

No.

(Received at London Office

2 APR 1951

Date of writing Report 20th March 1951 When handed in at Local Office 19 Port of Amoy

No in Reg. Book. Survey held at Amherst Date. 22nd Febr. First Survey 22nd Febr. Last Survey 13th March 19 51

55206 on the Machinery of the ~~Mold~~ Iron or Steel *Member* "CFRONIA" (NO. OF PAGES 1)

		Year.		Month.					
Tonnage	Gross	8966	Vessel built at	Schiedam	By whom	J. V. Wilson	When	1939	4
	Net	4210	Engines made at	Rotterdam	By whom	J. V. Wilson	When	1939	-
Nominal Horse Power		502	Boilers, when made (Main)		(Donkey)		1939		

No. of Main Boilers 2 Owners John B. Smith Owners Address 100 Broadway
(if not already recorded in Appendix to Register Book.)
No. of Rank Boilers 1 Managers Wm. H. Smith Port New York Voyage to Europe

No. of Donkey Boilers
Steam Pressure—
in Main Boilers

Managers.

~~H~~ Surveyed Afloat ~~H~~ in Dry Dock N. D. S. M.
(State name of Dock.)

Port *The Hague* Voyage

Particulars of Classification (which must be inserted

in Donkey Boilers <u>1820</u>	CHARACTER. * for Special Survey. Date of last Survey and of Periodical Surveys.	Machinery and Boiler Surveys (including date of N.B., if any)
Last Report No. <u>Port ME conversion from Diesel oil to High Viscosity Fuel</u>		

Particulars of Examination and Repairs (if any)	DBS and part MS	+ 100 A1	+ 1 MC CS
---	-----------------	----------	-----------

Periodical Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case

1 damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined.

Was a damage report made by anyone else? If so, by whom? b7c

Did the Surveyor personally go inside each Main Boiler separately and make a through examination at this time?

the Donkey Yes OIL ENGINE

not, state for what reasons. What parts of the Boilers could not be thus thoroughly examined?

hat special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?

late latest date of internal examination of each boiler 23/2 Donkey boiler Present condition of funnel(s) Good

Did the Surveyor examine the Safety Valves of the Main Boilers? ☒ To what pressure were they afterwards adjusted under steam?

Did the Surveyor examine the Safety Valves of the Donkey Boiler? *Yes* To what pressure were they afterwards adjusted and *100 lb*

the Surveyor examine all the manholes doors and their fastenings of the Main Boilers? 15 40 112

4. the Carpenter examine the drain plugs of the Main Ballast?

...and of the Donkey Boilers.

and of the Donkey Boiler: *yes*

As the screw shaft has been drawn and examined, ☒ has it a continuous liner? ☒ Is an approved oil retaining appliance fitted at the after end? ☒ *no*

Has the shaft now fitted been previously used? ☒ Has it a continuous liner? ☒

an approved oil retaining appliance fitted at the after end. ✓ State date of examination of Screw Shaft ✓ State the wear down in the

stern bush 3,3 mm Is electric light and/or power fitted? yes If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? ✓

is the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms?

the Survey is not complete, state what arrangements have been made for its completion and what remains to be done.

hessel placed in dry dock; propeller and outside fastenings examined and found in order

MAIN ENGINE

N^o 3 & 7 crankpins examined and found with bottom end bearings in satisfactory condition.

in satisfactory condition.

Piston cooling water cooler and Main lubricating oil cooler transported to workshop, opened out

cleaned, hydro. tested, examined and found in good condition.

General Observations, Opinion, and Recommendation:— Please see Continuation sheet.

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, BS 0,11, R&MS 0,11, *LMC 0,11 or

CS 3,34
The machinery being in a good condition I am of opinion that this vessel is eligible to remain as classed with fresh record of DBS.3,51

Survey Fee (per Section 20)..... \$ 230.- } Fees applied for (

Special Damage or Repair Fee (if any) £ : :
(per Section 29.)

Received by me

[Signature]

| travelling expenses (if chargeable) | £ 7: - | 10 | 10 |

Committee's Minute..... TUES. 24 APR 1951

Assigned DBS 351

002750-002753-00811

Insert Character of Ship and Machinery needed in the Russian Navy.

Machinery of the M/V "CERONIA"Main Engine Conversion from Diesel Oil to High Viscosity Fuel (H.V.F.):

Arrangements have been made for running the Main engine on H.V.F.

For this purpose the lifting height of the fuel valve needles has been increased 0.3 mm, this being the only alteration in organic respect to the engine.

The fuel to be used is supposed to have a viscosity of 1350° Redwood at 100°F, while its temperature at the fuel valve needles is to be kept at 180°F.

A plan of the F.O. Heating & Purifying arrangement is forwarded herewith for guidance.

For this arrangement are newly fitted:

A Purifier and a Clarifier, both of the "DE LAVAL" type, with attached transfer pumps

2 F.O. Heaters - Swinney Bros Ever Clean type (being found marked: ^{LLOYDS TEST 450 LBS} LN.22429/30. GWW.22-12-50)

A F.O. suction filter and a Auto-Clean Duplex filter

A Heating system for ME fuel valves (for manoeuvring only) consisting of a freshwater hotwell (the water being heated by steam ejection) and a hot freshwater circulating pump (electric driven MONO-type). At sea, when running full speed, this system is out of action, the fuel valves being cooled as usual from the general cooling system.

Steam heating coils (ϕ 50/60 mm) are fitted in Forward F.O. Deep tanks (P&S) and in the F.O. cross bunkers (P&S). Same by ch. tested after fitting with satisfactory results.

The H.V.F. Settling tanks have their existing heating coils.

NOTE: It will be observed from the plan that the Main engine can be changed over on Diesel oil instantaneously.

Fitting of a new 38 kW steam generator set:

The existing 18 kW steam generator set has been removed and replaced by a new one, made and supplied by Sunderland Forge & Eng. Co., consisting of:

An cyl. steam engine N° 43395 (crankshaft found marked: L.R. 1634. DP. 27-10-50), and a Dynamo - N° 43396. Compound - 110V - 346 A - 38 kW - 640 r.p.m. A copy Certificate of this set has been requested for and will be forwarded when received.

A belonging new switchboard panel (pyrite), likewise supplied by Sunderland Forge, has been fitted to the existing switchboard, the dynamo being connected thereto with:

Main cables: $2 \times 1 \times 185 \text{ mm}^2$ GPLK (armoured paper lead cable)

Shunt cable: $2 \times 6 \text{ mm}^2$ ORLK (steel wire braided rubber lead cable).

The dynamos (the new one and the existing Diesel dynamo) are NOT arranged to run in parallel.

The new dynamo is secured by an Automatic Circuit breaker which has been adjusted thus:

Direct trip = 500 A. Time relay trip = 350 A in 7 seconds.

After fitting the new set was tried under working condition with satisfactory results.

Evaporator opened out, examined and found in good condition; same afterwards tried under steam and safety valves adjusted.

Donkey boiler examined internally and externally and found in good condition.

Mountings & safety valves opened out, examined and found or made in order.

Boiler afterwards tried under steam and found with the F.O. burning plant in good working order; its safety valves were adjusted.

On completion of the conversion the Main engine has been tried on H.V.F. for several hours under full load and found working satisfactorily.