

REPORT ON STEAM TURBINE MACHINERY. No. 59070

a. **Writing Report** 26th Nov 1937 **When handed in at Local Office** 27. 11. 1937 **Port of** Glasgow **Received at London Office** DEC -1 1937
Survey held at Glasgow **Date, First Survey** 20th Jan 1937 **Last Survey** 18th Nov 1937
Book. **on the** S.S. El Madina **(Number of Visits)** 1
at Glasgow **By whom built** Barclay & C^o. Ltd. **Yard No.** 666. **When built** 1934/11.
es made at do **By whom made** do. **Engine No.** B.W. 51 **When made** 1934.
rs made at do **By whom made** do. **Boiler No.** 666. **When made** 1934.
Horse Power at Full Power 790 **Owners** Scania Steam Navigation Co. **Port belonging to** Dundee
Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒
for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines 2 L.P. turbines with DR gear and hydraulic couplings

Turbines Ahead 2 Direct coupled, single reduction geared } to 2 propelling shafts. No. of primary pinions to each set of reduction gearing 1.
 Astern 2 double reduction geared }
coupled to Alternating Current Generator — phase — periods per second }
 Direct Current Generator } rated — Kilowatts — Volts at — revolutions per minute;
plying power for driving — Propelling Motors, Type —
 — Kilowatts — Volts at — revolutions per minute. Direct coupled, single or double reduction geared to — propelling shafts.

	H. P.			I. 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.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION							28 1/2"	28 1/2"	1			
"							28 1/2"	29 1/2"	1			
"							33 1/2"	30 25"	1			
"							42 1/2"	32 1/2"	1			
"							48 1/2"	33 1/2"	1			
"							58 1/2"	34 1/2"	1			
"							63 1/2"	36 1/2"	1			
"												
"												
"												
"												
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"												

Horse Power at each turbine { H.P. —
 I.P. —
 L.P. 790 each
Revolutions per minute, at full power, of each Turbine Shaft { H.P. —
 I.P. —
 L.P. 4150
Shaft diameter at journals { H.P. —
 I.P. —
 L.P. 4 3/32"
Pitch Circle Diameter { 1st pinion 8.5697" 1st reduction wheel 46.4908"
 2nd pinion 11.998" main wheel 68.2745"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 17.126" 1st reduction wheel 28.544"
 2nd pinion 27.756" main wheel 32.678"
Pinion Shafts, diameter at bearings { External 1st 3.937" 2nd 8.662"
 Internal 1st — 2nd —
diameter at bottom of pinion teeth { 1st 7.9931"
 2nd 11.2256"

Shafts, diameter at bearings { 1st 8.662"
 main 15.748"
diameter at wheel shroud, { 1st 42.678" Generator Shaft, diameter at bearings —
 main 65.159" Propelling Motor Shaft, diameter at bearings —
Intermediate Shafts, diameter as per rule 10.46"
Thrust Shaft, diameter at collars as per rule 10.98"
Tube Shaft, diameter as per rule —
 as fitted —

Shaft, diameter as per rule —
 as fitted —
Is the { tube } shaft fitted with a continuous liner {
 { screw }
Bronze Liners, thickness in way of bushes as per rule —
 as fitted —

Seal between bushes as per rule —
 as fitted —
Is the after end of the liner made watertight in the propeller boss —
If the liner is in more than one length are the junctions —
fusion through the whole thickness of the liner —
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a —
material insoluble in water and non-corrosive —
If two liners are fitted, is the shaft lapped or protected between the liners —
Is an approved Oil Gland —
appliance fitted at the after end of the tube shaft —
Length of Bearing in Stern Bush next to and supporting propeller —

Blower, diameter — **Pitch** — **No. of Blades** — **State whether Moveable** — **Total Developed Surface** — square feet.
of Screw, are arrangements made so that steam can be led direct to the L.P. Turbine —
Can the H.P. or I.P. Turbine exhaust direct to the —
No. of Turbines fitted with astern wheels — **Feed Pumps** { No. and size —
 How driven —

connected to the Main Bilge Line { No. and size —
 How driven —
Lubricating Oil Pumps, including Spare Pump, No. and size —
independent means arranged for circulating water through the Oil Cooler —
Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge —
No. and size:—In Engine and Boiler Room —
s, &c. —

Water Circulating Pump Direct Bilge Suctions, No. and size —
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes —
Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges —
Are they fitted with Valves or Cocks —

Sea Connections fitted direct on the skin of the ship —
Are the Overboard Discharges above or below the deep water line —
each fitted with a Discharge Valve always accessible on the plating of the vessel —
Are the Blow Off Cocks fitted with a spigot and brass covering plate —
How are they protected —
How are they protected —
Have they been tested as per rule —

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times —
Arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one —
ment to another —
Is the Shaft Tunnel watertight —
Is it fitted with a watertight door —
worked from —

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