

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office **22 NOV 1951**

Date of writing Report 19... When handed in at Local Office 19... Port of **Seattle, Washington**

No. in Survey held at **Seattle, Washington** Date, First Survey **25th July** Last Survey **21st Sept.** 19 **51**

Reg. Book **08568** on the SS. **"KAISANIEMI"** (ex "EMPIRE CONSEQUENCE") (Number of Visits **30**)

Built at **Lubeck** By whom built **Lubecker Maschinsbau Geselcheff** Yard No. **396** When built **1940**

Engines made at **Altona-Ottensen** By whom made **Ottensener Eisenwerk A.G. Abt Maschinenfabrick** Engine No. **1430** When made **1939**

Boilers made at **Hamburg-Altona** By whom made **Ottenseult Steel Works** Boiler No. **1840-1841** When made **1940**

Registered Horse Power **1520** at **100 R.P.** Owners **Etela-Suomen-Laiva, O.Y.** Port belonging to **Helsinki**

Nom. Horse Power as per Rule **330 MN.** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Trade for which Vessel is intended **Ocean going service**

**ENGINES, &c.**—Description of Engines **Double compound and L.P. Turbine with D.R. gearing & Hydraulic coupling** Revs. per minute **100**

Dia. of Cylinders **H.P. 14-9/16 L.P. 31-1/2** Length of Stroke **31-1/2"** No. of Cylinders **2 H.P. 2 L.P.** No. of Cranks **4**

Crank shaft, dia. of journals as per Rule  as fitted **10-1/8"** Crank pin dia. **10-1/8"** Crank webs Mid. length breadth **17"** Thickness parallel to axis **5-5/8"**

Intermediate Shafts, diameter as per Rule  as fitted **11-1/16"** Thrust shaft, diameter at collars as per Rule  as fitted **(20 3/16")** Mid. length thickness **5-15/16** Yes. Thickness around eye-hole **5-1/16"**

Tube Shafts, diameter as per Rule  as fitted  Screw Shaft, diameter as per Rule  as fitted **12-7/8"** Is the ~~crank~~ shaft fitted with a continuous liner  Yes

Bronze Liners, thickness in way of bushes as per Rule  as fitted **7/8"** Thickness between bushes as per Rule  as fitted **3/4"** 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

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 **Continuous**

If 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 shaft **No** If so, state type  Length of Bearing in Stern Bush next to and supporting propeller **60"**

Propeller, dia **13'4"** Pitch **12'6"** No. of Blades **4** Material **Bronze** whether Moveable **No** Total Developed Surface **60.5** sq. ft.

Feed Pumps worked from the Main Engines, No. **None** Diameter  Stroke  Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. **2** Diameter **3-5/8"** Stroke **14"** Can one be overhauled while the other is at work **Yes**

Feed Pumps (No. and size **2 Simplex 12 x 6"x24"** Pumps connected to the Main Bilge Line (No. and size **1 Ballast 7-7/8 x 8-21/32 x 13-13/16** How driven **1 General Service 12"x6"x24"** Both Steam

Ballast Pumps, No. and size **1 duplex 7-7/8"x8-21/32"x13-13/16"** Lubricating Oil Pumps, including Spare Pump, No. and size **1 Rotary Geared to turbine 1 Duplex Steam 6-1/2"x6-1/2"x11 1/4"**

Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **1-3" (p&s) Aft E. R. Bulkhead. 1-3" (p&s) in Boiler Room. 1-8" Bilge Injection to Circulating Pump. 1-6" to Bilge & Ballast** In Holds, &c. No. **1 Hold 1-3" (p&s) No. 2 hold 1-3" (p&s) No. 3 hold 1-3" (p&s) No. 4 hold 1-3" (p&s) Tunnel Well 1-3"**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **1 - 8"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 - 6" Bilge & Ballast** 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 **Yes** Are they fitted with Valves or Cocks **Valves and 1 Cock to Boiler blow**

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 **Above**

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 **Vents from D. B. Tanks only** How are they protected **on floors by steel plates**

What pipes pass through the deep tanks **No 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 **Upper E.R.**

**MAIN BOILERS, &c.**— (Letter for record **S**) Total Heating Surface of Boilers **Two 3660 sq. ft.**

Which Boilers are fitted with Forced Draft **Both** Which Boilers are fitted with Superheaters **Both**

No. and Description of Boilers **Two (2) Prudhon Copus** Working Pressure **235 lbs. per sq. in.**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes**

IS A DONKEY BOILER FITTED? **No** If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

**PLANS.** Are approved plans forwarded herewith for Shafting  Main Boilers  Auxiliary Boilers  Donkey Boilers

(If not state date of approval)

Superheaters  General Pumping Arrangements  Oil fuel Burning Piping Arrangements

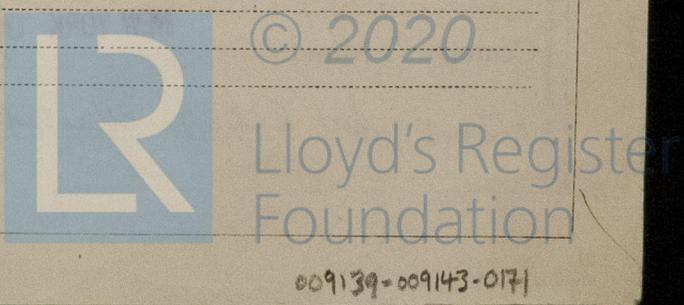
### SPARE GEAR.

Has the spare gear required by the Rules been supplied **Yes. For Reciprocating Engines and Auxiliaries**

State the principal additional spare gear supplied

The foregoing is a correct description

Manufacturer.



Dates of Survey while building

During progress of work in shops - -	{	.....	x
		.....	
During erection on board vessel - - -	{	.....	x
		.....	
Total No. of visits		.....	x

Dates of Examination of principal parts—

Cylinders	x	Slides	x	Covers	x
Pistons	x	Piston Rods	x	Connecting rods	x
Crank shaft	x	Thrust shaft	x	Intermediate shafts	x
Tube shaft	x	Screw shaft	x	Propeller	x
Stern tube	x	Engine and boiler seatings	x	Engines holding down bolts	x
Completion of fitting sea connections	x				
Completion of pumping arrangements	x	Boilers fixed	x	Engines tried under steam	x
Main boiler safety valves adjusted	x	Thickness of adjusting washers	x		
Crank shaft material	x	Identification Mark	x	Thrust shaft material	x
Intermediate shafts, material	x	Identification Marks	x	Tube shaft, material	x
Screw shaft, material	x	Identification Mark	x	Steam Pipes, material	x
				Test pressure	x
				Date of Test	x

Is an installation fitted for burning oil fuel No

Is the flash point of the oil to be used over 150° F. x

Have the requirements of the Rules for the use of oil as fuel been complied with x

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

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with x

Is this machinery duplicate of a previous case x If so, state name of vessel x

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel is stated to have been constructed under the supervision and to the requirements of the Germanischer Lloyd Surveyors and has now been examined throughout and the materials and workmanship are considered satisfactory.

For recommendations as to Class, etc. see Rpt. 9 attached herewith. JFR

The Surveyors are requested not to write on or below the space for Committee's Minute.

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

James F. Robertson  
 Engineer Surveyor to Lloyd's Register of Shipping.

NEW YORK OCT 31 1951

Committee's Minute

Assigned *See Rpt. 9 attached.*

