

REPORT ON OIL ENGINE MACHINERY.

25 FEB 1955 No. 112200
27 APR 1955

Received at London Office

NEWCASTLE-on-TYNE

of writing Report

When handed in at Local Office 22.2.1955 Port of

in Survey held at

Date, First Survey 19-11-53 Last Survey 8-2-1955

Book 744 S. Single
on the Tonnage
Register
Quadruple

Screw vessel

M.V. "SCOTTISH HAWK"

Tons Gross 11250
Net 6420

It at Greenock

By whom built The Greenock Dockyard Co. Ltd.

Yard No. 483

When built 1955

Engines made at

By whom made

Engine No. 1058

When made 1955

Key Boilers made at

By whom made

Boiler No. 1058

When made 1955

Horse Power

Owners Scottish Tanker Co. Ltd.

Port belonging to

Glasgow

as per Rule 1280

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

de for which vessel is intended

4 ENGINES, &c. — Type of Engines

Walhard Slipway - Oxford

2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders

610 lb/sq. in.

Diameter of cylinders 670 mm Length of stroke 2720 mm No. of cylinders Six No. of cranks Six (three)

Indicated Pressure

85 lb/sq. in.

Span of bearings (i.e., distance between inner edges of bearings in

of a crank)

Between each three three

Revolutions per minute { Maximum 115 Service 115

Wheel dia. 5'-7"

Weight 6 tons

Means of ignition Ignition

Is there a bearing between each crank

4.52 x 10⁶

Kind of fuel used Diesel Oil + Heavy (Bulb grade) oil

Solid forged

All over

Mid. length breadth 754 mm Thickness parallel to axis 300 mm

Semi built

530 mm

Mid. length thickness 300 mm Thickness around eye hole 221 mm

All built

Crank pin dia. 530 mm

Crank webs

Wheel Shaft, diameter

Intermediate Shafts, diameter

Thrust Shaft, diameter at collars

Screw Shaft, diameter

Screw Shaft, diameter

Is the shaft fitted with a continuous liner

Liners, thickness in way of bushes

27/32"

Thickness between bushes 13/16"

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

Yes

Is an approved Oil Gland fitted at the after

If two liners are fitted, is the shaft lapped or protected between the liners

Yes

Is the after end of the liner made watertight in the

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-

Yes

Length of bearing in Stern Bush next to and supporting propeller 6'-0 7/8"

If so, state type

No. of blades 16

Material Bronze whether moveable No. Total developed surface 132 sq. feet

Pitch 12'-8"

Including entrained water (lbs. in² or Kg. cm²) 80.3 x 10⁶

Kind of damper, if fitted None

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine

Yes

Thickens of cylinder liners

25 mm

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled

Yes

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

Cooling Water Pumps, No. and how driven

Working F.W.

Spare F.W.

S.W.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps worked from the Main Engines, No. and capacity

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and capacity of each

How driven

If the cooling water led to the bilges

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

Last Pumps, No. and capacity

Power Driven Lubricating Oil Pumps, including spare pump, No. and size

two independent means arranged for circulating water through the Oil Cooler

and size:—In machinery spaces

In pump room

holds, &c.

Branch Bilge Suctions

ect Bilge Suctions to the engine room bilges, No. and size

All the bilge suction pipes in holds and tunnel well fitted with strum-boxes

Are the bilge suction pipes in the machinery spaces led from easily

possible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are they fitted with valves or cocks

Are they fixed

all Sea Connections fitted direct on the skin of the Ship

Are the overboard discharges above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are the blow off cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per Rule

all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times

Is the shaft tunnel watertight

Is it fitted with a watertight door

the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery

worked from

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

No. of stages Three

diameters 12 3/4, 10 1/4, 3" stroke 7" driven by Steam engine

in Air Compressors, No.

No. of stages

diameters

Auxiliary Air Compressors, No.

No. of stages

stroke

All Auxiliary Air Compressors, No.

No. of stages

stroke

provision is made for first charging the air receivers

Driven by

How driven

enging Air Pumps or Blowers, No.

3-1700 mm x 548 mm

Engine Nos.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

D. & B. Hale & Co. Ltd.

Lloyd's Register Foundation

Auxiliary Engines

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

Have they been made under survey

Position of each in engine room

Report No.

Makers name

Position of each in engine room

Report No.

