

REPORT ON MACHINERY.

No. 36845

Received at London Office

THU 24 MAY 1917

Date of writing Report May 5th 1917 When handed in at Local Office

Port of Glasgow

No. in Survey held at Glasgow

Date, First Survey 28th April 1914 Last Survey May 15th 1917

Reg. Book.

(Number of Visits 115)

335 on the

T.S.S. "WESTMORELAND"

Tons

Gross 9511.

Net 6099.

Master

Built at Glasgow

By whom built D. & W. Henderson & Co. Ltd. (1912) When built 1917

Engines made at Newcastle-on-Tyne

By whom made Wallsend Slipway & Eng. Co. Ltd. when made 1914

Boilers made at Glasgow

By whom made D. & W. Henderson & Co. Ltd. (1912) when made 1917

Registered Horse Power

1126 N.H.P.

Owners Federal Steam Navigation Co Port belonging to London

Shaft Horse Power at Full Power 5200 I.H.P.

Is Refrigerating Machinery fitted for cargo purposes Yes

Is Electric Light fitted Yes

4800 S.H.P. at 150 Revs.

TUBINE ENGINES, &c.—Description of Engines

Screw Steam Turbines

No. of Turbines Two

Diameter of Rotor Shaft Journals, H.P.

6 1/2"

L.P. 6 1/2"

Diameter of Pinion Shaft

5 1/2"

Diameter of Journals

5 1/2"

Distance between Centres of Bearings

29 1/4"

Diameter of Pitch Circle

6.492"

Diameter of Wheel Shaft

13 1/4"

Distance between Centres of Bearings

5'-4"

Diameter of Pitch Circle of Wheel

9'-4.046"

Width of Face

2'-11"

Diameter of Thrust Shaft under Collars

13 1/2"

Diameter of Tunnel Shaft

as per rule

as fitted

12 5/8"

Diameter of Screw Shafts

as per rule

as fitted

Diameter of same

as per rule

as fitted

Diameter of Propeller

15'9"

Pitch of Propeller

15'0"

Diameter of Rotor Drum, H.P.

19'8"

L.P. 2'3"

astern 2'6"

Thickness at Bottom of Groove, H.P.

SOLID L.P. 1/16"

Astern 1/16"

Revs. per Minute at Full Power, Turbine

1728

Propeller

100

PARTICULARS OF BLADING.

H.P.

L.P.

ASTERN.

EXPANSION	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.	
	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction	Impulse	Reaction
1	1 1/2"	1 1/2"	3'-1"	2 1/2"	1	12	1 1/2"	1 1/2"	3'-1"	2 1/2"	1	12	1 1/2"	1 1/2"	3'-1"	2 1/2"	1	12
2	1 1/2"	1 1/2"	3'-3 1/2"	2 1/2"	1	12	1 1/2"	1 1/2"	3'-3 1/2"	2 1/2"	1	12	1 1/2"	1 1/2"	3'-3 1/2"	2 1/2"	1	12
3	1 1/2"	1 1/2"	2'-5 1/2"	2 1/2"	6	6	1 1/2"	1 1/2"	2'-5 1/2"	2 1/2"	6	6	1 1/2"	1 1/2"	2'-5 1/2"	2 1/2"	6	6
4	1 1/2"	1 1/2"	2'-6 1/2"	2 1/2"	6	6	1 1/2"	1 1/2"	2'-6 1/2"	2 1/2"	6	6	1 1/2"	1 1/2"	2'-6 1/2"	2 1/2"	6	6
5	2 1/4"	2 1/4"	2'-7 1/2"	2 1/2"	6	6	2 1/4"	2 1/4"	2'-7 1/2"	2 1/2"	6	6	2 1/4"	2 1/4"	2'-7 1/2"	2 1/2"	6	6
6							1 1/2"	1 1/2"	4'-0"	4'-0"	2	2	1 1/2"	1 1/2"	4'-0"	4'-0"	2	2
7							1 1/2"	1 1/2"	4'-12 3/4"	4'-12 3/4"	2	2	1 1/2"	1 1/2"	4'-12 3/4"	4'-12 3/4"	2	2
8							1 1/2"	1 1/2"	4'-10"	4'-10"	2	2	1 1/2"	1 1/2"	4'-10"	4'-10"	2	2
9							1 1/2"	1 1/2"	4'-10"	4'-10"	2	2	1 1/2"	1 1/2"	4'-10"	4'-10"	2	2
10							1 1/2"	1 1/2"	4'-10"	4'-10"	2	2	1 1/2"	1 1/2"	4'-10"	4'-10"	2	2

and size of Feed pumps 2 D. & W. Henderson 13 1/2" cyl 10" pump 25 stroke

and size of Bilge pumps (3) — one 7" cyl 8" pump 8 stroke + two Samson 9" cyl 6" pump 10 stroke

and size of Bilge suction in Engine Room 5' — 3 1/2"

In Holds, &c. nos 1: 2: 3 + 4 Two in each: No 5 Three:

Bilge suction well — one All 3 1/2"

Bilge Injections 2 sizes 10" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine Room & size Yes 3 1/2"

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 Both

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 Bilge pipes (brim pipes in tank al) How are they protected Wood casing & iron casing

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

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Stewart & Lloyd, & D. Colville & Son

Heating Surface of Boilers 15592 Is Forced Draft fitted Yes No. and Description of Boilers 5 single ended

Working Pressure 190 lb. Tested by hydraulic pressure to 380 Date of test 27-3-16 & 14-4-16 No. of Certificate 13387 & 13399

Each boiler be worked separately Yes Area of fire grate in each boiler 71.5 sq. ft. No. and Description of Safety Valves to

Boiler One pair direct spring Area of each valve 11.04 sq. ft. Pressure to which they are adjusted 195 Are they fitted with easing gear Yes

Least distance between boilers or uptakes and bunkers or woodwork 16 1/2" Mean dia. of boilers 16.6" Length 12'0" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 30 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. L.P.

Seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 9/16" Pitch of rivets 10 1/2" Lap of plates or width of butt straps 22 5/8"

Stages of strength of longitudinal joint rivets 90.5 Working pressure of shell by rules 206 Size of manhole in shell 16" x 12"

Compensating ring 32" x 34" x 1 1/2" No. and Description of Furnaces in each Boiler 4 Doughton Material Steel Outside diameter 43 1/4"

of plain part top Thickness of plates crown 5" Description of longitudinal joint welded No. of strengthening rings —

bottom Thickness of plates bottom 8"

Working pressure of furnace by the rules 232 Combustion chamber plates: Material Steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 1 1/2"

If stays are fitted with nuts or riveted heads No Working pressure by rules 206

Material of stays Steel Diameter at smallest part 1.99" Area supported by each stay 72" Working pressure by rules 248 End plates in steam space

Thickness 1 1/2" Pitch of stays 18" x 24 1/2" How are stays secured D.N. Working pressure by rules 191 Material of stays Steel

Area supported by each stay 440" Working pressure by rules 223 Material of Front plates at bottom Steel

Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 14" Working pressure of plate by rules 191

Mean pitch of stays 10 5/8" x 8 3/8"

Pitch of tubes 4 1/4" x 4 3/8" Material of tube plates Steel Thickness: Front 6 3/4" Back 2 1/2"

Working pressures by rules 190 + 242 Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 9" x 3 1/4" Double Length as per rule 30 7/8 Distance apart 9" Number and pitch of stays in each three @ 8"

Working pressure by rules 198 Steam dome: description of joint to shell No. % of strength of joint — Diameter 2020

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 —

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