

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 15464

Received at London Office.

22 NOV 1932

Report 19 When handed in at Local Office 19 Port of BELFAST
 Survey held at BELFAST Date, First Survey Last Survey 19
 Number of Visits
 on the Single Screw vessel S.S. "BRAEMAR CASTLE" Tons Gross 17029
 Triple Net 9490
 Quadruple
 BELFAST By whom built HARLAND & WOLFF LTD. Yard No. 1459 When built 11/52
 ON CASTLE MAIL S.S. CO. LTD. Port belonging to LONDON
 Made at BELFAST By whom made HARLAND & WOLFF LTD. Contract No. 1459 When made 11/52
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 3 ✓ Engine Brake Horse Power 660 M.N. as per Rule 132 Total Capacity of Generators 450 EACH Kilowatts.
 Used for essential services. YES

YES, &c.—Type of Engines HEAVY OIL WITH EXHAUST PISTONS 2 or 4 stroke cycle 2 ✓ Single or double acting SINGLE
 Pressure in cylinders 850 lbf/sq. in. Diameter of cylinders 260 mm Length of stroke 370 mm No. of cylinders 6 ✓ No. of cranks 6 ✓
 100 lbf/sq. in. Firing order in cylinders 1-6-2-4-3-5 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 524 mm
 Distance between each crank YES Moment of inertia of flywheel (16 m² or Kg.-cm.²) 780,000 Revolutions per minute 370 ✓
 1506 mm ✓ Weight 2130 Kg. ✓ Means of ignition COMPRESSION Kind of fuel used DIESEL OIL ✓

as per Rule. Crank pin dia. 180 mm ✓ Crank Webs Mid. length breadth 290 mm ✓ Thickness parallel to axis 100 mm ✓
 as fitted 180 mm ✓ (70 mm. HOLE) (90 mm. HOLE) Mid. length thickness 100 mm ✓ shrunk Thickness round eyehole 90 mm ✓
 as per Rule. Intermediate Shafts, diameter as per Rule. General armature, moment of inertia (16 m² or Kg.-cm.²)
 as fitted ✓ as fitted ✓

Provided to prevent racing of the engine when disengaged YES Means of lubrication FORCED Kind of damper if fitted ✓
 Are the exhaust pipes and silencers water cooled or lagged with non-conducting material LAGGED ✓

Pumps, No. 2 SW - 2 FW Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES
 Oil Pumps, No. and size ONE: DIRECT DRIVE FROM SHAFT

Compressors, No. No. of stages Diameters Stroke Driven by
 Rotary Blowers Diameter Stroke Driven by M.E. CHAN

VERS:—Have they been made under Survey YES ✓ State No. of Report or Certificate X509

which can be isolated, fitted with a safety valve as per Rule YES ✓
 Oil surfaces of the receivers be examined YES ✓ What means are provided for cleaning their inner surfaces MANHOLE 16" x 12"
 arrangement fitted at the lowest part of each receiver YES ✓

Air Receivers, No. Cubic capacity of each Internal diameter thickness
 welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules
 Receivers, No. 2 ✓ Total cubic capacity 25 cu ft each Internal diameter 29" thickness 1/2"
 welded or riveted longitudinal joint WELDED ✓ Material STEEL Range of tensile strength 2933 Working pressure by Rules 356 lbf/sq. in.

GENERATORS:—Type DRIIP PROOF
 Supply 225 volts. Full Load Current 2000 Amperes. Direct or Alternating Current D.C.
 current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
 Generators, are they compounded as per Rule YES is an adjustable regulating resistance fitted in series with each shunt field YES
 Are they so spaced they cannot be accidentally earthed, short circuited, or touched YES Are the lubricating arrangements of the generators as per Rule YES
 Are they under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements
 Are they 100 kw. or over have they been built and tested under survey YES
 Is there any machinery other than generator NIL

Approved plans forwarded herewith for Shafting YES (If not, state date of approval) Receivers YES Separate Tanks YES
 Vibration characteristics if applicable been approved YES SECRET'S LETTER 10.12.51 Armature shaft Drawing No.

R SEE ATTACHED LIST

The foregoing is a correct description,

HARLAND & WOLFF LIMITED

John N. Smith
 Secretary

Manufacturer.



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004564-004572-0247

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

Dates of Examination of principal parts—Cylinders 29.1.52 - 7.3.52 Covers..... Pistons 23.1.52 - 24.4.52..... Piston rods.....

Connecting rods 19.11.51 - 12.5.52..... Crank and Flywheel shafts 11.1.52 - 25.1.52 - 5.5.52..... Intermediate shafts.....

Crank shaft Material JOURNALS:- F.S. C.PINS & WEBS:- C.S. Tensile strength F.S. 32 TONS/SQ. IN. C.S. 29.5 - 38 TONS/SQ. IN.
Elongation F.S. 32/34% C.S. 24/36% Identification Marks No. 2 " 1284" AD 25.1.52

Flywheel shaft, Material..... Identification Marks.....

Identification marks on Air Receivers No. 530 160 TONS TEST 584 LBS/SQ. IN. W.P. 356 LBS/SQ. IN. AD 27.5.52

Is this machinery duplicate of a previous case. Yes..... If so, state name of vessel "KENYA CASTLE" YARD No. 1432

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

These three Auxiliary Generating Units were constructed and installed under Special Survey in accordance with Rules approved plans and Secretanys.
The material used in construction was made at Works approved by Committee and under the supervision of the Society's Surveyor. The workmanship satisfactory.
On completion each unit was examined under full working conditions with satisfactory results.

The amount of Fee ... £ : : When applied for..... 19.....

Travelling Expenses (if any) £ : : When received..... 19.....

Committee's Minute..... TUES. 16 DEC 1952

Assigned..... See F.E. mch. rph

A. Dainton & Co.
Surveyor to Lloyd's Register of
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