

REPORT ON STEAM TURBINE MACHINERY.

No. 105406

Date of writing Report 10 When handed in at Local Office 10 Port of **NEWCASTLE-ON-TYNE** Received at London Office 26 NOV 1948

No. in Survey held at *South Shields* Date, First Survey 13/9/48 Last Survey 22/10/1948
Reg. Book. 77969 on the *S.S. 'TRESUS'* (Number of Visits 24)

Built at *Portland, Oregon* By whom built *Kaiser Co., Inc.* Yard No. *98* Tons Gross *10669* Net *6317*
Engines made at *Lynn, Mass.* By whom made *G. E. Co.* Engine No. *364743* When built *1944*
Boilers made at *U.S.A.* By whom made *Combustion Engine Co.* Boiler No. *39663* When made *1944*
Shaft Horse Power at Full Power *525 K.W.* Owners *Anglo-Saxon Petroleum Co. Ltd.* Port belonging to *London*
Nom. Horse Power as per Rule ☒ Is Refrigerating Machinery fitted for cargo purposes *No.* Is Electric Light fitted *Yes*
Trade for which Vessel is intended *Petroleum in Bulk.*

STEAM TURBINE ENGINES, &c. — Description of Engines *Two single reduction geared impulse turbines*

No. of Turbines Ahead *One* Direct coupled, single reduction geared *to Generator* No. of primary pinions to each set of reduction gearing *One*
Astern *One* double reduction geared *to Generator*

direct coupled to { Alternating Current Generator *3* phase *60* periods per second
for supplying power for driving { Direct Current Generator *rated 400 Kilowatts 450 Volts at 1200 revolutions per minute;*
Propelling Motors, Type *rated 400 Kilowatts 450 Volts at 1200 revolutions per minute.* Direct coupled, single or double reduction geared to *propelling shafts.*

TURBINE LOADING.	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.
1ST EXPANSION	<i>1 1/2"</i>	<i>25 9/16"</i>	<i>1</i>									
2ND	<i>1 1/8"</i>	<i>26 1/8"</i>	<i>1</i>									
3RD	<i>1 1/2"</i>	<i>25 9/16"</i>	<i>1</i>									
4TH	<i>1"</i>	<i>26 1/8"</i>	<i>1</i>									
5TH	<i>1 5/16"</i>	<i>25 3/8"</i>	<i>1</i>									
6TH	<i>2 1/8"</i>	<i>26 3/8"</i>	<i>1</i>									
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine { H.P. *700*
I.P. *5645*
L.P. *1200* } Revolutions per minute, at full power, of each Turbine Shaft { 1st reduction wheel *1200*
main shaft *1200*

Rotor Shaft diameter at journals { H.P. *2 1/2"*
I.P. *5.43"*
L.P. *25.56"* } Pitch Circle Diameter { 1st pinion *5.43"*
2nd pinion *25.56"* } Width of Face { 1st reduction wheel *8.25"*
main wheel *8.25"*

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion *6.625"*
2nd pinion *6.625"* } 1st reduction wheel *6.625"*
main wheel *6.625"*

Flexible Pinion Shafts, diameter { 1st *4"*
2nd *4"* } Pinion Shafts, diameter at bearings { External *4"*
Internal *4"* } diameter at bottom of pinion teeth { 1st *5.125"*
2nd *5.125"*

Wheel Shafts, diameter at bearings { 1st *4"*
main *4"* } diameter at wheel shroud, { 1st *4"*
main *4"* } Generator Shaft, diameter at bearings *4"*
Propelling Motor Shaft, diameter at bearings *4"*

Intermediate Shafts, diameter as per rule *as fitted* Thrust Shaft, diameter at collars as per rule *as fitted*

Stern Tube Shaft, diameter as per rule *as fitted* Screw 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* Thickness 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 made by 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 plastic material insoluble in water and non-corrosive *two 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 *ft* If so, state type *Length of Bearing in Stern Bush next to and supporting propeller*

Propeller, diameter *Pitch* No. of Blades *State whether Moveable* Total Developed Surface *square feet.* Can the H.P. or I.P. Turbine exhaust direct to the *condenser*

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

Pumps connected to the Main Bilge Line { No. and size *How driven*

Last Pumps, No. and size *Lubricating Oil Pumps, including Spare Pump, No. and size*

Two independent means arranged for circulating water through the Oil Cooler *Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge*
Pumps, No. and size: — In Engine and Boiler Room *In Pump Room*

Water Circulating Pump Direct Bilge Suctions, No. and size *Independent Power Pump Direct Suctions to the Engine Room*

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *the 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*

All Sea Connections fitted direct on the skin of the ship *Are they fitted with Valves or Cocks*

Are they 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 line*

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 covering plate*

Pipes pass through the bunkers *How are they protected*

Pipes pass through the deep tanks *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*
compartment to another *Is the Shaft Tunnel watertight* *Is it fitted with a watertight door* *worked from*

