

REPORT ON OIL ENGINE MACHINERY.

No. 19219

Date of writing Report 1.7.30 When handed in at Local Office 25.7.30 Port of Liverpool Received at London Office 30 JUL 1930

No. in Survey held at 1130 Reg. Book. Date, First Survey 18th November 1929 Last Survey 24.4 1930

on the Twin Screw vessel M/S "Athelmer" Number of Visits 91 Tons Gross 8940.98 Net 5240.91

Built at Glasgow By whom built W. & A. Beardmore & Co. Ltd. Yard No. 413 When built 1930

Engines made at Liverpool By whom made John & T. Russell & Co. Ltd. Engine No. 1155 When made 1930

Boilers made at Liverpool By whom made John & T. Russell & Co. Ltd. Boiler No. 1155 When made 1930

Brake Horse Power 3200 Owners United Motors Co. Ltd. Port belonging to Liverpool

Nom. Horse Power as per Rule 409 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Foreign

MAXIMUM PRESSURE IN CYLINDERS 500 DIAMETER OF CYLINDERS 630 mm LENGTH OF STROKE 1300 mm NO. OF CYLINDERS 12 NO. OF CRANKS 12

EVOLUTIONS PER MINUTE 110 FLYWHEEL DIA. 2620 mm WEIGHT 13,150 kg MEANS OF IGNITION Compression KIND OF FUEL USED Diesel

CRANK SHAFT, DIA. OF JOURNALS as per Rule 403.3 mm as fitted 415 mm CRANK PIN DIA. 415 mm CRANK WEBS Mid. length breadth 11.26" Mid. length thickness 11.34" THRUST SHAFT, DIAMETER AT COLLARS as per Rule 11.8" as fitted 12.5/8"

FLYWHEEL SHAFT, DIAMETER as per Rule 16.5/8" as fitted 16.5/8" INTERMEDIATE SHAFTS, DIAMETER as per Rule 11.26" as fitted 11.34" SCREW SHAFT, DIAMETER as per Rule 12.38" as fitted 13"

BRONZE LINERS, THICKNESS IN WAY OF BUSHES as per Rule 6/16" as fitted 3/4" THICKNESS BETWEEN BUSHES as per Rule 5/8" as fitted 5/8" IS THE AFTER END OF THE LINER MADE WATERTIGHT IN THE PROPELLER BOSS Yes

IF THE LINER IS IN MORE THAN ONE LENGTH ARE THE JUNCTIONS MADE BY FUSION THROUGH THE WHOLE THICKNESS OF THE LINER No

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 No

IF TWO LINERS ARE FITTED, IS THE SHAFT LAPPED OR PROTECTED BETWEEN THE LINERS No

IF AN APPROVED OIL GLAND OR OTHER APPLIANCE IS FITTED AT THE AFTER END OF THE TUBE No

LENGTH OF BEARING IN STERN BUSH NEXT TO AND SUPPORTING PROPELLER 52" PROPELLER, DIA. 3' 3" PITCH 11' 0" NO. OF BLADES 4 MATERIAL Bronze WHETHER MOVEABLE No TOTAL DEVELOPED SURFACE 527 sq. feet

METHOD OF REVERSING ENGINES Air Is a governor fitted to prevent racing of the engine when disengaged Yes MEANS OF LUBRICATION Forced Thickness of cylinder liners 26/16 mm ARE THE CYLINDERS FITTED WITH SAFETY VALVES Yes ARE THE EXHAUST PIPES AND SILENCERS 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 No

ROLLING WATER PUMPS, NO. 3 (one 6" dia) 2-10x8" IS THE SEA SUCTION PROVIDED WITH AN EFFICIENT STRAINER WHICH CAN BE CLEARED WITHIN THE VESSEL Yes

LARGE PUMPS WORKED FROM THE MAIN ENGINES, NO. 1 DIAMETER 8' 9" x 10" STROKE 4' 7" x 7' 2" x 9"

PUMPS CONNECTED TO THE MAIN BILGE LINE No. and Size 2-8' 9" x 10" 4' 7" x 7" x 9" HOW DRIVEN Steam

