

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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Date of writing Report *29<sup>th</sup> June 1938* When handed in at Local Office *19* Port of *Copenhagen*  
 No. in Survey held at *Elsinore and Naalborg* Date, First Survey *1<sup>st</sup> September 1937* Last Survey *June 1938*  
 Reg. Book. *39064* on the *Steel Single Screw Steamer LOTTA* (Number of Visits *51*) Tons { Gross *1558.32*  
 Net *1014.16*  
 Built at *Naalborg* By whom built *Naalborg Verft A/S* Yard No. *58* When built *1938*  
 RECIROCATING Engines made at *Elsinore* By whom made *Naalborg Verft A/S* Engine No. *341* When made *1938*  
 EXHAUST STEAM TURBINE: *Copenhagen* By whom made *Naalborg Verft A/S* Boiler No. When made *1938*  
 Boilers made at *Naalborg* By whom made *Naalborg Verft A/S* Boiler No. When made *1938*  
 Registered Horse Power *EXH. TURB. 375* Owners *De Danske Selskaber, Vesthavet (J. Lauritzen)* Port belonging to *Copenhagen*  
 Nom. Horse Power as per Rule *(234) 231* Is Refrigerating Machinery fitted for cargo purposes *no.* Is Electric Light fitted *ye.*  
 Trade for which Vessel is intended *Ocean going service.*

ENGINES, &c.—Description of Engines *3 cylinder compound engine with exhaust steam turbine on the Elsinore system*  
 Dia. of Cylinders *2 HP. 400<sup>7</sup>/<sub>16</sub> - 1 LP. 1000<sup>7</sup>/<sub>16</sub>* Length of Stroke *950<sup>7</sup>/<sub>16</sub>* No. of Cylinders *3* Revs. per minute *115*  
 Crank shaft, dia. of journals *as per Rule 263<sup>5</sup>/<sub>16</sub>* Crank pin dia. *265<sup>7</sup>/<sub>16</sub>* Crank webs *Mid. length breadth 428<sup>7</sup>/<sub>16</sub>* No. of Cranks *3*  
 Intermediate Shafts, diameter *as per Rule 251<sup>7</sup>/<sub>16</sub>* Thrust shaft, diameter at collars *as per Rule 263.5<sup>7</sup>/<sub>16</sub>*  
 Tube Shafts, diameter *as per Rule 294.5<sup>7</sup>/<sub>16</sub>* Screw Shaft, diameter *as per Rule 306<sup>7</sup>/<sub>16</sub>* Is the *tube* shaft fitted with a continuous liner *yes*

Bronze Liners, thickness in way of bushes *as per Rule 16.6<sup>7</sup>/<sub>16</sub>* Thickness between bushes *as per Rule 12.5<sup>7</sup>/<sub>16</sub>* Is the after end of the liner made watertight in the propeller boss *ye.*  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *one length*  
 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 *fits tightly*  
 If two liners are fitted, is the shaft lapped or protected between the liners *yes* Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft *no.*

Propeller, dia. *4035 mm* Pitch *3350 mm* No. of Blades *4* Material *Phosphor manganese Bronze* whether Movable *no.* Total Developed Surface *6* sq. feet  
 Feed Pumps worked from the Main Engines, No. *none* Diameter Stroke Can one be overhauled while the other is at work *yes*  
 Bilge Pumps worked from the Main Engines, No. *2* Diameter *110 mm* Stroke *250 mm* Can one be overhauled while the other is at work *yes*

Feed Pumps { No. and size *2 off - 7" x 5" x 12" simplex* Pumps connected to the { No. and size *1 Ballast pump 9" x 10" x 10"* 1 Gen. Service pump 8" x 5" x 8"  
 How driven *Steam, independent Steam pumps* Main Bilge Line { How driven *both pumps are steam driven, duplex type.*  
 Ballast Pumps, No. and size *1 off 9" x 10" x 10"* Lubricating Oil Pumps, including Spare Pump, No. and size *yes*

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 *3 off - 65 mm*  
 In Pump Room *yes* In Holds, &c. *F-Holds 2 off 90 mm, A-Holds 4 off 75 mm, Tunnel 2 off 65 mm.*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *1 off - 100 mm* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1 off - 150 mm* 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 - except one through DB* Are they fitted with Valves or Cocks *Valves and 1 blow-off cock.*  
 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 *below*  
 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 *none.* How are they protected *yes*  
 What pipes pass through the deep tanks *none.* Have they been tested as per Rule *yes*  
 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 *up platform*  
 MAIN BOILERS, &c.—(Letter for record *5*) Total Heating Surface of Boilers *2 x 1658 sq. ft. = 3316 sq. ft.* Working Pressure *15.4 kg/cm<sup>2</sup> = 220 lb./sq. in.*

Is Forced Draft fitted *yes* No. and Description of Boilers *Two off single ended return water*  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *ye.*  
 IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *yes*  
 Is the donkey boiler intended to be used for domestic purposes only *yes*

PLANS. Are approved plans forwarded herewith for Shafting *ye.* Main Boilers *ye.* Auxiliary Boilers *yes* Donkey Boilers *yes*  
 Superheaters *ye.* General Pumping Arrangements *ye.* Oil fuel Burning Piping Arrangements *yes*  
 SPARE GEAR.  
 Has the spare gear required by the Rules been supplied *ye.*  
 State the principal additional spare gear supplied

The foregoing is a correct description.

AALBORG VERFT A/S  
 HELSINGØRS JERNSKIBS- OG MASKINBYGGERI  
 A. Blumhøj  
 T. Rasmussen



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NOTE.—The words written in red ink are not obligatory.

