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Writing report at 31st January, 1957. Received London Port 2 FEB 1957 No. 17679
MANCHESTER. In shops 10. 17.7.56. 7.2.57.
No. of visits On vessel First date Last date

1ST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

Name Classed Vessel. Gross tons
B. Crouch & Co. - DIVETT - South Australia. Managers

NE at Hong Kong. By Cheoy Lee Shipyard. Yard No. 669. Year Month
When

Engines made at Openshaw. By Messrs. Crossley Bros. Ltd., Contract No. 11557. When 1956.
Eng. No. 147107.

Boilers made at By Blr. Nos. When

Installations installed at By When

Is of restricted service of ship, if limited for classification

Is of vegetable or similar cargo oil notation, if required

Is classed for navigation in ice? Is ship intended to carry petroleum in bulk?

Is refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant

Is refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

Particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so. Ticks and other signs of doubtful meaning are not to be used. Where the not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report not be repeated below, but the port and report number should be stated.

in engines One. No. of propellers One. Brief description of propulsion system Direct Drive to Propeller.

RECIPROCATING ENGINES. Licence Name and Type No. H.R.N.5 Heavy Oil.

Anders per engine 5. Dia. of cylinders 10 1/2". stroke(s) 13 1/2". 2 or 4 stroke cycle 2. Single or double acting Single.

approved BHP per engine 400 at 400 RPM of engine and 400. RPM of propeller.

ing MIP 92 p.s.i. (For DA engines give MIP top & bottom) Maximum cylinder pressure 950 p.s.i. Machinery numeral 94. 80.

Anders arranged in Vee or other special formation? Vertical in line. If so, number of crankshafts per engine

ROKE ENGINES. Is the engine of opposed piston type? No. If so, how are upper pistons connected to crankshaft?

Is exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? Ports. No. and type of mechanically driven scavenge pumps or blowers per

now driven 1 - Scavenge Pump Double Acting.

Is exhaust gas driven scavenge blowers per engine None. Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

Is emergency pump or blower is fitted, state how driven No. of scavenge air coolers None. Scavenge air pressure at full

psi Are scavenge manifold explosion relief valves fitted? Yes.

ROKE ENGINES. Is the engine supercharged? Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per

No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

OUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel Inlet Exhaust Starting Safety

Cylinder covers C.I. Material of piston crowns C.I. Is the engine equipped to operate on heavy fuel oil? Yes.

um for :—Cylinders Water. Pistons Lub. Oil. Fuel valves Overall diameter of piston rod for double acting engines

Is welded with a sleeve? Is welded construction employed for: Bedplate? No. Frames? No. Entablature? No. Is the crankcase separated from the

Is the engine of crosshead or trunk piston type? Trunk. Total internal volume of crankcase 54 cu.ft. No. and total area of explosion relief

13- Are flame guards or traps fitted to relief devices? Yes. Is the crankcase readily accessible? Yes. If not, must the engine be removed for

Is the engine secured directly to the tank top or to a built-up seating? How is the engine started? Compressed Air.

Can be directly reversed? Yes. If not, how is reversing obtained?

Have main bearings been tested working in the shop? Yes. How long at full power? 6 hours.

LYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 16-2-57 State barred speed range(s), if imposed

17-9- Is a governor fitted? Yes. Is a torsional vibration damper or detuner fitted to the shafting? No.

\$640.00 Type No. of main bearings 6. Are main bearings of ball or roller

Distance between inner edges of bearings in way of crank(s) 14.11/16" Distance between centre lines of side cranks or eccentrics of opposed piston engines

Is Built, semi-built, solid. (State which) Solid.

\$21.00 Diameter of crankpins Centre 7 1/4" Breadth of webs at mid-throw 9 1/4" Axial thickness of webs 3.23/32".

Thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Pins O.H. Steel. Minimum 40 T.P.I.

Webbs Tensile strength 35.6, 36.4

2nd Sep Wheel 37 1/2" Weight 1656 lbs. Are balance weights fitted? Yes. Total weight Radius of gyration

Wheel shaft Material Minimum approved tensile strength

Separate, integral with crankshaft, integral with thrustshaft. (State which) Flywheel bolted to crankshaft.

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GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship, and recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This heavy oil engine has been constructed under special survey of tested materials and in accordance with the Rules, approved plans and Secretary's letters. The materials are sound and free from defects. The workmanship is good. The engine, coupled to a dynamometer, was tested at the Engine Builder's Works under the following conditions of loading - 100% engine rating, 1 hour 10% overload governing, manoeuvring.

Attached hereto - Crankshaft Cert. F.65074.

Thrust shaft Cert. F.528.

Conn. Rod Certs. F.7995, F.8829.

L. V. H. A. M. S.

Engineer Surveyor to Lloyd's Register

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS P.75, P.74, P.89, P.77, P.75 L.V.H. 4.9.56. (Birmingham). ✓

CRANKSHAFT OR ROTORSHAFT 3438 - 55 RF.27 L.V.H. 1.6.56. (Sheffield). ✓

FLYWHEEL SHAFT 5150 - 54 EBT.11 L.V.H. 21.9.56. (Manchester). ✓

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case?

If so, state name of vessel

Date of approval of plans for crankshaft 4.5.56.

Straight shafting

Gearing

Clutch

Separate oil fuel tanks

Pumping arrangements

Oil fuel arrangements

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:-

Fitting of stern tube

Fitting of propeller

Completion of sea connections

Alignment of crank shaft in main bearing

Engine chocks & bolts

Alignment of gearing

Alignment of straight shafting

Testing of pumping arrangements

Oil fuel lines

Donkey boiler supports

Steering machinery

Windlass

Date of Committee

Special Survey Fee £28 :0

Decision

See Rpt. 1.

Expenses £1 :15

Date when A/c rendered 7-2



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