AIR RECEIVERS:—Have they been made under survey *Yes* State No. of report or certificate *Nme*
State full details of safety devices *Reusable Plug fitted to each air receiver*

Can the internal surfaces of the receivers be examined and cleaned *Yes* Is a drain fitted at the lowest part of each receiver *Yes*

Injection Air Receivers, No. *✓* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*

Seamless, welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *✓*

Starting Air Receivers, No. *Two* Total cubic capacity *360 c.ft.* Internal diameter *5'-0"* thickness *17/32"*

Seamless, welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *Shell 32/36 Ton/10"* Working pressure *600 lbs*

IS A DONKEY BOILER FITTED *Yes, two* If so, is a report now forwarded *Yes*

Is the donkey boiler intended to be used for domestic purposes only *Mr. Rankin*

PLANS. Are approved plans forwarded herewith for shafting *Rankin* Receivers *Yes* Separate fuel tanks *✓*

Donkey boilers *Yes* General pumping arrangements *✓* Pumping arrangements in machinery space *✓*

Oil fuel burning arrangements *✓*

Have Torsional Vibration characteristics been approved *Yes* Date and particulars of approval *17/12/53*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* State if for "short voyages" only *✓*

State the principal additional spare gear supplied *✓*

The foregoing is a correct description and the particulars of the engine are as approved for
FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED Manufacturer. *Torsional Vibration characteristics*

Dates of Survey while building
During progress of work in shops - *MANAGING DIRECTOR (1953) Nov. 19, 24, 30, Dec. 1, 18, 22 (1953) Jan. 23, Feb. 17, 1954, 21, Apr. 1, 8, 28, 29, 1954*
During erection on board vessel - *5.12.19, Jun. 3, 4, 10, 17, 21, 24, 30, Jul. 1, 8, 18, 14, 18, 16, 19, 20, 21, 23, 27, 28, 29, 30, Aug. 28, 29, 30, 31, Sep. 1, 2, 8, 9, 10, 13, 17, 20, 21, 22, 23, 29, Oct. 1, 4, 5, 6, 8, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 25, 27, 28, Nov. 8, 9, 17 (1953) Jan. 12, 13, Feb. 8*
Total No. of visits *84*

Dates of examination of principal parts—Cylinders *19-8-54 To 27-9-54* Covers *✓* Pistons *5-10-54 To 22-9-54* Rods *22-9-54* Connecting rods *13-9-54*

Crank shaft *1-9-54* Flywheel shaft *✓* Thrust shaft *1-9-54* Intermediate shafts *✓* Tube shaft *✓*

Screw shaft *✓* Propeller *✓* Stern tube *TESTED 12/11/54* Engine seatings *✓* Engine holding down bolts *✓*

Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *(SHOP) 9-11-54*

Crank shaft, material *Steel* Identification mark *F.R.A. Section 1-110405 SLD 202 S.L. COUPLING. LLOYDS 46713 CD 3-2-54 SLD*

Thrust shaft, material *Steel* Identification mark *LLOYDS 46767 CD 15-12-53*

Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *✓* Identification mark *✓*

Identification marks on air receivers *LLOYDS HWC TESTED 800 LBS WP 600 LBS 18-11-54 S.B.*

Welded receivers, state Makers' Name *✓*

Is the flash point of the oil to be used over 150°F *✓*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *✓*

Full description of fire extinguishing apparatus fitted in machinery spaces *✓*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *✓* If so, have the requirements of the Rules been complied with *✓*

What is the special notation desired *✓*

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with *✓*

Is this machinery duplicate of a previous case *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.) *This main engine has been constructed under Special Survey in accordance with the requirements of the Rules and the approved plans.*

The materials and workmanship are good.

The engine has been tested in the shop under full load and found satisfactory and has been despatched to Greenock for installation on board.

Welded Construction = 85 1/2 tons.

The amount of Entry Fee ... £ *238-0-0*

Special Air Rec^{rs} ... £ *12-0-0* When applied for *24 FEB 1955*

Welded Construction^{rs} ... £ *22-15-0* When received *19*

Donkey Boiler Fee ... £ *22-15-0*

Travelling Expenses (if any) £

Committee's Minute

Assigned

GLASGOW 26 APR 1955

SEE ACCOMPANYING MACHINERY REPORT

AGC 3-5-55

Engine Surveyor to Lloyd's Register of Shipping

Lloyd's Register Foundation