ELASTIC PUMPS, NO. AND SIZE one 8' 9" x 10" LUBRICATING OIL PUMPS, INCLUDING SPARE PUMP, NO. AND SIZE 3 (one 6" dia) 2-7' 8"

ARE TWO INDEPENDENT MEANS ARRANGED FOR CIRCULATING WATER THROUGH THE OIL COOLER Yes SUCTIONS, CONNECTED TO BOTH MAIN BILGE PUMPS AND AUXILIARY BILGE PUMPS, NO. AND SIZE:—IN MACHINERY SPACES 2, 3 1/2" 2-3" 2-2" FOR HOLD, 2-2" PUMP ROOM 2-3"

INDEPENDENT POWER PUMP DIRECT SUCTIONS TO THE ENGINE ROOM BILGES, NO. AND SIZE 2-10" IN EACH 2-5 1/2"

ARE ALL THE BILGE SUCTION PIPES IN HOLDS AND TUNNEL WELL FITTED WITH STRAIN-BOXES Yes ARE THE BILGE SUCTIONS IN THE MACHINERY SPACES FROM EASILY ACCESSIBLE MUD-BOXES, PLACED ABOVE THE LEVEL OF THE WORKING FLOOR, WITH STRAIGHT RAIL PIPES TO THE BILGES Yes

ARE ALL SEA CONNECTIONS FITTED DIRECT ON THE SKIN OF THE SHIP Yes ARE THEY FITTED WITH VALVES OR COCKS Both

ARE THEY FIXED SUFFICIENTLY 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 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

ARE ALL PIPES THAT PASS THROUGH THE BUNKERS How ARE THEY PROTECTED How ARE THEY 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

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 PARTMENT TO ANOTHER Yes IS THE SHAFT TUNNEL WATERTIGHT None IS IT FITTED WITH A WATERTIGHT DOOR No

IN WOOD VESSEL, WHAT MEANS ARE PROVIDED TO PREVENT LEAKAGE OF EITHER FUEL OIL OR OF LUBRICATING OIL FROM SATURATING THE WOODWORK

AIR COMPRESSORS, NO. 2 NO. OF STAGES 3 DIAMETER 6.40-5.40-1.20" STROKE 4.80 mm DRIVEN BY Steam Engines

AUXILIARY AIR COMPRESSORS, NO. one NO. OF STAGES 3 DIAMETER 4.50-3.50-0.82" STROKE 2.60 mm DRIVEN BY Steam

ALL AUXILIARY AIR COMPRESSORS, NO. — NO. OF STAGES — DIAMETERS — STROKE — DRIVEN BY —

REVENGING AIR PUMPS, NO. — DIAMETER — STROKE — DRIVEN BY —

AUXILIARY ENGINES CRANK SHAFTS, DIAMETER as per Rule as fitted

RECEIVERS:—IS EACH RECEIVER, WHICH CAN BE ISOLATED, FITTED WITH A SAFETY VALVE AS PER RULE Yes

ARE THE INTERNAL SURFACES OF THE RECEIVERS BE EXAMINED Yes WHAT MEANS ARE PROVIDED FOR CLEANING THEIR INNER SURFACES Mauls

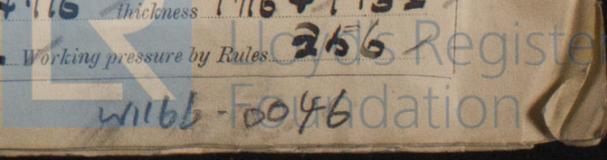
IS THERE A DRAIN ARRANGEMENT FITTED AT THE LOWEST PART OF EACH RECEIVER Yes

HIGH PRESSURE AIR RECEIVERS, NO. 4 CUBIC CAPACITY OF EACH 150 LITRES INTERNAL DIAMETER 12" THICKNESS 1/2"

SEAMLESS, LAP OR RIVETED LONGITUDINAL JOINT Seams Material S RANGE OF TENSILE STRENGTH 29.33 WORKING PRESSURE BY RULES 1000 lb

STARTING AIR RECEIVERS, NO. 2 TOTAL CUBIC CAPACITY 1300 CF INTERNAL DIAMETER 16-4 1/16" THICKNESS 1 1/16 + 1 1/32"

