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REPORT ON OIL ENGINE MACHINERY.

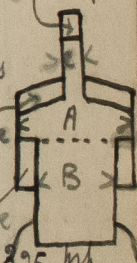
No. 8009.
24 APR 1930
YKANO 4500

of writing Report. 16th June 1929. When handed in at Local Office 4-4-1930 Port of Copenhagen.
in Survey held at Copenhagen Date, First Survey 6th Nov. 1927. Last Survey 6th June 1929.
Book. Number of Visits 53
on the Twin Screw vessel M.V. "CHICHIBU MARU" Tons: Gross 17,494 Net 10,286
at Yokohama By whom built Messrs. Yokohama Dock Co. Ltd. Yard No. 170 When built 1930
ines made at Copenhagen By whom made Messrs. Akt. Burmeister & Wain, maskin og Skibbyggeri Engine No. 1418 When made 1929
key Boilers made at Yokohama By whom made Designated N.Y.K. Boiler No. 140 When made 1930
ke Horse Power 16,500 Owners Messrs. Nippon Yusen Kaisha Port belonging to Tokio
n. Horse Power as per Rule 3380 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes.
de for which vessel is intended

ENGINES, &c.—Type of Engines Vertical Diesel Engine (Crosshead type) 2 or 4 stroke cycle 4 Single or double acting Double
imum pressure in cylinders 35 kg/cm² Diameter of cylinders 840 mm = 33 1/16" Length of stroke 1500 mm = 59 1/16" No. of cylinders 2 x 8 No. of cranks 2 x 8
of bearings, adjacent to the Crank, measured from inner edge to inner edge 1190 mm. Is there a bearing between each crank. Yes
olutions per minute 115 TURNING wheel dia. 2122 mm Weight 2570 kg. Means of ignition Air Compression Kind of fuel used Abre oil flash point
nk Shaft, dia. of journals as per Rule 570 mm Crank pin dia. 570 mm Crank Webs Mid. length breadth 1130 mm Thickness parallel to axis 355 mm
as fitted 570 mm M d. length thickness 335 mm Thickness around eye hole 272 mm
wheel Shaft, diameter as per Rule 510 mm Intermediate Shafts, diameter as fitted 470 mm Thrust Shaft, diameter at collars as fitted 496 mm
as fitted 510 mm Is the screw shaft fitted with a continuous liner? yes
e Shaft, diameter as per Rule 23.28 mm Thickness between bushes as fitted 26 mm Is the after end of the liner made watertight in the
ize Liners, thickness in way of bushes as fitted 26 mm If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner? yes
eller boss yes 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? yes
o 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
Length of Bearing in Stern Bush next to and supporting propeller 8'-11 1/2"
eller, dia. 18'-6" Pitch 18'-6" No. of blades 4 Material Bronze whether Moveable yes Total Developed Surface 102 sq. feet
od of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when decelerated? yes Means of lubrication
lubrication Thickness of cylinder liners 56 mm Are the cylinders fitted with safety valves? yes Are the exhaust pipes and silencers water cooled or lagged with
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? yes
ing Water Pumps, No. 4 off for salt water - 300 tons each 3 Centrifugal pumps Is the sea suction provided with an efficient strainer which can be cleared within the vessel? yes
e Pumps worked from the Main Engines, No. 2 off for fresh water - 250 " " Is the sea suction provided with an efficient strainer which can be cleared within the vessel? yes
ps connected to the Main Bilge Line No. and Size 3. 1-9"x11"=150 T/H. 2 Centrifugal 140 Tons/Hr (Emergency) 30 T/Hr How driven Motors
ast Pumps, No. and size 1-10"x11"=250 T/Hr Lubricating Oil Pumps, including Spare Pump, No. and size 4 off, rotary pumps - 250 tons each
wo independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
ps, No. and size:—In Machinery Spaces 2-5", 9-3 1/2", 1-3", 8-2 1/2", 6-2"
olds, &c. 3-3 1/2", 10-3"
pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-12", 2-8", 4-6", 2-3 1/2"
all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces
com easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks. Both.
hey 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 above.
hey 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.
hat pipes pass through the bunkers? yes How are they protected? yes
hat pipes pass through the deep tanks? yes Have they been tested as per Rule? yes
e 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? yes Is it fitted with a watertight door? yes worked from Top of Eng Room of Bridge 3rd stage
a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork? yes
ain Air Compressors, No. 3 off x 2 No. of stages 3 Diameters 8 1/2 x 7 1/2 x 17 1/2 Stroke 400 mm Driven by Air Diesel oil engines
uxiliary Air Compressors, No. 1 off No. of stages 3 Diameters 20 x 17 1/2 x 45 Stroke 180 mm Driven by Electric motor
mall Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 10 x 17 1/2 x 45 Stroke 180 mm Driven by Electric motor
eaving Air Pumps, No. 1 Diameter 100 mm Stroke 180 mm Driven by Electric motor
uxiliary Engines crank shafts, diameter as per Rule 338 mm of engines working the main air compressors 338 mm of engines working the main generators 338 mm
as fitted 338 mm yes and fusible plugs

R RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule? yes
in the internal surfaces of the receivers be examined? yes What means are provided for cleaning their inner surfaces? yes
there a drain arrangement fitted at the lowest part of each receiver? yes 9 off - 550 Litres - - - - - 450 mm - - - - - 20 mm
igh Pressure Air Receivers, No. 14 off Cubic capacity of each 2 off - 350 - - - - - Internal diameter 350 mm thickness 12 mm
amless, lap welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 44.6-49.4 Working pressure by Rules 91.6 kg/cm²
tarting Air Receivers, No. 4 Total cubic capacity 800 cu ft each Internal diameter 6'-0" thickness 1 9/16" Working pressure by Rules 34.0 lbs.
eamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 26-30 Working pressure by Rules 34.0 lbs.

007620 - 007625 - 0077



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting

Receivers 2/3/28

Separate Tanks 2/7/29

Donkey Boilers 22/1/27

General Pumping Arrangements 6/2/29 19/7/29

Oil Fuel Burning Arrangements 6/2/29

SPARE GEAR

Delivered as per accompanying list

To be checked when placed on board. Checked onboard.

The foregoing is a correct description,

Burneise aktieselskabet
Wains maskin-og Skibsbyggeri

Manufacturer.

J. Trenching

Dates of Survey while building
During progress of work in shops - Yokohama 12, 27, 29 OCT. 5, 9, 26 NOV. 8, DEC. 1928, 25, 30, JAN. 2, 6, 14, 21, 26 FEB. 1, 30, MAR. 2, 25, 27, APR. 3, 10, 31 MAY. 20, 25 JUNE 12, JULY 9, AUG. 4, 17, SEPT. 7, 11, 21, 22, 25, 28, OCT. 4, NOV. 19, 20
During erection on board vessel - Yokohama 2, 27, APR. 2, 7, 8, 16, 23, 27, 29, MAY 4, 7, 12, 15, 19 JUNE 9, 10, 12 JULY 8, 22, 28, AUG. 3, 6, 17, 27, SEPT. 14, 21, 24, OCT. 8, 18 NOV. 7, DEC. 1929, 8, 23, JAN. 14 FEB. 1930
Total No. of visits 153

