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6561 MONDAY 21 NOV 1958

Writing report 29-12-58. Received London Port of HONG KONG. No. 14637.
held at Hong Kong. No. of visits In shops First date 12-2-58. Last date 23-12-58.
On vessel 12.

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

R.B. Name M.S. "ADRI VIII" Gross tons 223.

Direktorat Angkutan Managers - Port of Registry Djakarta.
Angkatan Darat (Pusat) Yard No. 701 Year Month 1958 Dec.

built at Hong Kong. By Cheoy Lee Shipyard Eng. No. 80554 When 1957 Sept.

Engines made at Stamford Lines By Blackstone & Co., Ltd. When 1957 Sept.

made at - By - Blr. Nos. - When -

oilers made at - By - Blr. Nos. - When -

ry installed at Hong Kong. By Cheoy Lee Shipyard When 1958 Dec.

ers of restricted service of ship, if limited for classification Indonesian Waters.

ars of vegetable or similar cargo oil notation, if required Nil.

o be classed for navigation in ice? No. Is ship intended to carry petroleum in bulk? No.

erating machinery fitted? Yes. If so, is it for cargo purposes? No. Type of refrigerant Freon 12.

erigerating machinery compartment isolated from the propelling machinery space? Yes. Is the refrigerated cargo installation intended to be classed? -

lowing 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 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 need not be repeated below, but the port and report number should be stated.

main engines One No. of propellers One Brief description of propulsion system Oil operated reverse reduction gear.

IN RECIPROCATING ENGINES. Licence Name and Type No.

ylinders per engine Dia. of cylinders stroke(s) 2 or 4 stroke cycle Single or double acting

imum approved BHP per engine 303 at RPM of engine and 375 RPM of propeller.

ponding MIP (For DA engines give MIP top & bottom) Maximum cylinder pressure Machinery numeral 61

ylinders arranged in Vee or other special formation? If so, number of crankshafts per engine

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

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

and how driven

f 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?

stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full

Are scavenge manifold explosion relief valves fitted?

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

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

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

aterial of cylinder covers Material of piston crowns Is the engine equipped to operate on heavy fuel oil?

ing medium for :-Cylinders Pistons Fuel valves Overall diameter of piston rod for double acting engines

e rod fitted with a sleeve? Is welded construction employed for: Bedplate? Frames? Entablature? Is the crankcase separated from the

rside of pistons? Is the engine of crosshead or trunk piston type? Total internal volume of crankcase No. and total area of explosion relief

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

haul of bearings, etc? Is the engine secured directly to the tank top or to a built-up seating? How is the engine started?

the engine be directly reversed? If not, how is reversing obtained?

s the engine been tested working in the shop? How long at full power?

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

working propeller For spare propeller Is a governor fitted? Is a torsional vibration damper or detuner fitted to the shafting?

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

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

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

iameter of journals Diameter of crankpins Centre Breadth of webs at mid-throw Axial thickness of webs

Side Pins Minimum

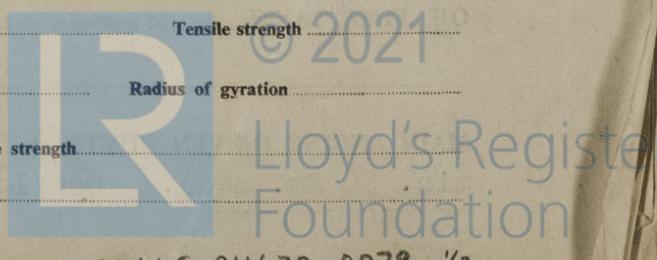
shrunken, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Approved

Webbs Tensile strength

iameter of flywheel Weight Are balance weights fitted? Total weight Radius of gyration

iameter of flywheel shaft Material Minimum approved tensile strength

lywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which)



MAIN GAS TURBINES. Name and Type No.

No. of sets of turbines 1 Open or closed cycle Open at 1800 RPM of output shaft
 How is drive transmitted to propeller shaft? Direct
 ARRANGEMENT OF TURBINES. HP drives 1 at 1800 RPM HP gas inlet temperature 400 pressure 100
 (A small diagram should be attached showing gas cycle.) IP drives 1 at 1800 RPM IP gas inlet temperature 400 pressure 100
 LP drives 1 at 1800 RPM LP gas inlet temperature 400 pressure 100
 No. of air compressors per set 1 Centrifugal or axial flow type? Centrifugal Material of turbine blades Aluminum
 compressor blades 1 No. of air coolers per set 1 No. of heat exchangers per set 1 How are turbines started? Hand
 How is reversing effected? None Are the turbines operated in conjunction with free piston gas generators? No
 Total No. of free piston gas generators 0 Diameter of working pistons 10 Diameter of compressor pistons 10 No. of double
 minute at full power 1 Gas delivery pressure 100 Gas delivery temperature 400 Have the turbines and attached equipment been tes
 in the shop? Yes How long at full power? 10

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 4d.)

