

REPORT ON OIL ENGINE MACHINERY.

No. 18730.

17 JAN 1952

Received at London Office

Writing Report 7th Jan. 1951 When handed in at Local Office 14th Jan 1952 Port of Gothenburg

Survey held at Gothenburg Date, First Survey 16th October 1950 Last Survey 21st December 1951 Number of Visits 103

17919 48 on the ~~Trip~~ ^{Single} Screw vessel Motor Tanker "S H E T L A N D" Tons Gross 10560 Net 6170

18268. Gothenburg By whom built AB Lindholmens Varv Yard No. 1017 When built 1951

as made at Kristinehamn By whom made AB Karlstads Mek. Verksstad Engine No. 20 When made 1951

Boilers made at Gothenburg By whom made AB Lindholmens Varv Boiler No. 2886 When made 1951

orse Power { Maximum 6300 Owners A/S Det Dansk-Franske Dampskibsselskab Port belonging to Copenhagen

per Rule 1263 Is Refrigerating Machinery fitted for cargo purposes. --- Is Electric Light fitted. Yes

or which vessel is intended General

GINES, &c. —Type of Engines Heavy oil engine, solid inj. 2 or 4 stroke cycle 2 Single or double acting Single

m pressure in cylinders 52 kg/cm² Diameter of cylinders 720 mm. Length of stroke 1250 mm. No. of cylinders 9 No. of cranks 9

ndicated Pressure 5.75 kg/cm² Max. 6.0 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in

a crank) --- Is there a bearing between each crank. Yes Revolutions per minute { Maximum 125 Service 125

el dia. --- Weight --- Moment of inertia of flywheel (lbs. in² or Kg. cm²) --- Means of ignition Compr. Kind of fuel used Diesel oil

" " " " balance wts. (" " " ")

(Solid forged) dia. of journals as per Rule --- Crank pin dia. --- Crank webs Mid. length breadth --- Thickness parallel to axis ---

Semi built dia. of journals as fitted --- Crank pin dia. --- Crank webs Mid. length thickness --- Thickness around eyehole ---

el Shaft, diameter as per Rule --- Intermediate Shafts, diameter as fitted --- Thrust Shaft, diameter at collars as fitted ---

shaft, diameter as per Rule --- Screw Shaft, diameter as fitted --- Thrust Shaft, diameter at collars as fitted ---

shaft, diameter as per Rule --- Screw Shaft, diameter as fitted --- Thrust Shaft, diameter at collars as fitted ---

Liners, thickness in way of bushes as per Rule 21.2 mm. Thickness between bushes as fitted 21.5 mm. Is the after end of the liner made watertight in the

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

iner 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-

ightly If two liners are fitted, is the shaft lapped or protected between the liners --- Is an approved Oil Gland fitted at the after

stern tube No If so, state type --- Length of bearing in Stern Bush next to and supporting propeller 2300 mm.

er, dia. 5200 Pitch 3942/2899 No. of blades 4 Material Bronze whether moveable No Total developed surface 9.71 sq. feet

of inertia of propeller including entrained water (lbs. in² or Kg. cm²) --- Kind of damper, if fitted None

of reversing Engines Compr. air Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of

ion Forced Thickness of cylinder liners --- Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

d with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

the engine Led to a funnel Cooling Water Pumps, No. and how driven 1 salt water 5430 litres per minute. 1 fresh water

Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

pumps worked from the Main Engines, No. and capacity None Can one be overhauled while the other is at work. ---

connected to the Main Bilge Line No. and capacity of each 1 ballast 150 tons/h., 1 bilge 40 tons/h., 1 transfer pump 30 t/h.

How driven Steam El-motor Steam

ooling water led to the bilges. No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

ments. ---

Pumps, No. and capacity 1 150 tons/hour Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 a 265 m³/hour

independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions.

size:—In machinery spaces 3 x 3½; 2 x 3; 3 x 2" to cofferdam in engine room In pump room 4 x 4" to main p.r.

800 In dry cargo hold 2 x 2½ chain locker 2 x 2" forward pump room 1 x 2½ cofferdam forward 1 x 5"

Bilge Suctions to the engine room bilges, No. and size 1 x 6; 1 x 3 1/4; 1 x 3"

the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily

le mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Sea Connections fitted direct on the skin of the Ship recesses Are they fitted with valves or cocks Valves Are they fixed

tly high on the ship's side to be seen without lifting the platform plates Yes Are the overboard discharges above or below the deep water line Above

y 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

ipes pass through the bunkers No coal bunkers How are they protected ---

ipes pass through the deep tanks Heating coils Have they been tested as per Rule Yes

pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

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 Yes Is the shaft tunnel watertight Mch. aft Is it fitted with a watertight door --- worked from ---

od vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ---

16 Air Compressors, No. None No. of stages --- diameters --- stroke --- driven by ---

19 Auxiliary Air Compressors, No. 2 No. of stages 4 M³ at diameters 30 kg/cm² stroke --- driven by El-motor

Auxiliary Air Compressors, No. 1 No. of stages 113 litres at diameters 25 kg/cm² stroke --- driven by El-motor

21, provision is made for first charging the air receivers. The small starting up compressor which is also handdriven

y ing Air Pumps or Blowers, No. 1 D.A. for each cylinder How driven ---

25, ary Engines Have they been made under survey. Yes Engine Nos. 53-54-55-25461-5950/52

Makers name AB Hedemora Verkstäder No. 3 a 140 KW., 1 a 40 KW., 1 a 30 KW. for harb. purposes

Position of each in engine room 1 a 140 KW. on port side, 2 a 140 KW. on starboard side on the engine room floor.

