

REPORT ON MACHINERY.

No. 1020

Received at London Office 5 AUG 1947

Port of BOMBAY.
 Date, First Survey 23/11/46 Last Survey 10/3/1947
 (Number of Visits 12)
 Survey held at BOMBAY.
 on the S.S. "KILWA" Ex KIUNGCHOW
 Built at Greenock By whom built Scott's S.B. & E. Co. When built 1921
 By whom made Scott's S. B. & E. Co. when made 1921
 Owners British India S. N. Co. Port belonging to London.
 Registered Horse Power 1600 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

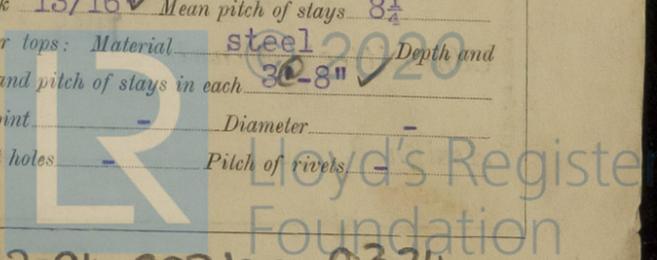
TURBINE ENGINES, &c.—Description of Engines Impulse Turbine No. of Turbines 3 H.P. L.P. & astern
 Diameter of Rotor Shaft Journals, H.P. 9" 4 1/2" L.P. 9" 4 1/2" Diameter of Pinion Shaft 4 1/2"
 Diameter of Journals 4 1/2" Distance between Centres of Bearings 2'-0 1/2" Diameter of Pitch Circle 5.5386
 Diameter of Wheel Shaft 12" 11" aff 2" aff Distance between Centres of Bearings 4'-9 1/2" Diameter of Pitch Circle of Wheel 67.482"
 Diameter of Thrust Shaft under Collars 10.15/16" Diameter of Tunnel Shaft as per rule 10.3/8
 Diameter of same as fitted 13" 12" aff 2" aff Diameter of Propeller 13'-9" Pitch of Propeller 13'-0"
 Total Surface 56 sq.ft. Diameter of Rotor Drum, H.P. 10" L.P. 11 1/2" astern 11 1/2"
 Revs. per Minute at Full Power, Turbine 3200 Propeller 102

PARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION	1.7/16"	2'-4.7/16"	Two	2.3/16"	2'-10.3/16"	One	1.7/8"	2-10.7/8"	One
"	1.3/8"	2'-4.7/8"	One	2.9/16"	2'-10.9/16"	One	2.5/8"	2'-11.5/8"	One
"	1.3/8"	2'-5.3/8"	One	3 1/2"	2'-11 1/2"	One	2.15/16"	2'-11.15/16"	One
"	1.7/16"	2'-5.15/16"	One	4.5/16"	3'-0.15/16"	One			
"	1 1/2"	2'-6 1/2"	One	5"	3'-1"	One			
"	1.5/8"	2'-6.5/8"	One	6 1/2"	3'-2 1/4"	One			

and size of Feed pumps Two Main 8" x 6" x 18" stroke. One Aux. 7" x 5" x 12" stroke
 and size of Bilge pumps Two duplex 6" x 6" x 6" Ballast Pump also connected to Bilge line
 and size of Bilge suction in Engine Room Two 3" in E.R. and Two 3" in Boiler Room
 In Holds, &c. No.1 Hold one 3", No.2 Hold one 3", No.3 Hold one 3" and No.4 Hold one 3"
 of Bilge Injections one sizes 7 1/2" Connected to condenser Yes to circulating pump Yes Is a separate Donkey Suction fitted in Engine Room & size Yes 6" 23"
 all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves and cocks
 they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line below
 they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
 pipes are carried through the bunkers None How are they protected -
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Bulkhead deck

