

Rpt. 4b

Date of writing report 16.9.60 Received London Port HAMBURG No. 9894
Survey held at Hamburg No. of visits In shops 7 First date 29.4.60 Last date 12.9.60
On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name Yard No. 50 Gross tons 100
Owners Transport Department Ghana Managers Port of Registry
Hull built at Hamburg-Altenwerder By Rudolf Meier & Söhne Year Month
When 1960
Main Engines made at Kassel By Henschel-Werke GmbH. Eng. No. 904024 When 1960
Gearing made at Hameln By Eisenwerke Reintjes GmbH.
Donkey boilers made at None By Blr. Nos. When
Machinery installed at Hamburg-Altenwerder By Rudolf Meier & Söhne When 1960
Particulars of restricted service of ship, if limited for classification Twin Screw Passenger Launch River Volta Service
Particulars of vegetable or similar cargo oil notation, if required
Is ship to be classed for navigation in ice? no Is ship intended to carry petroleum in bulk? no
Is refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant
Is the refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

The following 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 wording is 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 need not be repeated below, but the port and report number should be stated

No. of main engines 2 No. of propellers 2 Brief description of propulsion system 2 oil engines 4 SCSA geared to two screwshafts

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Henschel type GR 1416, Serial No. 521

No. of cylinders per engine 6 Dia. of cylinders 135 mm stroke(s) 155 mm 2 or 4 stroke cycle 4 Single or double acting single

Maximum approved BHP per engine 160 at 1600 RPM of engine and 800 RPM of propeller.

Corresponding MIP 8.9 kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 85 kg/cm² Machinery numeral 31.6 64

Are the cylinders arranged in Vee or other special formation? no If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? If so, how are upper pistons connected to crankshaft?

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

No. of exhaust gas driven scavenge blowers per engine Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

If a stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at power Are scavenge manifold explosion relief valves fitted?

FOUR STROKE ENGINES. Is the engine supercharged? no Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per engine none No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

TWO & FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel 1 Inlet 2 Exhaust 2 Starting 1 Safety 1

Material of cylinder covers cast iron Material of piston crowns Aluminium Is the engine equipped to operate on heavy fuel oil? no

Cooling medium for :-Cylinders sea water Pistons no cooling Fuel valves no cooling Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the

underside of pistons? no Is the engine of crosshead or trunk piston type? trunk Total internal volume of crankcase see HNO RE- No. and total area of explosion relief

devices none Are flame guards or traps fitted to relief devices? no Is the crankcase readily accessible? yes If not, must the engine be removed for

overhaul of bearings, etc? yes Is the engine secured directly to the tank top or to a built-up seating? built up sea- How is the engine started? with air

Can the engine be directly reversed? no If not, how is reversing obtained? by single reversing gear

Has the engine been tested working in the shop? yes How long at full power? 8 hours

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 4.7.60 State barred speed range(s), if imposed

for working propeller not below 650 RPM For spare propeller not below 650 RPM Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? no

Where positioned? Type No. of main bearings 7 Are main bearings of ball or roller

type? Distance between inner edges of bearings in way of crank(s) Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which)

Diameter of journals Diameter of crankpins Centre Side Axial thickness of webs

If shrunk, radial thickness around eyeholes Are dovetail pins fitted? Crankshaft material Journals Pins Minimum

Diameter of flywheel Weight Are balance weights fitted? Total weight Tensile strength

Diameter of flywheel shaft Material Minimum approved tensile strength Radius of gyration

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) integral with 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 give 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 machinery has been built under Special Survey in conformity with the Rule Requirements the approved plans and the Secretary's letters.

The material and workmanship are good.

The installation has been properly installed in the above vessel, examined under full working condition and is eligible in my opinion to be classed as follows:-

* LMC 9.60 and the notation TS(OG), 2 Oil Engines geared to two screwshafts, 160 BHP, 31.6 M subject to satisfactory examination at the port of destination.

Note:- These main engines are not to be operated continuously below 650 RPM (slight gear hammer between 450 and 630 RPM)

A notice board to this effect has been fitted to the engine, control platform and the tachometer marked accordingly.

Engineer Surveyor to Lloyd's Register of Shipping.

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

RODS

CRANKSHAFT OR ROTORSHAFT

FLYWHEEL SHAFT

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS Stern tubes: LLOYD'S TEST HAM No. 1082/60 WOD 3 kg/cm² 22.6.60

Cast steel coupling flanges:- LLOYD'S KEL 1763 JH 26.7.57 HAM 22.6.60 WOD

Is the installation a duplicate of a previous case? no If so, state name of vessel -
Date of approval of plans for crankshaft See HNO Rpt. No. 105 Straight shafting 20.4.60 Gearing see HNO FE- Rpt. (gear & clutch) Clutch
Separate oil fuel tanks - Pumping arrangements 12.8.60 Oil fuel arrangements 12.8.60
Cargo oil pumping arrangements - Air receivers see att. Cert. Donkey boilers -
Dates of examination of principal parts:-
Fitting of stern tube 5.7.60 Fitting of propeller 6.7.60 Completion of sea connections 5.8.60 Alignment of crankshaft in main bearings 3.9.60
Engine chocks & bolts 5.8.60 Alignment of gearing 5.8.60 Alignment of straight shafting 5.8.60 Testing of pumping arrangements 3.9.60
Oil fuel lines 3.9.60 Donkey boiler supports - Steering machinery - Windlass 3.9.60
Date of Committee THURSDAY 15 DEC 1960 Special Survey Fee DM 375.00
Decision See Rpt. 1.

Expenses DM 1.56.00

Date when A/c rendered No. 1223 24-10-60