Dates of Examination of principal parts - Cylinders 2/5, 9/6, 27, 6/8, 16, 21/8, 7/9, 11/10, 15/10, 22/11, 7/12, 28
Covers 22/11, 7/12, 28
Pistons 2/6, 14, 6/8, 6/11, 30/11, 7/12, 27, 19/3, 2/4, 24/16, 12/27
Rods 2/5, 9/6, 26/10, 27/11, 19/12, 28
Connecting rods 19/3, 13/12, 27
Crank shaft 3, 7, 9, 27, 9, 3/11, 6/11, 28
Flywheel shaft 2/5, 9/6, 27, 6/8, 16, 21/8, 7/9, 11/10, 15/10, 22/11, 7/12, 28
Thrust shaft 5, 11, 19, 27, 10/28
Intermediate shafts 2/6, 14, 6/8, 6/11, 30/11, 7/12, 27, 19/3, 2/4, 24/16, 12/27
Screw shaft 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000
Propeller 7/12, 28
Stern tube 8/12, 28, 2/12, 28, 8/12, 28
Engine seatings 7/5/29
Engines holding down bolts 10/7/29
Completion of fitting sea connections 7/5/29
Completion of pumping arrangements 18/11/29
Engines tried under working conditions 8/1/30
Crank shaft, Material S.M.I. Steel Identification Mark No. 9535, 9536, 9537, 9538, 9539, 9540, 9541, 9542, 9543, 9544, 9545, 9546, 9547, 9548, 9549, 9550, 9551, 9552, 9553, 9554, 9555, 9556, 9557, 9558, 9559, 9560, 9561, 9562, 9563, 9564, 9565, 9566, 9567, 9568, 9569, 9570, 9571, 9572, 9573, 9574, 9575, 9576, 9577, 9578, 9579, 9580, 9581, 9582, 9583, 9584, 9585, 9586, 9587, 9588, 9589, 9590, 9591, 9592, 9593, 9594, 9595, 9596, 9597, 9598, 9599, 9600, 9601, 9602, 9603, 9604, 9605, 9606, 9607, 9608, 9609, 9610, 9611, 9612, 9613, 9614, 9615, 9616, 9617, 9618, 9619, 9620, 9621, 9622, 9623, 9624, 9625, 9626, 9627, 9628, 9629, 9630, 9631, 9632, 9633, 9634, 9635, 9636, 9637, 9638, 9639, 9640, 9641, 9642, 9643, 9644, 9645, 9646, 9647, 9648, 9649, 9650, 9651, 9652, 9653, 9654, 9655, 9656, 9657, 9658, 9659, 9660, 9661, 9662, 9663, 9664, 9665, 9666, 9667, 9668, 9669, 9670, 9671, 9672, 9673, 9674, 9675, 9676, 9677, 9678, 9679, 9680, 9681, 9682, 9683, 9684, 9685, 9686, 9687, 9688, 9689, 9690, 9691, 9692, 9693, 9694, 9695, 9696, 9697, 9698, 9699, 9700, 9701, 9702, 9703, 9704, 9705, 9706, 9707, 9708, 9709, 9710, 9711, 9712, 9713, 9714, 9715, 9716, 9717, 9718, 9719, 9720, 9721, 9722, 9723, 9724, 9725, 9726, 9727, 9728, 9729, 9730, 9731, 9732, 9733, 9734, 9735, 9736, 9737, 9738, 9739, 9740, 9741, 9742, 9743, 9744, 9745, 9746, 9747, 9748, 9749, 9750, 9751, 9752, 9753, 9754, 9755, 9756, 9757, 9758, 9759, 9760, 9761, 9762, 9763, 9764, 9765, 9766, 9767, 9768, 9769, 9770, 9771, 9772, 9773, 9774, 9775, 9776, 9777, 9778, 9779, 9780, 9781, 9782, 9783, 9784, 9785, 9786, 9787, 9788, 9789, 9790, 9791, 9792, 9793, 9794, 9795, 9796, 9797, 9798, 9799, 9800, 9801, 9802, 9803, 9804, 9805, 9806, 9807, 9808, 9809, 9810, 9811, 9812, 9813, 9814, 9815, 9816, 9817, 9818, 9819, 9820, 9821, 9822, 9823, 9824, 9825, 9826, 9827, 9828, 9829, 9830, 9831, 9832, 9833, 9834, 9835, 9836, 9837, 9838, 9839, 9840, 9841, 9842, 9843, 9844, 9845, 9846, 9847, 9848, 9849, 9850, 9851, 9852, 9853, 9854, 9855, 9856, 9857, 9858, 9859, 9860, 9861, 9862, 9863, 9864, 9865, 9866, 9867, 9868, 9869, 9870, 9871, 9872, 9873, 9874, 9875, 9876, 9877, 9878, 9879, 9880, 9881, 9882, 9883, 9884, 9885, 9886, 9887, 9888, 9889, 9890, 9891, 9892, 9893, 9894, 9895, 9896, 9897, 9898, 9899, 9900, 9901, 9902, 9903, 9904, 9905, 9906, 9907, 9908, 9909, 9910, 9911, 9912, 9913, 9914, 9915, 9916, 9917, 9918, 9919, 9920, 9921, 9922, 9923, 9924, 9925, 9926, 9927, 9928, 9929, 9930, 9931, 9932, 9933, 9934, 9935, 9936, 9937, 9938, 9939, 9940, 9941, 9942, 9943, 9944, 9945, 9946, 9947, 9948, 9949, 9950, 9951, 9952, 9953, 9954, 9955, 9956, 9957, 9958, 9959, 9960, 9961, 9962, 9963, 9964, 9965, 9966, 9967, 9968, 9969, 9970, 9971, 9972, 9973, 9974, 9975, 9976, 9977, 9978, 9979, 9980, 9981, 9982, 9983, 9984, 9985, 9986, 9987, 9988, 9989, 9990, 9991, 9992, 9993, 9994, 9995, 9996, 9997, 9998, 9999, 10000
Thrust shaft, Material S.M.I. Steel Identification Mark No. 9638, 9639, 9640, 9641, 9642, 9643, 9644, 9645, 9646, 9647, 9648, 9649, 9650, 9651, 9652, 9653, 9654, 9655, 9656, 9657, 9658, 9659, 9660, 9661, 9662, 9663, 9664, 9665, 9666, 9667, 9668, 9669, 9670, 9671, 9672, 9673, 9674, 9675, 9676, 9677, 9678, 9679, 9680, 9681, 9682, 9683, 9684, 9685, 9686, 9687, 9688, 9689, 9690, 9691, 9692, 9693, 9694, 9695, 9696, 9697, 9698, 9699, 9700, 9701, 9702, 9703, 9704, 9705, 9706, 9707, 9708, 9709, 9710, 9711, 9712, 9713, 9714, 9715, 9716, 9717, 9718, 9719, 9720, 9721, 9722, 9723, 9724, 9725, 9726, 9727, 9728, 9729, 9730, 9731, 9732, 9733, 9734, 9735, 9736, 9737, 9738, 9739, 9740, 9741, 9742, 9743, 9744, 9745, 9746, 9747, 9748, 9749, 9750, 9751, 9752, 9753, 9754, 9755, 9756, 9757, 9758, 9759, 9760, 9761, 9762, 9763, 9764, 9765, 9766, 9767, 9768, 9769, 9770, 9771, 9772, 9773, 9774, 9775, 9776, 9777, 9778, 9779, 9780, 9781, 9782, 9783, 9784, 9785, 9786, 9787, 9788, 9789, 9790, 9791, 9792, 9793, 9794, 9795, 9796, 9797, 9798, 9799, 9800, 9801, 9802, 9803, 9804, 9805, 9806, 9807, 9808, 9809, 9810, 9811, 9812, 9813, 9814, 9815, 9816, 9817, 9818, 9819, 9820, 9821, 9822, 9823, 9824, 9825, 9826, 9827, 9828, 9829, 9830, 9831, 9832, 9833, 9834, 9835, 9836, 9837, 9838, 9839, 9840, 9841, 9842, 9843, 9844, 9845, 9846, 9847, 9848, 9849, 9850, 9851, 9852, 9853, 9854, 9855, 9856, 9857, 9858, 9859, 9860, 9861, 9862, 9863, 9864, 9865, 9866, 9867, 9868, 9869, 9870, 9871, 9872, 9873, 9874, 9875, 9876, 9877, 9878, 9879, 9880, 9881, 9882, 9883, 9884, 9885, 9886, 9887, 9888, 9889, 9890, 9891, 9892, 9893, 9894, 9895, 9896, 9897, 9898, 9899, 9900, 9901, 9902, 9903, 9904, 9905, 9906, 9907, 9908, 9909, 9910, 9911, 9912, 9913, 9914, 9915, 9916, 9917, 9918, 9919, 9920, 9921, 9922, 9923, 9924, 9925, 9926, 9927, 9928, 9929, 9930, 9931, 9932, 9933, 9934, 9935, 9936, 9937, 9938, 9939, 9940, 9941, 9942, 9943, 9944, 9945, 9946, 9947, 9948, 9949, 9950, 9951, 9952, 9953, 9954, 9955, 9956, 9957, 9958, 9959, 9960, 9961, 9962, 9963, 9964, 9965, 9966, 9967, 9968, 9969, 9970, 9971, 9972, 9973, 9974, 9975, 9976, 9977, 9978, 9979, 9980, 9981, 9982, 9983, 9984, 9985, 9986, 9987, 9988, 9989, 9990, 9991, 9992, 9993, 9994, 9995, 9996, 9997, 9998, 9999, 10000
Tube shaft, Material Identification Mark
Screw shaft, Material Steel Identification Mark

