

Auxiliary Turbines built by Schneider, Le Creusot, France.

Machine No 238-9

Driving S W Alternators No 9816 & 9815 respectively

Report on Steam Turbine Machinery. No. LYO E.11

4a.

of writing Report 25 July 1956 When handed in at Local Office 19 Port of LYON, France.
in Survey held at Le Creusot Date, First Survey 16/1/56 Last Survey 1/8/56
Book (Number of Visits 14)

on the Single Twin Triple Quadruple Screw Vessel Tons {Gross
(Net)

at St. Nazaire By whom built Chantiers de Penhoët Yard No. B.17 When built 1956

ines made at By whom made Engine No. When made

ers made at By whom made Boiler No. When made

ft Horse Power {Maximum 116 Owners. Port belonging to

. as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted yes

No. of de for which Vessel is intended carrying Petroleum in bulk

blowers

struction AM TURBINE ENGINES, &c.—Description of Engines 2 sets Westinghouse Type 650 KW each

area of of Turbines Ahead two Direct coupled, single reduction geared Alternator propelling shafts. No. of primary pinions to each set of reduction gearing

ct coupled to { Alternating Current Generator 5 phase 60 periods per second { Direct Current Generator rated 650 Kilowatts 450 Volts at 1,200 revolutions per minute;

upplying power for driving. Propelling Motors, Type

d. Kilowatts. Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

etween

proved TURBINE

Axial ADING.

balance { No. of rows 1. double 6. single

Vas the { No. of stages

g { No. of rows in each

stage

t Horse Power at each turbine { H.P. 850 { I.P. 8,000 1st reduction wheel

or Shaft diameter at journals { H.P. 50-65 mm Pitch Circle { 1st pinion 98.72 mm 1st reduction wheel

ance between centres of pinion and wheel faces and the centre of the adjacent bearings { 2nd pinion 741.88 mm main wheel

able Pinion { 1st 179.75 mm 1st reduction wheel

ts, diameter { 2nd 103.72 mm main wheel

ow are el Shafts, diameter at bearings { 1st 69.65 mm diameter at bottom of pinion teeth

mediate Shafts, diameter { main 101.42 mm

rokes e Shaft, diameter { as per rule. { as fitted. { 112.7 mm

hinery ze Liners, thickness in way of bushes { as per rule. { as fitted. { Is the after end of the liner made watertight in the

eller boss. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

o liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland or other appliance fitted at the after end of the tube

If so, state type Length of Bearing in Stern Bush next to and supporting propeller

eller, diameter. Pitch. No. of Blades. State whether Moveable. Total Developed Surface. square feet.

ngle Screw, are arrangements made so that steam can be led direct to the L.P. Turbine. Can the H.P. or I.P. Turbines exhaust direct to the

enser. No. of Turbines fitted with astern wheels. Feed Pumps { No. and size. { How driven.

ctures ps connected to the Main Bilge Line { No. and size. { How driven.

st Pumps, No. and size. Lubricating Oil Pumps, including Spare Pump, No. and size. Main & Spare 5 Cu.M.

wo independent means arranged for circulating water through the Oil Cooler. Branch Bilge Suctions, No. and size:—In Engine

etters. Boiler Rooms. In Pump Room.

ssible. lds, &c.

Water Circulating Pump Direct Bilge Suctions, No. and size. Direct Bilge Suctions to the Engine and/or Boiler Room

s, No. and size. Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

he 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.

ll Sea Connections fitted direct on the skin of the ship. Are they fitted with Valves or Cocks.

hey fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates. Are the Overboard Discharges above or below the deep water

Are they 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

ing plate. What pipes pass through the bunkers. How are they protected.

pipes pass through the deep tanks. Have they been tested as per rule.

ll 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

, or from one compartment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from

ERS, &c.—Total Heating Surface of Boilers.

ced Draught fitted. No. and Description of Boilers. Working Pressure.

egiste report on Main Boilers now forwarded?