No. of generators 1 KW per generator 100 at 1800 RPM AC or DC? AC Position Port
 No. of propulsion motors 1 SHP per motor 100 at 1800 RPM Position Port
 How is power obtained for excitation of generators? None Motors? None

REDUCTION GEARING (Reciprocating engines or gas turbines. A small line sketch should be attached showing arrangement of gearing.)

Is gearing of single or double helical type? Single If single, position of gear thrust bearing Port Is gearing of epicyclic type? No
 PCD of pinions: First reduction 10 Second reduction 10 PCD of wheels: First reduction 10 Main 10
 Material of pinions Steel Tensile strength 100 Material of wheel rims Steel Tensile strength 100
 Are gear teeth surface hardened? Yes How are teeth finished? Hand Diameter of pinion journals 10
 journals 10 Are the wheels of welded construction? No Is gearcase of welded construction? No Has the wheel/gearcase been heat treated on
 of welding? Yes Where is the propeller thrust bearing located? Port Are gear bearings of ball or roller type? Ball

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting

description and, for clutches, state how operated None
 Can the main engine be used for purposes other than propulsion when declutched? Yes If so, what? None

STRAIGHT SHAFTING. Diameter of thrustshaft 4 1/2" Material O.H. Steel. Minimum approved tensile strength 100

Shaft separate or integral with crank or wheel shaft? Integral Diameter of intermediate shaft 4 1/2" Material O.H. Steel.
 Minimum approved tensile strength 28 tons p.s.i. Diameter of screwshaft cone at large end 4 1/2" Is screwshaft fitted with a continuous liner? Yes
 Diameter of tube shaft. (If these are separate shafts) 7/16" Is tube shaft fitted with a continuous liner in way of stern tube? No Thickness of screw/shaft sh
 bearings 7/16" Thickness between bearings 3/8" Material of screw/shaft O.H. Steel. Minimum approved tensile strength 100
 Is an approved oil gland fitted? No If so, state type None Length of bearing next to and supporting propeller 1'-10 1/2"
 Material of bearing Lignum Vitae. In multiple screw vessels is the liner between stern tube and A bracket continuous? No If not, is the exposed length of shaft

PROPELLER. Diameter of propeller 4'-11" Pitch 3'-2 1/2" Built up or solid Solid. Total developed surface 46.9%

No. of blades 3 Blade thickness at top of root fillet 2.44" Blade material Bronze Moment of inertia of dry propeller 92 K
 If propeller is of special design, state type None Is propeller of reversible pitch type? No If so, is it of approved design? No
 State method of control None Material of spare propeller None Moment of inertia None

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine One Can they be declutched? Yes

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) One 16 cub./ft. min. Driven
Eng. E.R.(port) Southampton Certificate No. D/11359 Hamworthy No. 21722.
 No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) Two (inboard & outboard E.R. st
(Inboard) R. Waddicor No. 5914 Lloyd's Hyd. test 700 lbs. W.P. 350 lbs. 10-
Marked (Outboard) R. Waddicor No. 6984 Lloyd's Hyd. test 700 lbs. W.P. 350 lbs. 17-
 How are receivers first charged? Diesel driven air Compressor Maximum working pressure of starting air system 300 lbs. p.s.i. at the safety
 accordance with the Rules? Yes Has the starting of the main engines been tested and found satisfactory? Yes

COOLERS. No. of main engine fresh water coolers One No. of main engine lubricating oil coolers One Gear Case oil coolers 0

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure One in E.R. casing (forward

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) Two cooling pumps (1 F.W. 1 S.W.), One bilge pump 1
min. 50 ft. head. (One) Lub. oil pump.

INDEPENDENT PUMPS below essential pumps, state position and driven. Give capacity of bilge pumps.	Service for which each pump is connected to be marked thus X															
	SUCTION							DELIVERY								
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cool- ing	Sea	Feed Tanks	Lub. Oil	Boiler Feed	Salt Water Cool- ing	Fresh Water Cool- ing	Oil Fuel Tanks	Fire Main	Lub. Oil	Piston Cool- ing	Over- board.
General Service Pump Gall. per min. 50 ft E.R. (port) driven Diesel Aux. Eng.	X	X				X				X			X			X
Oil Transfer (hand) (Stbd.)				X								X				

