

/NK

Rpt. 9

19 APR 1960

20 APR 1960

Date of writing report 14.4.60.

Received London

Port NEWCASTLE UPON TYNE

No.

116 968

Survey held at NORTH SHIELDS

No. of visits 10

First date 11.3.60.

Last date 7.4.60.

REPORT OF PERIODICAL SURVEYS & REPAIRS OF MACHINERY

No. in R.B. 02892 Name "AURIS"

Gross tons 8269 Date of build 4-1948

Owner Shell Petroleum Co. Ltd.

Managers -

Part of Registry London

Engines made 8-59 By British Thompson Houston Ltd.

Type Gas turbine DR geared hydraulic clutch

No. of Main Engines 1 No. of Screws 1

Records of Survey & Special Notations as per Register Book

No. of Main Boilers - W.P. -

No. of Aux. Boilers 2 W.P. 180 lb.

Surveyed Afloat or in Dry Dock Both

Nature of Survey Part C.S., A.B.S., Repairs

Was Damage Report issued? No Int. Cert.? Yes

Last Report (For Head Office only)

+100A1

oil tanker

+ LMC

+ NE 8-59

A 4.59 NA (WT) 8.59

CL 8-59

sps 4-58

Now

The condition of any of the following items is to be described as "good" only when the part has been examined, found or placed in good condition, and is considered to be acceptable until the due date of the next Periodical Examination. Where it is considered that re-examination or repairs should be effected before the due date of the next Periodical Examination a distinguishing mark thus † should be inserted against the item and the circumstances and action recommended described fully under "defects and repairs". At part or complete Special Surveys those items which are not applicable to the ship should be cancelled with a black line; this need not be done when the machinery is on a continuous survey basis. When any part has been subjected to pressure test this should be stated. Engine parts when referred to by numbers should be counted from forward.

DOCKING Propellers Good Wear Down of Stern Bushes 3/32" Oil Glands Sea Connections

Fastenings Good Has Screwshaft been drawn? No Date of Examination Has Shaft been changed?

Has Shaft now fitted been previously used? Has Shaft now examined/fitted a continuous liner? Approved oil gland?

MAIN ENGINES (Recip. Steam or I.C.) PORT STARBOARD

1 Cyls., Covers, Pistons & Rods

2 Valves & Gears

3 Connecting Rods, Top Ends & Guides Side Centre

4 Crankpins & Bearings Side Centre

5 Journals & Bearings

MAIN ENGINE DRIVEN AIR COMPRESSORS

6 Cyls., Covers, Pistons & Rods

7 Connecting Rods & Top Ends

8 Crankpins & Bearings

9 Journals & Bearings

10 Gaskets & Safety Devices

MAIN ENGINE DRIVEN SCAVENGE PUMPS

11 Cyls., Covers, Pistons & Rods

12 Connecting Rods & Top Ends

13 Crankpins & Bearings

14 Journals & Bearings

15 Levers

16 SCAVENGE BLOWERS

17 SUPERCHARGERS

MAIN TURBINES

18 Casings, Rotors, Blading, Bearings & Thrusts H.P.*

19 EXHAUST STEAM TURBINES (WITH RECIP. ENGINES)

20 STEAM COMPRESSORS

21 CLUTCHES & HYDRAULIC COUPLINGS

22 REDUCTION GEARING

23 THRUST BLOCKS, SHAFTS & BEARINGS

24 INTERMEDIATE SHAFTS & BEARINGS

25 HOLDING DOWN BOLTS & CHOCKS

26 CONDENSERS (MAIN & AUX.)

27 STEAM RE-HEATERS

28 DE-SUPERHEATERS

29 STOP & MANOEUVRING VALVES

30 MAIN ENGINE DRIVEN PUMPS

31 CRANKCASE DOORS & EXPLOSION RELIEF DEVICES

Have Main Engines been tested working and manoeuvring? Yes

OPINION OF MACHINERY AND RECOMMENDATIONS

The machinery of this vessel, so far as now seen is in safe working condition and eligible in our opinion to remain as now classed with fresh record of ABS (Scotch) 4.60 (vessel laid up pending fabrication and fitting of redesigned diffuser plate).

Date of Committee MONDAY 13 JUN 1960

Decision As above subject

ABS (Scotch) 4.60

10m. 6.56. T. (MADE AND PRINTED IN ENGLAND.)

