

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

Liverpool F.E. Report No 118395

No 13253

Received at London Office

-8 JUN 1942 23 SEP 1942

LIVERPOOL

Date of writing Report

When handed in at Local Office

4. 6. 1942 Port of

Belfast

No. in Survey held at Reg. Book.

Date, First Survey

30 Dec. 1941

Last Survey

28 May 1942

Number of Visits

4-5

Single
on the Twin
Triple
Quadruple

Screw vessel

"BRITISH TRADITION"

Tons
Gross
Net

Built at

Birkenhead

By whom built

Lammell Land & Co. Ltd.

Yard No. 1067 When built

Engines made at

Belfast

By whom made

Harland & Wolff Ltd.

Engine No. 2099 When made 1942

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power

3300

Owners

Port belonging to

Nom. Horse Power as per Rule

489

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines

Harland & Wolff B.V.V. Airless Injection

2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders

700 lbo

Diameter of cylinders

740 mm.

Length of stroke

597.6

No. of cylinders

6

No. of cranks

6

Mean Indicated Pressure

128 lbo

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

972 mm.

Is there a bearing between each crank

Yes

Revolutions per minute

110

Flywheel dia.

2489 mm

Weight

2590 kgs.

Means of ignition

Compression

Kind of fuel used

Diesel oil

Crank Shaft.

Solid forged

Semi built

All built

dia. of journals

as per Rule

as fitted

as fitted

Crank pin dia.

505 mm.

Crank Webs

Mid. length breadth

980 mm.

Thick. parallel to axis

310 mm.

Mid. length thickness

310 mm.

Thick. around eye-hole

292.5 mm.

Flywheel Shaft, diameter

as per Rule

as fitted

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

as fitted

Tube Shaft, diameter

as per Rule

as fitted

as fitted

Screw Shaft, diameter

as per Rule

as fitted

as fitted

Is the

tube

screw

shaft fitted with a continuous liner

YES.

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

as fitted

Thickness between bushes

as per Rule

as fitted

as fitted

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

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

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

No.

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

5'-2"

Propeller, dia.

16'-0"

Pitch

11'-6"

No. of blades

4

Material

Mn. BRONZE

Whether Moveable

No

Total Developed Surface

81. sq. feet

Method of reversing Engines

Air & oil back

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Yes

Means of lubrication

Faced

Thickness of cylinder liners

53 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

One fast water

One fresh water

and alternative means

Cooling Water Pumps, No. 2

One fast water

One fresh water

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Yes

Bilge Pumps worked from the Main Engines, No.

One

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

How driven

1 BILGE & SAN. @ 8'x8'x10' DUPLEX, 1 BALLAST @ 10'x11'x10' DUPLEX.

Is the cooling water led to the bilges

PLUMBER

BLOCKS ONLY.

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

NOTHING ADDITIONAL TO APPROVED BILGE SUCTIONS.

Ballast Pumps, No. and size

1 @ 10'x11'x10'

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

one engine driven 100 tons/hr

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

3 @ 3 1/2"

In Pump Room

2 @ 4"

In Holds, &c.

HOLD - 1 @ 2 1/2" P+S.

STORE 1 @ 2" P+S.

FOREHOLD 1 @ 2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

1 @ 6" FROM AFTWELL.

1 @ 8" EMERGENCY.

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

YES.

Are the Bilge Suctions in the Machinery Spaces

YES.

Are all Sea Connections fitted direct on the skin of the ship

BUILT BOXES.

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

BELOW & L.W.L.

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

at pipes pass through the deep tanks

NONE.

Have they been tested as per Rule

YES.

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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

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.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

2

No. of stages

2

Diameters

Stroke

Driven by

STEAM.

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Is provision made for first Charging the Air Receivers

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

002498-002505-0277

Lloyd's Register
Foundation

2543.

YES.

YES.

thickness

by Rules

27/32.

by Rules

YES

No

Separate Fuel Tanks:

22 10 -41

2-10-41.

SPARE GEAR

In accordance with the Emergency Arrangements

See Attached list.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	{	During progress of work in shops--	1941 Dec. 30 Jan 1, 2, 4, 5 Feb. 2, 9, 20 Mar 4, 10, 14, 16, 18, 25 Apr 2, 3, 7, 13, 15, 16, 17, 20, 21
		During erection on board vessel--	22, 23, 24, 27, 28, 29, 30 May 1, 2, 4, 5, 6, 7, 9, 11, 12, 13, 21, 22, 26, 27, 28 14/1/41 to 9/9/42.
		Total No. of visits	45 + 86.

Dates of Examination of principal parts—Cylinders 4.5.42 *Covers* 20.4.42 *Pistons* 5.5.42 *Rods* 22.4.42 *Connecting rods* 17.4.42

Crank shaft 18.3.42 Flywheel shaft ✓ Thrust shaft 18.3.42 Intermediate shaft 3-2-42 Tube shaft ✓

Screw shaft 5-2-42 Propeller 5-2-42 Stern tube 5-2-42 Engine seatings 25 5-2-42 Engines holding down bolts 14 5-2-42
 Completion of filling sea connections 3-3-42 Completion of pumping arrangements 19-8-42 Engines tried under working conditions 30-8-42

Crank shaft, Material S. M. Steel Identification Mark LLOYD'S No. 1044 Flywheel shaft, Material ✓ Identification Mark 17-1

Thrust shaft, Material	S. M. Steel	Identification Mark	LL6YD3 No. 1044	Intermediate shafts, Material	Steel	Identification Marks	2A, 2B, 2C, 2D
Tube shaft, Material	✓	Identification Mark	✓	Screw shaft, Material	Steel	Identification Mark	6611 C.P.

Identification Marks on Air Receivers

550 lb
350 lb

NO 9-10-41

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*

Description of fire extinguishing apparatus filled Chemical

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ☒ 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 ☒

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

This machinery has been constructed under special survey. The materials & workmanship are sound & for

Test bed runs at full power were satisfactory. In my opinion, the machinery is engine for a
churn vessel. It has been shipped to Bitter Lake for installation.

It has been fitted in the MV "BRITISH TRADITION" tried under

working conditions and found satisfactory.

NOTE

The amount of Entry Fee .. £ 5 - 0 / 03 : 18 / 83, When applied for,

Rice Amel J. H. Suckern

Donkey Boiler Fee ... £ 4. 4/10. When received, 19

Travelling Expenses (if any) £

Engineer's Receipt, to Lloyd's Bank, 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, 8

Committee's Minute

Assigned LMC 8:42 Lloyd's Register

Assigned: 2:11:20:42
T.S. CL

Foundation