013588 - 013595 - 0197

4 A. 811.
Is { a Donkey } Boiler fitted? If so, is a report now forwarded?
{ an Auxiliary }
Is the donkey boiler intended to be used for domestic purposes only?
Plans. Are approved plans forwarded herewith for Shafting 1/12/55 Main Boilers. Auxiliary Boilers. Donkey Boilers.
(If not, state date of approval)
Superheaters. General Pumping Arrangements. Oil Fuel Burning Arrangements.
Geared turbines } Have torsional vibration characteristics of system been approved. Yes Date of approval 16/12/55
situated aft. }

SPARE GEAR.

Has the spare gear required by the Rules been supplied. As per Rule requirements.
State the principal additional spare gear supplied. NIL

The foregoing is a correct description and the particulars of the engines as supplied are as approved for torsional vibration characteristics. STE DES FORGES ET ATELIERS DU CREUSOT

Dates of Survey while building { During progress of work in shops - - 16 Jan., 24 Feb., 19 Mar. 25 May, 4 June, 19-20-31 July 1956
During erection on board vessel - -
Total No. of visits.

Dates of Examination of principal parts—Casings. 24-2-56 Rotors. 4-6-56 Blading. 4-6-56 Gearing. 4-6-56

Wheel shaft. 4-6-56 Thrust shaft. Intermediate shafts. Tube shaft. Screw shaft.

Propeller. Stern tube. Engine and boiler seatings. Engine holding down bolts.

Completion of fitting sea connections. Completion of pumping arrangements. Boilers fixed. Engines tried under steam.

Main boiler safety valves adjusted. Thickness of adjusting washers. Identification Mark.

Rotor shaft, Material and tensile strength. N1. Cr. Mo. Steel N° 1 73.5 Kg/mm2 N°2 75.3 Kg/mm2 Identification Mark N°1 STE 920 N°2 STE 920

Flexible Pinion Shaft, Material and tensile strength. Identification Mark.

Pinion shaft, Material and tensile strength. N1. Cr. Steel N° 1 82.3 Kg/mm2 N°2 82.8 Kg/mm2 Identification Mark N° 1 STE 920 N°2 STE 920/2 EP

; Chemical analysis. C. .381 .3.8 .010. P.019 Mn .58 Si 1.50 Cr .60

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment. 8-10-56

1st Reduction Wheel Shaft, Material and tensile strength. Identification Mark.

Wheel shaft, Material. O.H. Steel Identification Mark. STE 920. EP Thrust shaft, Material. Identification Mark.

Intermediate shafts, Material. Identification Marks. Tube shaft, Material. Identification Marks.

Screw shaft, Material. Identification Marks. Steam Pipes, Material. Test pressure.

Date of test. Is an installation fitted for burning oil fuel.

Is the flash point of the oil to be used over 150°F. Have the requirements of the Rules for the use of oil as fuel been complied with.

Full description of Fire Extinguishing Apparatus fitted in machinery spaces.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. If so, have the requirements of the Rules been complied with.

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with.

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.) These two geared auxiliary steam turbine so

were constructed under special survey of tested materials in accordance with the Secretary's le

approved plans and requirements of the Rules.

The quality of the workmanship and material be shut

employed in the construction of the turbines has been found good.

Due to an unsufficient supply of steam at the Gea

Engine Builders Works, it was not possible to test these machines under full load conditions and

will therefore be necessary to carry out these tests after fitting on board ship.

In the opinion of the undersigned, subject

full load tests being carried out and found satisfactory, these steam turbines are suitable for

stallation in a vessel to be classed with this Society for the purpose intended.

ATTACHMENTS: St. Etienne Certificates 920/A2, 920/J2, 920/N2, 920/G2 & 920/P2.

The amount of Entry Fee £ 200.000 : When applied for

Special ... £ : : 19

Donkey Boiler Fee ... £ : : When received

Travelling Expenses (if any) £ 25.400 : 19

FRIDAY 22 MAR 1957

Committee's Minute.

Assigned. Su Rpt. 1

Engine Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation