

MAIN GAS TURBINES. Name and Type No.

No. of sets of turbines _____ Open or closed cycle _____ BHP per set _____ at _____ RPM of output shaft _____

How is drive transmitted to propeller shaft? _____

ARRANGEMENT OF TURBINES. HP drives _____ at _____ RPM HP gas inlet temperature _____ pressure _____

IP drives _____ at _____ RPM IP gas inlet temperature _____ pressure _____

LP drives _____ at _____ RPM LP gas inlet temperature _____ pressure _____

No. of air compressors per set _____ Centrifugal or axial flow type? _____ Material of turbine blades _____

compressor blades _____ No. of air coolers per set _____ No. of heat exchangers per set _____ How are turbines started? _____

How is reversing effected? _____ Are the turbines operated in conjunction with free piston gas generators? _____

Total No. of free piston gas generators _____ Diameter of working pistons _____ Diameter of compressor pistons _____ No. of double strokes per minute at full power _____

Gas delivery pressure _____ Gas delivery temperature _____ Have the turbines and attached equipment been tested while in the shop? _____

How long at full power? _____

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 44)

No. of generators _____ KW per generator _____ at _____ RPM AC or DC? _____ Position _____

No. of propulsion motors _____ SHP per motor _____ at _____ RPM Position _____

How is power obtained for excitation of generators? _____ Motors? _____

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? _____ If single, position of gear thrust bearing _____ Is gearing of epicyclic type? _____

PCD of pinions: First reduction _____ Second reduction _____ PCD of wheels: First reduction _____ Main _____

Material of pinions _____ Tensile strength _____ Material of wheel rims _____ Tensile strength _____

Are gear teeth surface hardened? _____ How are teeth finished? _____ Diameter of pinion journals _____ Wheel shaft _____

journals _____ Are the wheels of welded construction? _____ Is gearcase of welded construction? _____ Has the wheel/gearcase been heat treated on completion of welding? _____ Where is the propeller thrust bearing located? _____ Are gear bearings of ball or roller type? _____

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting give brief description and, for clutches, state how operated

Can the main engine be used for purposes other than propulsion when declutched? _____ If so, what? _____

STRAIGHT SHAFTING. Diameter of thrustshaft _____ Material _____ Minimum approved tensile strength _____

Shaft separate or integral with crank or wheel shaft? Separate Diameter of intermediate shaft 163 mm Material _____

Minimum approved tensile strength _____ Diameter of screwshaft cone at large end _____ Is screwshaft fitted with a continuous liner? _____

Diameter of tube shaft. (If these are separate shafts) _____ Is tube shaft fitted with a continuous liner in way of stern tube _____ Thickness of screw/tube shaft liner at bearings _____

Thickness between bearings _____ Material of screw/tube shaft _____ Minimum approved tensile strength _____

Is an approved oil gland fitted? _____ If so, state type _____ Length of bearing next to and supporting propeller _____

Material of bearing _____ In multiple screw vessels is the liner between stern tube and A bracket continuous _____ If not, is the exposed length of shafting between liners readily visible in dry dock? _____

PROPELLER. Diameter of propeller _____ Built up or solid _____ Total developed surface _____

No. of blades _____ Blade thickness at top of root fillet _____ Blade material _____ Moment of inertia of dry propeller _____

If propeller is of special design, state type _____ Is propeller of reversible pitch type? _____ If so, is it of approved design? _____

State method of control _____ Material of spare propeller _____ Moment of inertia _____

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine 1 Can they be declutched? Yes

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) 1 Driven through clutch by star. aux Diesel engine. 1 hand operated (port aft)

No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) 2 main 500 litres each. 1 aux. 35 litres.

2 main on star. side. Aux. on port side eng. room.

How are receivers first charged? Aux. Receiver Hand Charged Maximum working pressure of starting air system 30 atmos. Are the safety devices in 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 1 No. of main engine lubricating oil coolers 1

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure 2 - engine room ford. at poop deck level. 1 - engine room port at casing level. 1 - overflow tank under star. genr.

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) 2 - main lub.oil. 1 - F.W. Cooling. 2 - S.W. circulating (Star. used as General Service 25 cub. metres/hr.)

