNE.

Continuation of Report No. 110923 dated 16<sup>th</sup> November 1953, on the

MV. ARNDAL

(CONT'D)

FOLLOWER 1.

All journals generally pitted, and minor local pitting in the centre and side crank pins.

Crankshaft removed and forwarded to the engine builders Wm Daxford & Sons Ltd for machining and dressing.

All journals machined and pittings removed, crank pins honed and polished and pitting removed.

Crankshaft flexible coupling after flange found fractured from one bolt hole to outer edge of flange a new flexible coupling marked as follows.

W.H.O.'s 4379 FS 17/10/38 J.L. (S.D.) 30/9/53.

fitted, following the machining of the adjacent crank web faces the bolt holes reamed and new bolts fitted.

Copy of Sunderland test certificate N° 3706 attached

Copy of Dusseldorf test certificate N° 43940 attached.

All (5) crankshaft journal bearings and all 4 centre and 8 side crank pin bearings reinstalled.

All sole plate plate checks and holding down bolts removed. checks having greater surface area being fitted at owners request.

Crankshaft lined off to intermediate and screw shaft shaft and tested for length with NEM line and left in good order. Minor repairs effected.

Now Done Part LMC CS :- Vessel placed in dry dock, propeller stem bush and outside fastenings examined.

Sea connection inlets and discharges opened out examined and found as placed in good order.

Main engine attached S.W. circulating pump high injection valve of fabricated steel, removed at owners request and replaced with a bronze valve hydraulically tested and found tight. Vess down as above.

The owners representative requests that the items now examined for damage be credited towards the continuous survey of machinery.

All (N°s 1,2,3 & 4) Main engine cylinders, cross valves and valve gears, transverse beam pins and bearings, upper and lower pistons and rods, opened out examined and found as placed in good order.

N°s 2 & 4 Main engine side rods centre and side crossheads and bearings opened out examined and found as placed in good order.

L. W. H. M. S. H. A. D.

(CONTINUED ON FOLLOWER 2 & 3.)

SURVEYOR TO LLOYD'S REGISTER.

NEWCASTLE-ON-TYNE.

0120 2/5



MV. "ARNDAL" (CONT'D)

FOLLOWER 2.

N<sup>os</sup> 1 & 3 main engine centre cross heads and bearings opened out examined and found or placed in good order.

Thrust block, shaft and bearings opened out, examined and found, or placed in good order.  
Minute scores in thrust collar bearing surfaces machined out, and all pads renewed.

Main engine attached, lubricating oil pump, fresh water circulating pump, and sea water circulating pump, all opened out examined and found or placed in good order.

Fresh water pump liner and bucket worn, both renewed.

Port and Starboard air compressors, together with their steam driving engines and intercoolers, opened out examined and found or placed in good order.  
Intercoolers hydraulically tested and found tight.  
one intercooler casing previously patched renewed.

Steam dynamo (30K.W) engine and diesel dynamo (30K.W) engine opened out examined and found or placed in good order.

Auxiliary condensers opened out examined and found or placed in good order, hydraulically tested and found tight, on completion of regainting both tube plates and renewing approx 90% of (thin) tubes.

The following independent pumps, bilge, ballast and G.S. pump, opened out, examined and found or placed in good order.

Lubricating oil and fresh water coolers opened out examined and found or placed in good order.  
Lubricating oil cooler tubes leaking owners new spare tube stock fitted.

Windlass engine opened out, examined and found or placed in good order.  
Cylinder block cracked, and crank shaft pinion worn, both renewed.

L. W. Hornshaw

(CONTINUED ON FOLLOWER 3.)

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

0120 13/51



MV. "HRNDALÉ" (CONT'D)FOLLOWER 3.

Now Done:- Port and Starboard donkey boilers examined in their entirety together with the safety valves and mountings and the safety valves adjusted under steam to the pressure stated above. Safety valves adjusted 17/7/53 and date of DBS 753 recommended as boilers have been continuously under steam since that date.) Oil fuel unit examined under working conditions. The oil fuel pipes between the pumps and the furnaces are in good condition, accessible, visible and well lighted for their entire length and the joints are tight. Fuel tank valves and their deck controls examined and listed and left in good order. Steam smothering installation listed and left in good order. Minor Repairs effected.

MAIN ENGINE HEAVY OIL FUEL CONVERSION

Now Done:- The owners have now fitted an installation to enable bunker fuel to be used in the main engine. The installation has been fitted and tested in accordance with the rules and the approved plans. Upon completion of these alterations the main engine was operated on heavy fuel during basin trials and found satisfactory.

The auxiliaries fitted in conjunction with these alterations are as follows.

Two De Laval separators N° 2784699 & N° 2784700

Two Heaton oil fuel heaters N° BD.74532.

Copy of London, list certificate N° D29054 attached.

The attached plans covering the alterations are as follows.

APPROVED PLANS

Diesel and heavy oil piping arrangements.

Steam and exhaust piping arrangements.

Purified and dirty oil tanks.

AS FITTED PLANS

Diesel and heavy oil fuel piping arrangements.

Steam and exhaust piping arrangements.

Main and auxiliary machinery examined under working conditions during extensive basin trials and all left in a safe working condition.



M.V. "ARNDALE"

## SURVEY OF ELECTRICAL INSTALLATION

No in Reg. Bk 01959

NAME OF VESSEL Arndale

Capacity of Installation K.W. -

Nature of Survey Additions for fuel oil conversion.No of Visits 6Where Surveyed Palmas Co. Ltd., Hebburn-on-Tyne.

Attended vessel at Owners Representative's request and examined the following additions which were carried out this time.

Two 7.5 HP 60.5 amps 110V 0.010 D.C. motors & control gear fitted in engine room for fuel oil conversion carried out this time & connected to section box now installed in workshop flat, with 71.064 VCLC cables. Section box connected to D.P. switch & fuses added to main switchboard with 19.083 VCLC cable. Minor alterations to main switchboard & minor repairs to accommodation lighting wiring also carried out.

On completion of the work, the above was tested for insulation resistance & seen under working conditions. All found satisfactory.

W. Mann

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

Elec. add. = £6