SEAMLESS, LAP OR RIVETED LONGITUDINAL JOINT Riveted Material S RANGE OF TENSILE STRENGTH 28.32 WORKING PRESSURE BY RULES 256



11166-6046

IS A Donkey BOILERS FITTED? Yes If so, is a report now forwarded? Yes
 PLANS. Are approved plans forwarded herewith for Shafting Yes Receivers Yes Separate Tanks Yes
Donkey Boilers Yes General Pumping Arrangements Yes Oil Fuel Burning Arrangements Yes

SPARE GEAR as per Rule supplied
 Principal additional spare gear. Propeller shaft & Gunder head complete with liners. Satisfactory one Piston Rod complete. 6 Stud Links

The foregoing is a correct description,
 For JOHN G. KINCAID & CO. LTD.
W. Carter Director. Manufacturer.

Dates of Survey while building
 During progress of work in shops - (1929) Nov. 18, 21, 24, 28, 29. Dec. 2, 6, 9, 11, 12, 13, 14, 19, 21, 26, 31. (1930) Jan. 8, 13, 14, 22, 28. Feb. 3, 11, 26, 27. Mar. 3, 5, 6, 7, 10, 12, 13, 14, 18, 20, 21, 26. Apr. 3, 8, 9, 10, 11, 14, 15, 18, 21, 22.
 During erection on board vessel - 21, 25, 28, 29, 30. May 1, 2, 5, 8, 9, 12, 13, 14, 15, 16, 19, 20, 21, 23, 26, 27, 30. June 2, 4, 5, 6, 9, 11, 12, 13, 18, 19, 23. July 1, 18, 23, 24.
 Total No. of visits 91

Dates of Examination of principal parts
 Cylinders 21, 4, 30 Covers 12, 3, 30 Pistons 9, 4, 30 Rods 30, 5, 30 Connecting rods 30, 5, 30
 Crank shaft 30, 5, 30 Flywheel shaft 6, 5, 30 Thrust shaft 6, 5, 30 Intermediate shafts 6, 5, 30 Tube shaft ✓
 Screw shaft 6, 5, 30 Propeller 6, 5, 30 Stern tube 5, 5, 30 Engine seatings 5, 5, 30 Engines holding down bolts 23, 6, 30
 Completion of fitting sea connections 6, 5, 30 Completion of pumping arrangements 29, 7, 30 Engines tried under working conditions 24, 7, 30
 Crank shaft, Material S Identification Mark LR 155 WGM Flywheel shaft, Material S Identification Mark LR P 2816 S 3208
 Thrust shaft, Material S Identification Mark LR P 351 S 3209 WGM Intermediate shafts, Material S Identification Marks LR P 2816 S 3208
 Tube shaft, Material ✓ Identification Mark Screw shaft, Material S Identification Mark LR P 1396 S 2710 W

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 Yes If so, have the requirements of the Rules been complied with Yes
 Is this machinery duplicate of a previous case Yes If so, state name of vessel M/S "A. K. Temple" No. 10205-4

General Remarks (State quality of workmanship, opinions as to class, &c.)
 These engines, boiler have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality. They have now been securely fitted on board, tried under working conditions & found satisfactory.

The Machinery is eligible in my opinion for the record of
 ✠ L.M.C. 7.30 (Notation of Donkey Boilers 180%)
 It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 7.30
 Oil Engines A.S.C.S.A. 129 C-L. 24 13/16 - 51 3/16 709 N.H.
 2 D.B. - 180 lb.
 J. 31/7/30

The amount of Entry Fee ... £ 6 : - : When applied for,
 Special ... £ 110 : 9 : 24th July 1930.
Donkey Boiler Fee ... £ 25 : 3 : When received,
Oil Engines (if any) £ 8 : 8 : 26th July 1930.

Committee's Minute GLASGOW 29 JUL 1930
 Assigned + L.M.C. 7.30
 CERTIFICATE WRITTEN.

W. Gordon-Muclain
 Engineer Surveyor to Lloyd's Register of Shipping.



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