INDEPENDENT PUMPS Name below essential pumps, state position and how driven. Give capacity of bilge pumps.	SUCTION										DELIVERY					Aux. Cond.
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cooling	Sea	Feed Tanks	Lub. Oil	Boiler Feed	Salt Water Cooling	Fresh Water Cooling	Oil Fuel Tanks	Fire Main	Lub. Oil	Piston Cooling	
Standby Lub.oil																
E.R.Port. Electric								X						X		
General Service. E.R.Star.																
30 cub.metres/hr.Electric X			X			X				X			X			X
Fuel Oil transfer																
E.R. Port frd. Electric.				X										X		
Fuel Oil transfer																
E.R. Side. Hand operated				X										X		
Bilge. 60 cub.metres/hr.																
Clutch on star.Aux.Diesel X			X			X				X			X			
Condenser circulating.																
E.R. Side.						X							X			X
Feed water.																
E.R. Side. Electric.							X			X						
Steam Feed Injector							X			X						
General Service.Forecastle																
30 cub.metres/hr.Electric X			X			X							X			

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room 2 - 3 1/2" bore

No. and size connected to main bilge line in main engine room 1 - 80 m/m.Star.Side. 1 - 65 m/m.PortSide 1-65m.m.aft well

Size and position of direct bilge suction in machinery spaces 1 - 65 m/m Port side

Size and position of emergency bilge suction in machinery spaces 1 - 65 m/m Port side

Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? Yes Do the piping arrangements comply with the Rules including special requirements for ships carrying petroleum in bulk, cargo of 200 cubic metres or more? 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)
E.R. Port side	Diesel 3 Cyl. 4 str.	Daimler Benz	-	Alternator 56 KVA 0.8 P.F.
E.R.Star. side	" " " "	" " " "	-	Alternator 50 MVA 0.8 PF.
				Compressor. Bilge pump.

Is electric current used for essential services at sea? Yes If so, state the minimum No. and capacity of generators required in order that the ship may operate at sea 1 - 50 K.V.A.

Is an electric generator driven by Main Engine? Yes 40 Kw

STEAM INSTALLATION. No. of donkey boilers burning oil fuel 1 W.P. 127 lb./in.2 Type Vertical multitubular

Position Engine Room Ford. First Flat.

Is a superheater fitted? No Are these boilers also heated by exhaust gas? No No. of donkey boilers heated by exhaust gas only? None W.P. _____

Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil fired boilers? _____

boilers Newcastle Is steam essential for operation of the ship at sea? No Are any steam pipes over 3 ins. bore? No If so, what is their material? _____

For oil fired boilers is the arrangement of pipes, valves, controls, etc., in accordance with the Rules? Yes No. of oil burning pressure units Feed

No. of steam condensers 1 No. of Evaporators None

STEERING GEAR. (State No. and Type of Steam Engines, Electric Motors, Hydraulic Pumps and other particulars) Electric - Hydraulic (One motor/pump unit) controlled from bridge and poop; emergency direct by hand from poop.

Have the Rule Requirements for fire extinguishing arrangements been complied with? Yes Brief description of arrangements Steam smothering in engine room and boiler flat. 10 gall. and 4 gall. foam extinguishers in E.R. Portable C.O.2 at switchboard

Has the 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-power sea trials of main engines 14.9.59. 2 hours

Does this machinery installation contain any features of a novel or experimental nature? (Give particulars) No

The foregoing 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 was originally built to Germanischer Lloyd Survey.

The entire installation, including the donkey boiler but excluding the screwshaft and sea connections, has been opened out, examined and found or placed in accordance with Rules, approved plans, and the Secretary's letters (for screwshaft and sea connections see Bremen Report.

The materials and workmanship, as far as could be seen, are good.

Scantlings of machinery and boilers are as per approved plans giving reasonable allowance for wear and tear. The boiler has been examined, seen under steam, safety valves adjusted at 127 lb./in.², tested for accumulation of pressure, and all found satisfactory.

The machinery was examined under full power conditions with satisfactory results and is eligible in our opinion for classification with the records LMC 9-59: 1 DB oil fired, W.P. 127 lb./in.². Fitted for oil fuel flash point above 150°F.

Chas R Rowcliffe H. Pollock
Engineer Surveyor to Lloyd's Register of Shipping.

C.R. ROWCLIFFE & H. POLLOCK

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

RODS

CRANKSHAFT OR ROTOR SHAFT 30182 43602 59730 D 466G L G.L. Lloyds KLN. H.R. 466. 2.1.56.

FLYWHEEL SHAFT

THRUST SHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case?

No

If so, state name of vessel

Date of approval of plans for crankshaft

24-8-59.

Straight shafting

24-8-59.

Gearing

Clutch

Separate oil fuel tanks

24-8-59.

Pumping arrangements

24-8-59.

Oil fuel arrangements

24-8-59.

Cargo oil pumping arrangements

24-8-59.

Air receivers

24-8-59.

Donkey boilers

24-8-59.

Dates of examination of principal parts:—

Fitting of stern tube

Fitting of propeller

Completion of sea connections

Alignment of crankshaft in main bearings

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

FRIDAY -4 DEC 1959

Special Survey Fee

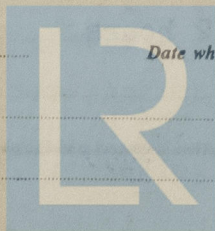
SEE Rpt 9

Decision

See Rpt. 1

Expenses

Date when A/c rendered



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