SUCTIONS. No. and size in each hold, deep tank or pump room etc. Hold two 2" dia. lp. ls. F.P. space & chain locker
pump 1" dia. p & s. Crew space aft one 2" dia. After Peak (dry tank) drains into crew
space aft through SDNR valve on bulkhead.
Size connected to main bilge line in main engine room One 2" dia. E.R. (aft).
Size and position of direct bilge suction in machinery spaces One 2" dia.
(forward).
Size and position of emergency bilge suction in machinery spaces One 2" dia. E.R. (aft).
 Do the piping arrangements comply with the Rules Yes
 requirements for ships carrying petroleum in bulk, cargo oil or classed for navigation in ice? Yes

STEAM & OIL ENGINE AUXILIARIES

Position of each	Type	Made by	Port and No. of Rpt. or Cert.	Driven Machinery (For electric generators, state output)
<u>(Port)</u>	<u>E.R. MGR 6</u>	<u>Lister.</u>	<u>Bristol Cert. No. SC 6385</u>	<u>Generator 4 K.W. G.S. Pump Air Compressor.</u>

Is electric current used for essential services at sea? No If so, state the minimum No. and capacity of generators required in order that the ship may operate
 Is an electric generator driven by Main Engine? No

INSTALLATION. No. of donkey boilers burning oil fuel W.P. Type None

Preheater fitted? None Are these boilers also heated by exhaust gas? No No. of donkey boilers heated by exhaust gas only? W.P.
 Can the exhaust heated boilers deliver steam directly to
 in range or do they operate only as economisers in conjunction with oil fired boilers? None Port and No. of report on donkey

Is steam essential for operation of the ship at sea? None Are any steam pipes over 3 ins. bore? None If so, what is their
 For oil fired boilers is the arrangement of pipes, valves, controls, etc., in accordance with the Rules? None No. of oil burning pressure

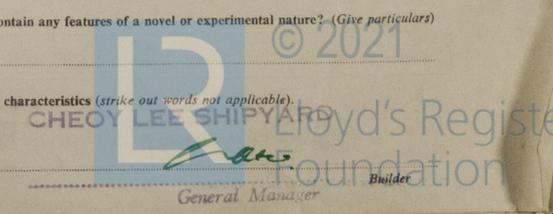
No. of steam condensers None No. of Evaporators None

GEAR. (State No. and Type of Steam Engines, Electric Motors, Hydraulic Pumps and other particulars) Hand gear only.

Rule Requirements for fire extinguishing arrangements been complied with? Yes Brief description of arrangements One hydrant, hose and combined
spray nozzle. Two 2 gall. Foam extinguishers. 1 qt. C.T.C. Sand box & scoop.

Spare gear required by the Rules been supplied? Yes Has all the machinery been tried under full working conditions and found satisfactory? Yes Date and duration of full
 trials of main engines 19-12-58. 4 Hours. Does this machinery installation contain any features of a novel or experimental nature? (Give particulars)

going description of the main engine and installation is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable).



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.

The Machinery of this vessel has been built and installed under survey by Society's Surveyors in accordance with the approved plans and Secretary's letters. materials have been satisfactorily tested as required and the workmanship is good. completion of installation the machinery was examined under working conditions, found satisfactory, and in my opinion, is eligible to be classed as contemplated.

Plans forwarded herewith

As Fitted Arrangement of Piping.

Documents forwarded herewith

Copy of Interim Certificate. Report 6 on forgings.
 Makers test sheet on Auxiliary Engine & Bristol Cert. SC 6385.
 Air Compressor Certificate Southampton D.11359 G.S. pump Certificate Southampton D.
 Propeller Certificate Rotterdam 58-1850.
 Air Receiver Certificates Manchester C 9231 C 1259.

James A. Andersen
 James A. Andersen
 Engineer Surveyor to Lloyd's Register of

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 Lloyd's H.Kg. ✓ No.680 J.A.A. Mar. 21-58.

SCREW AND TUBE SHAFTS Lloyd's H.Kg. ✓ No.679 J.A.A. Mar. 21-58.

PROPELLERS

No. 7951

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 Straight shafting 18-11-57. Gearing Clutch

Separate oil fuel tanks - Pumping arrangements 27-2-58. Oil fuel arrangements 27-2-58

Cargo oil pumping arrangements - Air receivers - Donkey boilers -

Dates of examination of principal parts:-

Fitting of stern tube 3-3-58. Fitting of propeller 11-8-58. Completion of sea connections 21-3-58. Alignment of crankshaft in main bearings -

Engine chocks & bolts 30-4-58. Alignment of gearing - Alignment of straight shafting 21-3-58. Testing of pumping arrangements 19-12-58

Oil fuel lines 19-12-58. Donkey boiler supports - Steering machinery 23-12-58. Windlass 23-12-58

Date of Committee TUESDAY 10 FEB 1959 Special Survey Fee \$640.00 ✓

Decision See Rpt. 1

Expenses \$14.00

Date when A/c rendered 29th December



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