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

If so, have the requirements of the Rules been complied with

Is this machinery duplicate of a previous case

If so, state name of vessel

M/S "KUNGSHOLM"

General Remarks

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

In accordance with the Rules for Special Survey

We have examined the material and workmanship from the commencement of construction of the machinery until the running test under full power working condition on the test bed in the shop and found it good efficient in every respect. The material used in the construction of the engines and the air receivers has been tested as required by the Rules either by us or as per test certificates produced. The dimensions are as specified and in accordance with the Rules, the approved plans as required in the Secretary's letter E dated the 29th Nov. and 19th Dec. 1927.

The intermediate and screw shafts, plan of which was approved on the 19th Dec. 1927 have been made here.

Recommend the vessel to have notation in the Register Book of + LMC with date of notation of OIL ENGINES when the machinery has been fitted on Board under the supervision and tested to the satisfaction of the Local Surveyor to this Society.

For Yokohama I see please see following sheet.

The amount of Entry Fee ... £ 87.36
Special ... £ 28.32
Donkey Boiler Fee ... £
Travelling Expenses (if any) ... £ 11.00
Committee's Minute ... £ 90.00

When applied for, 19.6
When received, 19

(3) A. F. Orbeck, J. Michalos
Engineer Surveyor to Lloyd's Register of Shipping.

Assigned + LMC 3.30

Oil Eng 2 D.B. - 120 lbs

Lloyd's Register Foundation