

## REPORT ON STEAM TURBINE MACHINERY. No. 5029

Date of writing Report 5th Oct., 1948 When handed in at Local Office 5th October, 1948 Port of Galveston, Texas  
No. in Survey held at Galveston, Texas Date, First Survey 14th August Last Survey 4th September, 1948  
Reg. Book 59561 on the S/S "FRANCINE CLORE" (Number of Visits Continuous)  
Built at Portland, Oregon By whom built Kaiser Co., Inc. Yard No. 74 When built 1944 - ~~1945~~  
Engines made at Lynn, Mass. By whom made General Electric Co. Engine No. - When made 1944  
Boilers made at St. Louis, Mo. By whom made Combustion Engineering Co. P. 9757 When made 1944  
Shaft Horse Power at Full Power 6000 Owners British Oil Shipping Co., Ltd. Port belonging to London  
Nom. Horse Power as per Rule 1425 ~~1396~~ 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, &amp;c. — Description of Engines One Curtis Impulse 10 Stage Turbine

No. of Turbines Ahead One ~~Direct coupled~~ ~~single reduction geared~~ to - propelling shafts. No. of primary pinions to each set of reduction gearing -  
Astern - ~~double reduction geared~~  
direct coupled to { Alternating Current Generator 3 phase 60/62 periods per second } rated 4925/5400 2300 3600  
for supplying power for driving One Propelling Motors, Type TSM-HL-80 One Synchronous Motor  
rated 4625 Kilowatts 2300 Volts at 90 revolutions per minute. Direct coupled, ~~single or double reduction geared~~ to One propelling shafts.

## TURBINE BLADING.

	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												
2ND												
3RD												
4TH												
5TH												
6TH												
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine { H.P. 7240 I.P. - L.P. - }  
Revolutions per minute, at full power, of each Turbine Shaft { H.P. 3600 1st reduction wheel - I.P. - main shaft 90 L.P. - }

Rotor Shaft diameter at journals { H.P. 5" & 10" I.P. - L.P. - }  
Pitch Circle Diameter { 1st pinion - 1st reduction wheel - 2nd pinion - main wheel - }  
Width of Face { 1st reduction wheel - main wheel - }

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

Flexible Pinion Shafts, diameter { 1st - 2nd - }  
Pinion Shafts, diameter at bearings External 1st { - 2nd { - diameter at bottom of pinion teeth { 1st - 2nd - Internal 1st { - 2nd { - }

Wheel Shafts, diameter at bearings { 1st - 2nd - }  
diameter at wheel shroud, { 1st - 2nd - }  
Generator Shaft, diameter at bearings 5 1/2"  
Propelling Motor Shaft, diameter at bearings 17.268"

Intermediate Shafts, diameter as per rule 16 1/2"  
as fitted 16 7/8"  
Thrust Shaft, diameter at collars as per rule 17.325"  
as fitted 18"  
Tube Shaft, diameter as per rule -  
as fitted -

Screw Shaft, diameter as per rule 18 5/8"  
as fitted 18 5/8"  
Is the screw shaft fitted with a continuous liner Yes  
Bronze Liners, thickness in way of bushes as per rule 1 1/8"  
as fitted 1 1/8"

Thickness between bushes as per rule .65"  
as fitted 31/32"  
Is the after end of the liner made watertight in the propeller boss Yes  
If the liner is in more than one length, are the junctions

made by fusion through the whole thickness of the liner Yes  
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a  
elastic 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

other appliance fitted at the after end of the tube shaft No  
Length of Bearing in Stern Bush next to and supporting propeller 7'-3"

Propeller, diameter 19'-6" Pitch 17'-6" at No. of Blades 4 State whether Moveable Solid Total Developed Surface 138.30 square feet.  
If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine One Turbine Can the H.P. or L.P. Turbine exhaust direct to the

Condenser Yes No. of Turbines fitted with astern wheels - Feed Pumps { No. and size Two 200 GPM One 10"x7"x24. 130 GPM  
How driven Steam Turbo-Units. Steam Vert Simplex

Pumps connected to the Main Bilge Line { No. and size E.R. two 175 GPM & one 450 GPM. Ford PR one 300 GPM. Aft PR one 700 GPM  
How driven Electric Centrifugal Vert Duplex 10"x7"x10" (Vert Duplex 14"x

