

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 10924

JUN 15 1939

Date of writing Report 6/6 1939 When handed in at Local Office 12/6 1939 Port of Copenhagen
 No. in Survey held at Copenhagen & Odense Date, First Survey 8/9 1938 Last Survey 22/5 1939
 Reg. Book. Number of Visits 47.

88522 on the Single Triple Quadruple } Screw vessel "INGE MÆRSK"
 Built at Odense By whom built Odense Haaskibsværft Yard No. 78 When built 1939
 Engines made at Copenhagen By whom made H. Rasmussen & Wain Engine No. 2857 When made 1939
 Donkey Boilers made at Elsinore By whom made H. Helsingørsk Jernv. & Mask. Boilers No. 733-4 When made 1939
 Brake Horse Power 3800 Owners H. O. SVENDBORG OG "O/S AF 1912" Port belonging to Copenhagen
 Nom. Horse Power as per Rule 572 Is Refrigerating Machinery fitted for cargo purposes 1/0 Is Electric Light fitted yes
 Trade for which vessel is intended Open sea, oil carrier.

OIL ENGINES, &c.—Type of Engines Diesel, crosshead type, solid injection 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 740 mm Length of stroke 1800 mm No. of cylinders 7 No. of cranks 7
 Mean Indicated Pressure 8.5 kg/cm²

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1004 mm Is there a bearing between each crank yes
 Revolutions per minute 105-110 Flywheel dia. 2360 mm Weight 25 tons Means of ignition compression Kind of fuel used heavy oil

Crank Shaft, { Solid forged as per Rule 501 mm Crank pin dia. 525 mm Crank Webs Mid. length breadth 1000 mm shrunk Thickness parallel to axis 310 mm
 { Semi-built dia. of journals as fitted 525 mm (170 mm CENT. HOLE) Mid. length thickness 310 mm Thickness around eye-hole 280 mm
 { All built as fitted 525 mm

Flywheel Shaft, diameter as per Rule 386 mm Intermediate Shafts, diameter as fitted 560 mm Thrust Shaft, diameter at collars as per Rule 374 mm
 as fitted 386 mm as fitted 560 mm as fitted 500 mm

Tube Shaft, diameter as per Rule 393 mm Is the { tube } shaft fitted with a continuous liner { yes.
 as fitted 393 mm as fitted 560 mm { screw }

Bronze Liners, thickness in way of bushes as per Rule 19.0 mm Thickness between bushes as per Rule 14.3 mm Is the after end of the liner made watertight in the
 as fitted 28.0 mm as fitted 20.0 mm

propeller boss 4/6 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner on 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 yes.

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 1750 mm

Propeller, dia. 5330 mm Pitch VARIABLE No. of blades 4 Material BRONZE whether Moveable No Total Developed Surface 10.6 sq. feet

Method of reversing Engines direct reverse Is a governor or other arrangement fitted to prevent racing of the engine when decoupled yes Means of lubrication
 forced. Thickness of cylinder liners 53.5 mm Are the cylinders fitted with safety valves yes. Are the exhaust pipes and silencers water-cooled or lagged with

non-conducting material yes. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
 1 OFF 2 CYL. DIFF. PUMP 140 TS/H

Cooling Water Pumps, No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Bilge Pumps worked from the Main Engines, No. 1 Diameter 165 mm Stroke 230 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size 1 OFF 165 x 230 mm / 1 OFF 230 x 230 x 250 mm DUAL / 1 OFF 150 x 150 x 150 mm DUAL.
 How driven BY MAIN ENGINE STEAM STEAM

Is the cooling water led to the bilges 1/0 If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 arrangements 1 OFF 2 CYL. DIFF. P. 140 TS/H

Ballast Pumps, No. and size 1 OFF 230 x 250 x 260 mm Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 OFF 230 x 250 x 250 mm DUAL.
 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 5 OFF 3" In Pump Room

In Holds, &c. COFFERS AFT: 1 OFF 6" FORE HOLD: 2 OFF 3" FORE COFFERS: 1 OFF 4" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 OFF 3" 2 OFF 4" 1 OFF 5"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes. 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 yes.

Are all Sea Connections fitted direct on the skin of the ship yes. Are they fitted with Valves or Cocks valves.

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 above

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 yes. How are they protected Have they been tested as per Rule

What pipes pass through the deep tanks 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
 of these compartments to another yes. Is the Shaft Tunnel watertight no tunnel 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. 1 No. of stages 2 Diameters 2.8 m Stroke 180 mm Driven by steam

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 2.8 m Stroke 180 mm Driven by steam

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 2.8 m Stroke 180 mm Driven by steam

What provision is made for first Charging the Air Receivers
 Scavenging Air Pumps, No. 1 CAPACITY Diameter 178 mm Stroke 180 mm Driven by steam

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position Is a report sent herewith

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