Report No. Stockholm rpt. no. 8422

1 a 40 KW on a platform on port side

1 a 30 KW on port side on the floor (harb. light).

all
12.2.52

8500-76810-69811
11869-01870-0038

AIR RECEIVERS:—Have they been made under survey. Yes ✓ State No. of report or certificate
State full details of safety devices
Can the internal surfaces of the receivers be examined and cleaned. Yes ✓ Is a drain fitted at the lowest part of each receiver. Yes
Injection Air Receivers, No. None ✓ Cubic capacity of each. Internal diameter. thickness.
Seamless, welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure.
Starting Air Receivers, No. 2 ✓ Total cubic capacity. 24 M³ Internal diameter. 1833 mm. thickness. 33.5 mm.
Seamless, welded or riveted longitudinal joint. E.W. Material. SM steel Range of tensile strength. 44-50 kg/mm² Working pressure. Actual

Are ~~XXX~~ DONKEY BOILERS FITTED Yes ✓ If so, is a report now forwarded. Yes ✓
Is the donkey boiler intended to be used for domestic purposes only. No, also for the auxiliary machinery and heating coils.
PLANS. Are approved plans forwarded herewith for shafting. 14/4 1949 Receivers. 8/3 1949 Separate fuel tank.
Donkey boilers. 19/7 1949 General pumping arrangements. 8/3 1951 Pumping arrangements in machinery space. 8/3 1951
Oil fuel burning arrangements. 12/4 1950
Have Torsional Vibration characteristics been approved. Yes Date and particulars of approval. 13/4 1949

SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes ✓ State if for "short voyages" only.
State the principal additional spare gear supplied. 1 complete cylinder liner, 1 cylinder cover complete with all valves,
2 complete sets of valves for one cover, 1 piston complete with rings, 1 propeller shaft with nut.

The foregoing is a correct description of the machinery. AB LINDHOLMENS VARV Manufacturer.

Dates of Survey while building: During progress of work in shops - - 16th October 1950 - 21st December 1951
During erection on board vessel - -
Total No. of visits. 103
Dates of examination of principal parts—Cylinders. Covers. Pistons. Rods. Connecting rods.
Crank shaft. Flywheel shaft. Thrust shaft. Intermediate shafts. 21/9 1951 Tube shaft.
Screw shaft. 21/9 1951 Propeller. 30/11 1951 Stern tube. 16/10 1950 Engine seatings. 10/10 1951 Engine holding down bolts. 1/11
Completion of fitting sea connections. 10/10 1951 Completion of pumping arrangements. 14/12 1951 Engines tried under working conditions. 20/1
Crank shaft, material. Identification mark. Flywheel shaft, material. Identification mark. LL. N
Thrust shaft, material. Identification mark. Intermediate shafts, material. SM steel Identification mark. NF 2
Tube shaft, material. Identification mark. Screw shaft, material. SM steel Identification mark. NF 21.9
Identification marks on air receivers. Starboard: No. 2414 Lloyd's test 48.5 kg. WP 30 kg. NF 10.10.51
Port: No. 2415 Lloyd's test 48.5 kg. WP 30 kg. NF 13.10.51
Welded receivers, state Makers' Name. AB Lindholmens Varv, Gothenburg.
Is the flash point of the oil to be used over 150°F. Yes ✓
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with. Yes ✓
Full description of fire extinguishing apparatus fitted in machinery spaces. Boiler room, 4 hoses, 1 a 150 l. portable foam apparatus, port. foam app. 1 hose for central foam in boiler room.
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.
What is the special notation desired.

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with. Yes ✓
Is this machinery duplicate of a previous case. Yes If so, state name of vessel. M/t "SLIEDRECHT" Got. F.E. Rpt. No. M/t "NERMA DAN" Got. F.E. Rpt. No. M/t "CHRISTIANSBORG" Got. F.E. Rpt. No.

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.) The main and auxiliary engines of this vessel have been built under special survey (See Got. Rpt. No. 18563 on the main engine and Skm. Surveyors' rpt. No. 842 on auxiliary engine). Test sheets in respect of the straight shafting are attached. Material cert. of air receivers with our report No. 18580. The machinery has been securely fitted in the vessel under our inspection and to our position and has been tested under full power conditions on a trial trip and found in order. A special plan showing position of the machinery is attached. A "Spanner" Exhaust gas Economiser, made by A/S Elektrisk Sveising, Oslo, copy of Oslo rpt. No. 6689 attached, has been fitted on board and its safety valves have been adjusted under steam 170 lbs. per square inch. This economiser works as heater in conjunction with the oil fired boilers. The machinery vessel is eligible, in our opinion, to be classed +IMC 12.51. Tail shaft fitted with Continuous Liner, and Worki

Pressure of 2 Donkey Boilers 170 lbs. per square inch.
Air receiver
The amount of ~~EXXX~~ Fee ... Kr. 300:00
Special ... Kr. 1810:00
Butterworth app. ... Kr. 120:00
Donkey Boiler Fee...
Travelling Expenses (if any) £
When applied for 14/1 1952
When received 19
Engineers Surveyor to Lloyd's Register of S

Committee's Minute
Assigned + LMC 12.51 Oil Eng.
O.L. 203 170/6.
TUES. 19 FEB 1952
Lloyd's Register Foundation

Gothenburg Office.

Certificate (if required) to be sent to the Committee's Minute.