BOILERS, &c.—(Letter for record) Manufacturers of Steel Yes
 Heating Surface of Boilers 4250 Is Forced Draft fitted Yes No. and Description of Boilers One Multitubular
 Working Pressure 200 lb. Tested by hydraulic pressure to 300 lbs. Date of test - No. of Certificate -
 each boiler be worked separately only one main Area of fire grate in each boiler 123 sq. ft. No. and Description of Safety Valves to boiler 3 spring loaded Area of each valve 12.57 sq. in. Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes
 least distance between boilers or uptakes and bunkers or woodwork 8'-0" Mean dia. of boilers 17'-9" Length 12'-9" Material of shell plates Steel
 thickness 1.17/32 Range of tensile strength - Are the shell plates welded or flanged - Descrip. of riveting: cir. seams Double
 seams Treble Diameter of rivet holes in long. seams 1.17/32 Pitch of rivets (2 3/4") 10.17 Lap of plates or width of butt straps 1'-10 1/2"
 percentages of strength of longitudinal joint rivets 84.9% plates 84.9% Working pressure of shell by rules 250 lb. sq. in. Size of manhole in shell 16" x 12"
 of compensating ring 3'-2"x2'-6" No. and Description of Furnaces in each Boiler 4 Corrugated (Morrison) Material Steel Outside diameter 4'-0"
 top 10" crown 5/8" Description of longitudinal joint Welded No. of corrugations 12
 bottom 10" bottom 5/8"
 working pressure of furnace by the rules 202.6 Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 21/32" Top 11/16" Bottom 7/8"
 of stays to ditto: Sides 8"x9" Back 8"x8" Top 8"x5" If stays are fitted with nuts or riveted heads Both Working pressure by rules 206
 material of stays Steel Diameter at smallest part 1.625 Area supported by each stay 64 sq. in. Working pressure by rules 206 lb. End plates in steam space steel Thickness 1.3/16" Pitch of stays 16 1/2", 21 1/2" How are stays secured nuts Working pressure by rules 206 lb. Material of stays steel
 diameter at smallest part 3.1/8" Area supported by each stay 350.6 sq. in. Working pressure by rules 210 Material of Front plates at bottom steel
 thickness 15/16" Material of Lower back plate steel Thickness 15/16" Greatest pitch of stays 8" Working pressure of plate by rules 205
 diameter of tubes 3" Pitch of tubes 4.1/8" Material of tube plates steel Thickness: Front 1.3/16" Back 13/16" Mean pitch of stays 8 1/4"
 across wide water spaces 14 1/2" Working pressures by rules - Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10 1/2" x 3/4" Length as per rule - Distance apart 1.5/8" Number and pitch of stays in each 30-8"
 working pressure by rules - Steam dome: description of joint to shell nil % of strength of joint - Diameter -
 thickness of shell plates - Material - Description of longitudinal joint - Diameter of rivet holes - Pitch of rivets -
 working pressure of shell by rules - Crown plates: Thickness - How stayed -



SUPERHEATER. Type Schmidt Date of Approval of Plan - MO Tested by Hydraulic Pressure to 350 lbs. sq. in.

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 1.7/8" Pressure to which each is adjusted 205 lbs. sq. in. Is Easing Gear fitted Yes.

IS A DONKEY BOILER FITTED? Yes. If so, is a report now forwarded? Yes

SPARE GEAR. State the articles supplied:— 1 Propeller, 1 set of coupling bolts

1 complete bearing bush for main gear wheel shafts.

1 " " " " rotor shafts.

1 " " " " pinion shafts.

1 set of packing rings for each gland.

1 set of Turbine thrust pads. 2 Pads for main thrust Liners for adjusting blocks. Valves

for Pumps. 3 valve lids for checks.

1 impeller shaft. 12 boiler tube stoppers. 1 set of Burner nozzles. assorted bolts and nuts

The foregoing is a correct description,

Manufacturer.

Dates of Survey while working being classed During progress of work in steps - 23-11-46, 29, 3, 7, 12, 18, 28 & 31-12-46, 6 & 20-1-47, 1 & 10-3-47 During erection on board vessel - 12 Total No. of visits 12

Is the approved plan of main boiler forwarded herewith yes.

" " " donkey " " " yes.

Dates of Examination of principal parts—Casings 23 Nov. 3rd Dec. 3, 12, 23 Dec. Blading 3, 12, 23 Dec. Gearing 12, 23 Dec.

Rotor shaft 3, 12, 23 Dec. Thrust shaft 13-1-47 Tunnel shafts 13-1-47 Screw shaft 3/12/46, 1/3/47 Propeller 1-3-47

Stern tube 3-12-46 Steam pipes tested 12, 18 Dec, 23-1-47 Engine and boiler sealings 13-1-47 Engines holding down bolts 13-1-47

Completion of pumping arrangements 12-1-46, 28 Jan. 21st Feb. Boilers fixed - Engines tried under steam 10-3-47

Main boiler safety valves adjusted 10-3-47 Thickness of adjusting washers

Material and tensile strength of Rotor shaft Identification Mark on Do.

Material and tensile strength of Pinion shaft Identification Mark on Do.

Material of Wheel shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of Section 49 of the Rules been complied with Yes

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

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and Main Boiler of this vessel have been examined throughout and found or placed in good condition. The scantlings have been verified and all pumping, oil fuel and steam pipe arrangements checked. The main engines and auxiliaries on completion of repairs tried under working conditions and found efficient. The boiler safety valves were adjusted under steam and an accumulation test carried out and the oil fuel installation examined under working condition. The safety valve easing gear was tried and found efficient. The machinery of this vessel is in good condition and is eligible in my opinion to be classed with notation of L.M.C. 3.47 and T.S.(O.G.) seen 3.47, subject to the solid drawn copper oil pressure pipes of the oil fuel installation being replaced by solid drawn steel pipes at the first convenient opportunity.

Table with columns: Description, Amount (£), When applied for, When received.

T.H. Noel Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 10 JAN 1948

Assigned See Bom 8476