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4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 14296.

Received at London Office 28 SEP 1950
MANCHESTER.
Port of
When handed in at Local Office 25th September, 50
Date, First Survey 3rd May, 1950. Last Survey 16th August, 19 50.
Number of Visits 9.
Tons } Gross
Net
Single }
on the Twin }
Triple }
Quadruple }
Screw vessel
Dartmouth.
By whom built Messrs. Philip & Sons Ltd. Yard No. 1220. When built
Messrs. Anglo-Saxon Petroleum Co. Ltd.
Engines made at Reddish. By whom made Messrs. Crossley Bros. Ltd. Contract No. 139527
Machine No. 24148. When made 1950.
rators made at Gateshead. By whom made Messrs. Clarke Chapman & Co. Ltd. Contract No. 24152. When made 1950.
of Sets 2. Engine Brake Horse Power 60 x 2. M.N. as per Rule 15 x 2. Total Capacity of Generators 40. Kilowatts.
t intended for essential services.

ENGINES, &c.—Type of Engines Crossley BW.4 - Vertical Heavy Oil. 2 or 4 stroke cycle 4. Single or double acting Single.
850 lbs/sq.inch. Diameter of cylinders 5". Length of stroke 6 1/2". No. of cylinders 4 x 2 No. of cranks 4 x 2.
indicated } 121 lbs/sq.inch. Firing order in cylinders 1, 2, 4, 3. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 12 5/8".
pressure } No. Moment of inertia of flywheel (16 m² or Kg.-cm.²) 1,000. ✓
ere a bearing between each crank No. Wheel dia. 24". Weight 460 lbs. Means of ignition Compression. Kind of fuel used Diesel Oil.
Approved. Crank pin dia. 3 1/2". Mid. length breadth 4 1/2". Thickness parallel to axis -
as fitted 3 1/2". Crank Webs Mid. length thickness 1.13/16". Thickness round eyehole -
13. Wheel Shaft, diameter as per Rule. Intermediate Shafts, diameter as per Rule. General armature, moment of inertia (16 m² or Kg.-cm.²)
as fitted. Means provided to prevent racing of the engine when declutched Yes. ✓ Means of lubrication Forced. Kind of damper if fitted None fitted.
he cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material
s. 13. ing Water Pumps, No. 1 - 2 1/2" Dia. x 1 3/8" Stroke. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
icating Oil Pumps, No. and size 1 - 1 1/8" Dia. x 1 1/4" Stroke.
Compressors, No. 80681. No. of stages 2. Diameters 4 1/2" & 1 5/8". Stroke 3 1/4". Driven by Clutch Drive. Eng. No. 142361.
nging Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Have they been made under Survey State No. of Report or Certificate.
h receiver, which can be isolated, fitted with a safety valve as per Rule
he internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces.
re a drain arrangement fitted at the lowest part of each receiver.
Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness
ess, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules.
ng Air Receivers, No. Total cubic capacity Internal diameter thickness
ess, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules.
CTRIC GENERATORS:—Type Compound Wound - Continuous Rating - Enclosed Ventilated - Drip-proof.
ire of supply 110 volts. Full Load Current 182. Amperes. Direct or Alternating Current Direct.
rnating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
off Yes. Generators, are they compounded as per Rule Yes. is an adjustable regulating resistance fitted in series with each shunt field Yes.
terminals accessible, clearly marked, and furnished with sockets Yes. Are they so spaced
test ded that they cannot be accidentally earthed, short circuited, or touched Yes. Are the lubricating arrangements of the generators as per Rule Yes.
verl generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements Yes.
generators are 100 kw. or over have they been built and tested under survey Yes - Stamped Lloyd's Test 21375 - 18.4.50 - JCW.
21411 - 29.4.50 - JCW.
00 R. of driven machinery other than generator Hamworthy Centrifugal Pump No. 84209-Clutch Driven by Eng. No. 139527.

S.—Are approved plans forwarded herewith for Shafting 21.9.50. Receivers Separate Tanks
(If not, state date of approval)
orsional Vibration characteristics if applicable been approved Armature shaft Drawing No.
(state date of approval)

E GEAR

The foregoing is a correct description,

CROSSLEY BROTHERS LIMITED,

Manufacturer.



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Lloyd's Register
Foundation

002157-002164-0101

Dates of Survey while building { During progress of work in shops - - 1950. May 3, 4, 5, 22, 29. July 11, 12. Aug. 15, 16.
During erection on board vessel - - -
Total No. of visits - - -

Dates of Examination of principal parts - Casings 5.5.50/3.5.50/22.5.50. Covers 12.7.50/16.8.50. Liners 3.5.50/4.5.50. Piston rods

Connecting rods 3.5.50. Crank and Flywheel shafts 29.5.50. Intermediate shafts -

Crank shaft { Material O.H. Steel. Tensile strength 46.4 Tons per sq. inch.
Elongation 22.5% on 2". Identification Marks Lloyd's 4033 - THS - 29.5.50
EBE 523.A and 544.A.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case If so, state name of vessel

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The foregoing engines have been constructed under Special Survey in accordance with the Rules and approved plans.

The materials and workmanship are good.

On completion of erection, the engine, direct coupled to their respective generators, have been examined under working conditions on the test bed, developing full generator load for 4 hours and 10% overload for 1 hour, and found satisfactory.

The clutch driven Air Compressor and Sea Water Pump have also been tried under running conditions and found satisfactory.

These Auxiliary sets are, in my opinion, suitable for installation in a vessel to be classed with this Society.

Attached herewith Crankshaft Forging Report F.6221, Generator Certificate C.32465 and C.32466, Hamworthy Air Compressor Cert. D.3540, Hamworthy Centrifugal Pump Cert. D.3870 and Engine Certificate C.9124/5.

The amount of Fee ... £ 8 : 0 : 0. When applied for 25/9/1950 (R.M.)
Travelling Expenses (if any) £ 1 : 0 : 0. When received 19

Committee's Minute FRI. 17 AUG 1951
Assigned See F.E. Welch rpt.

