

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 8259

14 APR 1931

Date of writing Report *9th April 31* When handed in at Local Office *11th April 31* Port of *Gothenburg*
 No. in Survey held at *Trollhättan & Gothenburg* Date, First Survey *8th May, 1930* Last Survey *30th March 1931*
 Reg. Book. *92484* on the *Single* Screw vessel *"SKOTAAS"* Tons ^{Gross} *8190* _{Net} *4894*
 Number of Visits *9*

Built at *Dundee* By whom built *Caledon S.B. & Eng. Co. Ltd.* Yard No. *335* When built *1931*
 Engines made at *Gothenburg* By whom made *Akheeb. Gohroeben* Engine No. *962* When made *1931*
 Auxiliary engine made at *Trollhättan* By whom made *Hydqvist & Holm AB.* Engine No. *1011* When made *1931*
 Brake Horse Power *✓* Owners *Skibs W. Hansén* Port belonging to *Larvik.*
 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 *General.*

OIL ENGINES, &c.—Type of Engines *One auxiliary diesel engine* 2 or 4 stroke cycle *2* Single or double acting *Single.*
 Maximum pressure in cylinders *35 kg/cm²* Diameter of cylinders *210 mm* Length of stroke *320 mm* No. of cylinders *2* No. of cranks *2*
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *298 mm.* Is there a bearing between each crank *✓*
 Revolutions per minute *400* Flywheel dia. *1050 mm* Weight *700 kg.* Means of ignition *Diesel system* Kind of fuel used *Diesel fuel oil.*
 Crank Shaft, dia. of journals *as per Rule 135 mm* Crank pin dia. *135 mm* Crank Webs Mid. length breadth *1180 mm* Thickness parallel to axis *✓*
 as fitted *135 mm* Mid. length thickness *74 mm* Thickness around eye-hole *✓*
 Flywheel Shaft, diameter *as per Rule* Intermediate Shafts, diameter *as per Rule* Thrust Shaft, diameter at collars *as per Rule*
 as fitted *as fitted* as fitted *as fitted* as fitted *as fitted*
 Tube Shaft, diameter *as per Rule* Screw Shaft, diameter *as per Rule* Is the { tube } shaft fitted with a continuous liner {
 as fitted *as fitted* as fitted *as fitted* }

Bronze Liners, thickness in way of bushes *as per Rule* Thickness between bushes *as per rule* Is the after end of the liner made watertight in the
 as fitted *as fitted* as fitted *as fitted* 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 *✓*
 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 *✓* If so, state type *✓* Length of Bearing in Stern Bush next to and supporting propeller *✓*

Propeller, dia. *✓* Pitch *✓* No. of blades *✓* Material *✓* whether Moveable *✓* Total Developed Surface *✓* sq. feet
 Method of reversing Engines *✓* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Means of lubrication
Forced. Thickness of cylinder liners *22 mm.* Are the cylinders fitted with safety valves *Yes.* Are the exhaust pipes and stencils water cooled or lagged with
 non-conducting material *lagged.* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *✓*
 Cooling Water Pumps, No. *One 2600 l/h.* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *✓*
 Bilge Pumps worked from the Main Engines, No. *✓* Diameter *✓* Stroke *✓* Can one be overhauled while the other is at work *✓*
 Pumps connected to the Main Bilge Line { No. and Size *✓*
 How driven *✓*
 Ballast Pumps, No. and size *✓* Lubricating Oil Pumps, including Spare Pump, No. and size *One 600 l/h.*
 Are 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 Machinery Spaces *✓*
 In Holds, &c. *✓*

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *✓*
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *✓* Are the Bilge Suctions in the Machinery Spaces
 led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *✓*
 Are 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 platform 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 *✓*
 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 *✓*

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 *✓* Is the Shaft Tunnel watertight *✓* Is it fitted with a watertight door *✓* worked from *✓*
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *✓*
 Main Air Compressors, No. *Solid injection* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*
 Auxiliary Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*
 Small Auxiliary Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*
 Scavenging Air Pumps, No. *One* Diameter *410 mm* Stroke *120 mm* Driven by *Aux. engine.*
 Auxiliary Engines crank shafts, diameter *as per Rule* *✓*
 as fitted *as fitted* *✓*

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *✓*
 Can the internal surfaces of the receivers be examined *✓* What means are provided for cleaning their inner surfaces *✓*
 Is there a drain arrangement fitted at the lowest part of each receiver *✓*
 High Pressure Air Receivers, No. *✓* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*
 Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure by Rules *✓*
 Starting Air Receivers, No. *✓* Total cubic capacity *✓* Internal diameter *✓* thickness *✓*
 Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure by Rules *✓*



1220-190400-550400

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting 27/3/30
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR 2 fuel valves complete with 2 extra valves & 2 extra seats for same, 1 starting air valve, 1 safety valve, 1 scavenging air valve, 1 set of valves for the water pump, 1 piston complete with piston rings and in addition 10 extra piston rings, 2 gudgeon pins with 2 bushes for same, 8 cylinder cover studs & nuts, 2 crank pin bearing bolts & nuts, 1 set of crank pin brasses, 1 set of journal brasses, 1 fuel oil pump complete with 1 inlet plunger spring and 2 extra delivery valve springs, 1 complete set of all springs and packings, & 1 length of steel pipe with unions.

The foregoing is a correct description,

NYDQVIST & HOLM AKTIEBOLAG

[Signature]

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1930: May 8, July 9, 26, Aug 5, Oct 17, Dec 19.
{ During erection on board vessel - - - } 1931: February 27, March 27, 30.
Total No. of visits 9

Dates of Examination of principal parts—Cylinders 17/10/30 19/12/30 Covers 17/10/30 19/12/30 Pistons 5/8/30 Rods Connecting rods 5/8/30
Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts
Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions 27/3/30
Crank shaft, Material *J.M. Steel* Identification Mark *LLOYDS 8482 HJ. 25.7.30* Flywheel shaft, Material Identification Mark
Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks
Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

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

Is this machinery duplicate of a previous case *yes*

If so, state name of vessel *M/S "Fosna" & M/S "Nordavik"*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*This auxiliary engine has been built under Special Survey.
All the Rule requirements have been complied with.
The workmanship is good.*

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee ... £ :
Special ... £ No. 100:00 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ No. 13:25 :
When applied for, *11/2 April 1931*
When received, *28/4/31*

G. Brander for self & E. Bernelius
Engineer Surveyor to Lloyd's Register of Shipping.



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Committee's Minute

FRI. 24 APR 1931

Assigned

See J. E. Rpt.