Ballast Pumps, No. and size Aft PR One 14"x14"x12" Lubricating Oil Pumps, including Spare Pump, No. and size Two 60 GPM Rotex Ele.  
Are two independent means arranged for circulating water through the Oil Cooler Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Pumps, No. and size:—In Engine and Boiler Room E.R. Eleven 3" dia into 4" Main & One 2" dia; Two 3 1/2" dia into 4" Line:  
In Holds, &c. Fore & Aft Peaks One 4" each Chain Locker 2" Ejector: Ford PR Two 2 1/2" Aft PR One 4" & Aft

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 18" dia. Independent Power Pump Direct Suctions to the Engine Room  
Bilges, No. and size Two 4" dia. Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes

Are 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 Yes  
Are all Sea Connections fitted direct on the skin of the ship Boxes or Spools Are they fitted with Valves or Cocks Valves

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

What pipes pass through the bunkers - How are they protected -  
What pipes pass through the deep tanks - Have they been tested as per rule -

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
Is the 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 Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes  
worked from E.R. Floor Level



BOILERS, &c.— (Letter for record S ) Total Heating Surface of Boilers 11352 sq. ft.

Is Forced Draft fitted Yes No. and Description of Boilers Two single pass straight tube Working Pressure 500 lbs. sect. header with superheaters & air heaters

Is a Report on Main Boilers now forwarded? Yes

Is { a Donkey } Boiler fitted? No If so, is a report now forwarded? - { an Auxiliary }

Plans. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers - Donkey Boilers - (If not state date of approval) T2 Tanker Type

Superheaters Yes General Pumping Arrangements Yes Oil Fuel Burning Arrangements -

Spare Gear. State the articles supplied: Supplied to Rule Requirements

The foregoing is a correct description,

Manufacturer

Dates of Survey while building { During progress of work in shops - - } { During erection on board vessel - - } Total No. of visits -

Dates of Examination of principal parts—Casings - Rotors - Blading - Gearing - Motor Thrust shaft 18th Aug. Thrust shaft 20th Aug. Intermediate shafts 20th Aug. Tube shaft - Screw shaft - Propeller 14th Aug. Stern tube - Engine and boiler seatings 18th Aug. Engine holding down bolts 4th Sept. Completion of pumping arrangements - Boilers fixed - Engines tried under steam 4th Sept. Main boiler safety valves adjusted 31st Aug. Thickness of adjusting washers - Rotor shaft, Material and tensile strength - Identification Mark - Flexible Pinion Shaft, Material and tensile strength - Identification Mark - Pinion shaft, Material and tensile strength - Identification Mark - 1st Reduction Wheel Shaft, Material and tensile strength - Identification Mark - Wheel shaft, Material - Identification Mark - Thrust shaft, Material O.H. Steel Identification Mark - Intermediate shafts, Material O.H. Steel Identification Marks - Tube shaft, Material - Identification Mark - Screw shaft, Material O.H. Steel Identification Marks - Steam Pipes, Material Seamless Steel Test pressure 750 lbs. Date of test 17th Aug. 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 the Rules for the use of oil as fuel been complied with Yes Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Tanker If so, have the requirements of the Rules been complied with - Is this machinery a duplicate of a previous case Yes If so, state name of vessel T2 Type Tankers

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boilers of this vessel were constructed under Special Survey of the American Bureau of Shipping & U.S.C.G.; the condition and standard of workmanship are considered to be good and satisfactory.

The main and auxiliary machinery as opened for Survey (See Rpt. 9) are in good condition; all were examined under working conditions and found satisfactory.

The machinery and boilers of this vessel are eligible, in my opinion, to be classed with this Society, with a record of LMC (MS) is recommended for the favourable consideration of the Committee.

Note: Part machinery survey was done Jacksonville, Florida 20/9/47.

The amount of Entry Fee	.... f	:	:	When applied for,
Special	.... f	:	:	19
Donkey Boiler Fee	.... f	:	:	When received,
Travelling Expenses (if any)	f	:	:	19

James T. Tully  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK DEC 22 1948

Assigned LMC-9,47



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