

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 74842

Received at London Office 8 DEC 1949

Date of writing Report 5.12.49 19 When handed in at Local Office 5.12.49 19 Port of Changow

No. in Survey held at Changow Date, First Survey 24-1-49 Last Survey 24-11-1949

Reg. Book. on the Single Twin Triple Quadruple Screw vessel M. V. "British Captain" Number of Visits 8 Gross 8,400 Net 7,400

Built at Grassow By whom built Harland & Wolff Ltd. Yard No. 1394/2 When built 1949

Owners British Tanker Co. Ltd. Port belonging to London

Oil Engines made at Changow By whom made Harland & Wolff Ltd. Contract No. 1394/1 When made 1949
Engine No. 1601/2

Generators made at Belfast By whom made Do Contract No. 1394/1 When made 1949
Generator No. 8491/2

No. of Sets 2 Engine Brake Horse Power 110 M.N. as per Rule 24.5 Total Capacity of Generators 150 Kilowatts.

Is Set intended for essential services Yes

OIL ENGINES, &c.—Type of Engines Heavy Oil Diesel Injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 800 lbf/sq. in. Diameter of cylinders 250 mm Length of stroke 300 mm No. of cylinders 5 No. of cranks 3

Mean indicated pressure 100 lbf/sq. in. Firing order in cylinders 1-3-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 308 mm

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 364.5 KM² Revolutions per minute 500

Flywheel dia 1140 mm Weight RM 1402 Kgs Means of ignition Compression Kind of fuel used Heavy Oil

Crank Shaft, dia. of journals as per Rule 180 mm Crank pin dia. 165 mm Crank Webs Mid. length breadth 230 mm Thickness parallel to axis SOLID FETTERED
as fitted Mid. length thickness 80 mm Thickness round eye-hole as fitted

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted General armature, moment of inertia (16 m² or Kg.-cm.²) as fitted

Are means provided to prevent racing of the engine when decoupled Yes Means of lubrication Grease Kind of damper if fitted NONE

Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Cooling Water Pumps, No. Driven by Engine 1 Centrifugal 600 lbf/sq. in. @ 1929 R.P.M. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size Driven by Engine 1. Gear Type 2.6 lbf/sq. in. @ 500 R.P.M.

Air Compressors, No. Two No. of stages Two Diameters 280-325 mm Stroke 130 mm Driven by Steam

Scavenging Air Pumps, No. as fitted Diameter as fitted Stroke as fitted Driven by as fitted

AIR RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate Report X. 140

Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes [Block]

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Remove Deposit Valve

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. as fitted Cubic capacity of each as fitted Internal diameter as fitted thickness as fitted

Seamless, lap welded or riveted longitudinal joint as fitted Material as fitted Range of tensile strength as fitted Working pressure by Rules as fitted

Starting Air Receivers, No. One Total cubic capacity 150 lbf/sq. in. Internal diameter 14 1/4" thickness 3/8"

Seamless, lap welded or riveted longitudinal joint as welded Material as fitted Range of tensile strength 28-32 1/2" Working pressure by Rules APP?

ELECTRIC GENERATORS:—Type Imp. Prof.

Pressure of supply 110 volts. Full Load Current 682 Amperes. Direct or Alternating Current Direct

If alternating current system, state the periodicity as fitted Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown on and off Yes Generators, are they compounded as per Rule is an adjustable regulating resistance fitted in series with each shunt field

Are all terminals accessible, clearly marked, and furnished with sockets as fitted Are they so spaced as fitted

or shielded that they cannot be accidentally earthed, short circuited, or touched as fitted Are the lubricating arrangements of the generators as per Rule as fitted

If the generators are under 100 kw. full load rating, have the makers supplied certificates of test as fitted and do the results comply with the requirements as fitted

If the generators are 100 kw. or over have they been built and tested under survey as fitted

Details of driven machinery other than generator NONE

PLANS.—Are approved plans forwarded herewith for Shafting 19.6.48 Receivers 29.4.49 Separate Tanks 18.1.49
(If not, state date of approval) 12

Have Torsional Vibration characteristics if applicable been approved Yes (state date of approval) 12 Armature shaft Drawing No. as fitted

SPARE GEAR Yes with additions

The foregoing is a correct description,

For HARLAND AND WOLFF, LIMITED

Manufacturer.

Emulation Secretary

002938-002946-0151

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Lloyd's Register
Foundation

During progress of work in shops - - }
Dates of Survey while building }
During erection on board vessel - - }
Total No. of visits

See J.E. Machy. rpt.

Dates of Examination of principal parts—Cylinders 4.5.49 Covers 9.5.49 Pistons 25.5.49 Piston rods ✓

Connecting rods 25.5.49 Crank and Flywheel shafts 4.2.49 Intermediate shafts ✓

Crank shaft Material S.M.S. Tensile strength 29.6/30.8 1/2"
Elongation 33% Identification Marks See Below

Flywheel shaft, Material ✓ Identification Marks ✓

Identification marks on Air Receivers NO 452: 21 cyls test 58H.185/D: W.P. 356.185/D: R.O.B. 20.V.49

Is this machinery duplicate of a previous case Yes If so, state name of vessel M.V. "British Triumph"

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These Auxiliary engines have been constructed under Special Survey in accordance with the Rules, Approved Plans and Secretary's Atlas

Materials and workmanship are good

These units have been efficiently installed in the vessel, tested under full working conditions satisfactorily. Torsional vibration characteristics approved for a service speed of 500 R.P.M.

Crank shaft marks:-

Engine No 1601

Engine No 1602

21 cyls

21 cyls

S 806

S 805

T.D.S

T.D.S

10.6.48

14.6.48

N.C.S

N.C.S

4.2.49

4.2.49

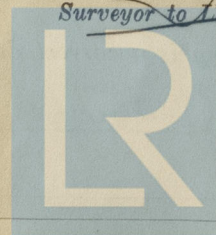
Remaining forging reports common to 1394/1 and No's 1398/1, 1399/1 to follow, will be forwarded on completion of same.

The amount of Fee ... £ 11 : - : - When applied for 19
Travelling Expenses (if any) £ 3 : : : When received 19

Committee's Minute GLASGOW - 7 DEC 1949

Assigned SEE ACCOMPANYING MACHINERY REPORT

B. Clive Sumner
Surveyor to Lloyd's Register of Shipping.



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