C.R. Rowcliffe

R.P. Frazer

C.R. Rowcliffe R.P. FRAZER



Lloyd's Register Foundation

If certificate is required state where to be sent

32 Essential Independent Pumps (Identify by position) Frd. (No.1) L.O. pump - Good
33 Bilge, Ballast & Oil Fuel Suction Lines, Fittings & Controls
34 Have the remaining Piping Arrangements & Fittings in the machinery space been examined as considered necessary?
35 Fresh Water Coolers 36 Lub. Oil Coolers Frd. - Good (tested) 37 Heaters (state service)
38 Independent Air Compressors, Coolers & Safety Devices
39 Air Receivers & Safety devices - Main 40 Auxiliary
41 Oil Fuel Tanks (Not forming part of hull structure)
42 Evaporators 43 Have Evaporator Safety Valves been tested under steam?
44 Steering Machinery 45 Windlass 46 Fire Extinguishing Arrangements

AUXILIARY ENGINES (Identify by position)

PROPULSION		ELECTRICAL EQUIPMENT	
PORT	STARBOARD		AUXILIARY EQUIPMENT
a Generators			1 Generators & Governors
b Exciters			m Motors
c Air Coolers			n Switchboards & Fittings
d Motors			o Circuit Breakers
e Air Coolers			p Cables
f Control Gear, Cables, etc.			q Insulation Resistance
g Insulation Resistance			r Steering Gear Generators and Motors
A Insulating Oil Test			s Navigation Light Indicators
i Overspeed Governors			
j Magnetic Couplings			
k Air Gap			

BOILERS OPENED UP & EXAMINED (Identify by position and state latest date of internal examination of each boiler)

MAIN AUXILIARY, DUMFRIES SCOTCH - Good
1.4.60.
Superheaters
Safety Valves
Mountings, Doors & Fastenings
Safety Valves Adjusted to { Set
Spt
Boiler Securing Arrangements
Main Economisers Exhaust Gas Heated Economisers
Steam Heated Steam Generators Steam Generator Safety Valves Adjusted to
Were Oil Burning System & Remote Controls examined working in accordance with Rules? Yes Good Forced Circulating Pumps
Have Saturated Steam Pipes in cylindrical boiler smoke boxes been examined as required by Rules? Funnel Good

EXAMINATION & TESTING OF STEAM PIPES (State material)

Main Auxiliary (over 3 in. bore)
Were Copper Pipes annealed? Have Saturated Pipes in cylindrical boiler smoke boxes been tested?

PARTICULARS OF DEFECTS & REPAIRS, ETC. (Damage repairs should be detailed separate from wear and tear repairs; state what action has been taken regarding items which are subjects of class)

*H.P. turbines:- At Owners request it was agreed to examine the H.P. turbine without lifting the top casing. The inlet blades were examined by entering the combustion chamber and sighting through the inlet scroll plate. The outlet blades were examined by removing the flame tubes connecting H.P. to L.P. turbine. All blades as seen were in good condition with a slight deposit over surfaces. Three slight thermal surface fractures found in way of inlet scroll plate. It is considered that these do not affect the strength of the scroll plate. It is considered that the H.P. turbine may be credited towards the C.S. cycle.

L.P. Compressor:- The L.P. compressor was opened out to fit strain gauges to the blades. It was found that one fixed blade in the present last row was broken off at its root. (The 11th and 12th rows had been previously removed due to failure of the compressor rotor blades)
The remaining blades in this row were crack detected and found sound. It was decided to leave the fitting of a new blade until the strain gauge tests were completed.

Continued ...

Survey fees Part C.S. £25-0-0
A.B.S. £8.0.0.

Damage fee
Expenses...

Date when A/c rendered 19 APR 1960



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Foundation

20 APR 1960

Port of NEWCASTLE-ON-TYNE.Continuation of ~~Ship~~/Mchy. Report No.

dated

G.T.S.
on the ~~S.S. "AURIS"~~ "AURIS"

It was stated by the Owners and makers representatives that the failure of this blade and the previous failure of the 11th and 12th rows may have been caused by vibrations imposed on these blades by the outlet diffuser plate. Engine trials were subsequently held and in the Makers and Owners opinion, the instrument readings taken show that the diffuser plate is affecting the last row of compressor blades. The vessel has now been laid up at Tyne Dock until a modified diffuser has been made, this will take about one month. The Owners state drawings of the new part will be sent to the Society's London Office.

WASTE HEAT BOILER: Stated tubes have been vibrating in service.

A flat bar has been welded to top row to prevent further vibration. Boiler tested and found tight.

H.P. Turbine Clearances.Stage One

Top 0.087"

Above horizontal joint 0.063"

Below " " 0.060

Bottom 0.084

Stage Five

Top 0.060"

Port 0.075"

Star. 0.035"

L.P. COMPRESSOR LOWER HALF CASING