



**AIR RECEIVERS:**—Have they been made under survey *yes* State No. of Report or Certificate *✓*  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*  
 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.** *✓* 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.** *2* Total cubic capacity *800 cb. ft.* Internal diameter *✓* thickness *✓*  
 Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules*

**IS A DONKEY BOILER FITTED?** *yes* If so, is a report now forwarded? *yes, Amal dan N-152*  
 Is the donkey boiler intended to be used for domestic purposes only, also for *waking, cleaning gear, windlass, pumps, compressor*  
**PLANS.** Are approved plans forwarded herewith for Shafting *✓* Receivers *✓* Separate Fuel Tanks *✓*  
 (If not, state date of approval)

Donkey Boilers *✓* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*  
 Oil Fuel Burning Arrangements *yes* **SPARE GEAR.**

Has the spare gear required by the Rules been supplied *yes*  
 State the principal additional spare gear supplied *1 piston, 1 piston rod, 1 propeller shaft, 1 cylinder complete with cover, lining & jacket, 1 crosshead with guide shoes, 3 fuel pumps*

The foregoing is a correct description,  
**ODENSE STAALSKIBSVÆRKT** BUILDERS  
 VED A. P. MØLLER *B. Jakobsen* Manufacturer.

Dates of Survey while building	During progress of work in shops--	17/3	22/3	27/4	27/4	28/4	6/5	11/5	21/5	23/5	24/5	28/5	31/5
	During erection on board vessel--												
	Total No. of visits	11											
Dates of Examination of principal parts	Cylinders	Covers	Pistons	Rods	Connecting rods								
Crank shaft	Flywheel shaft	Thrust shaft	Intermediate shafts	Tube shaft									
Screw shaft	Propeller	Stern tube	74	Engine seatings	17/3	22/3	Engines holding down bolts	20/4	29/4				
Completion of fitting sea connections	22/3	Completion of pumping arrangements	28/4	Engines tried under working conditions	21/5	24/5	28/5						
Crank shaft, Material	Identification Mark	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										
Identification Marks on Air Receivers													

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*  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Oil tanks*. If so, have the requirements of the Rules been complied with *✓*  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *✓*  
 Is this machinery duplicate of a previous case *yes*. If so, state name of vessel *"S. ENA" Op. No. N-994*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 This machinery has been fitted under Special Survey and in accordance with the Society's Rules, the approved plans and the requirements contained in the Surveyor's letters E dated 17/4. 27/4 38.  
 The main & auxiliary machinery as well as the cargo oil pumping arrangement has been tested under working conditions and found satisfactory, and on the fire trial trip the manoeuvring of the main engine was tested and found good. Highest speed obtained 12.5 knots at 120 R.P.M.

Recommend the vessel to have addition of **+ L.M.C.S-38 OIL ENGINE, C.L.**

The amount of Entry Fee *Rs. 40.00* When applied for, *15.6.1938*  
 Special *Rs. 365.34*  
 Donkey Boiler Fee *Rs. 300.00* When received, *28.6.1938*  
 Travelling Expenses (if any) *Rs. 396.00*  
 LATE FEES *Rs. 9.00*  
 Committee's Minute *28.6.1938*  
 Assigned *26.10.1938*  
*Oil Eng. Ch.*

SURVEYORS' OFFICE, CAN. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

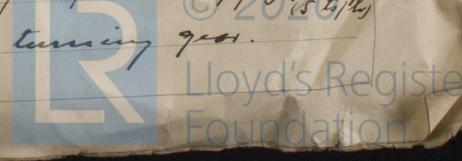
Single S. Motor Tanker "OTINA"

List of Auxiliary Machinery

The Steam Plant comprises:  
 One horizontal, single ended, multi-tubular donkey boiler, H.S. = 2560 sq. ft. W.P. = 180 lbs./sq. in. fitted for fuel oil and shafted gas firing and supplying steam for the following purposes:  
 1 duplex oil burning unit, Turishi's patent.  
 2 vertical feed pumps, 6" x 8 1/2" x 18" simplex.  
 1 fan for forced draught. 1 evaporator.  
 1 general service pump, 8" x 8" x 10" duplex, shafted by cooling water pump.  
 1 centrifugal circulating sea water pump, shafted by cooling water pump. 200 t.p.h.  
 1 oil fuel transfer pump, 6" x 5" x 6" duplex.  
 1 shafted by fresh water cooling pump, 8" x 8" x 5" duplex.  
 1 cofferdam pump, 6" x 6" x 6" duplex.  
 1 shafted by lubricating oil pump, 8" x 8" x 10" duplex.  
 1 sanitary fresh water pump, 4 1/2" x 3" x 4" duplex.  
 1 lubricating oil transfer pump, 4 1/2" x 3" x 4" duplex.  
 1 2-stage manoeuvring air compressor, 120 cb. ft./min. at 450 Rev./min. driven by a 1-cyl. steam engine.  
 1 2-cylinder NH<sub>3</sub> compressor for provision stores.  
 1 steering gear, 1 windlass, 1 warping winch, 2 cargo winches.  
 2 cargo oil pumps, 12" x 10" x 24" duplex.  
 1 " " shipping pump, 6" x 6" x 6" duplex } in the two  
 2 " " pumps, 12" x 10" x 24" duplex } main pump  
 1 " " shipping pump, 6" x 6" x 6" duplex } rooms.  
 1 cofferdam pump, 6" x 6" x 6" duplex.  
 1 oil fuel transfer pump, 6" x 6" x 6" duplex. } in the fore hold  
 1 ballast pump, 6" x 6" x 6" duplex } pump room.  
 1 compound wound dynamo, 16 k.w., driven by a 1-cyl. steam engine.  
 and Motor for the heating coils in the cargo oil tanks and the hold in the accommodation space.

The electric plant comprises:  
 2 16 k.w. compound wound dynamos, 110 V., 145 A. = 390 R.P.M., one driven by a 1-cyl. steam engine and the other by a 30 BHP throughout oil engine, supplying current for the following purposes:  
 1 off 2.5 HP electric motor for the lubricating oil purifier.  
 1 " 2 " " " " " rotary speed feed oil supply pump.  
 1 " 7.5 " " " " " " engine turning gear.

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Simple Se. Motor Tanker "OTINA"

- 1 of 1.5 HP electric motor for the turning lath
  - 1 " 3 " " " grinding machine.
  - 1 " 2 " " " " drilling machine.
  - 1 " 1 " " " " ventilator.
  - 1 " 2.5 kwts. " " " wireless telegraph.
- and current for the electric light installation.

Besides a 60 HP 3-cyl. 45CSA Ruston & Hornsby oil engine is driving a 2-stage manovering air compressor, 170 cfm. p.m. at 450 R.P.M.

The circulating seawater pump, circulating fresh water pump, sanitary pump, bilge pump, lubricating oil pump and oil fuel supply pump for the ordinary working of the engine at sea are all driven by the main engine through chain drive.

*E. H. Møller*

SURVEYOR TO LLOYD'S REGISTER OF SHIPPING

THE ABOVE IS A CORRECT DESCRIPTION.

ODENSE STAALSKIBSVÆRFT  
VED A. P. MØLLER

*B. Jakobsen*

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