

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 16 MAY 1948

Date of writing Report 19... When handed in at Local Office 15 MAY 1948 19... Port of **HULL**

No. in Survey held at **Burley & Hull** Date, First Survey 18. 9. 45 Last Survey 26. 8. 1946
 Reg. Book (Number of Visits 34)

on the **Stm. Indr. BORELLA** Tons Gross 524 Net 186

Built at **Burley** By whom built **Cook, William & Gemme L^a.** Yard No. 762 When built 1946

Engines made at **Hull** By whom made **Amos Smith L^a.** Engine No. 779V When made

Boilers made at **Hull** By whom made **Amos Smith L^a.** Boiler No. 779 When made

Registered Horse Power **MN 190** Owners **City Steam Fishing Co. Ltd., 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** Port belonging to **Hull**

Nom. Horse Power as per Rule **158** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES**

Trade for which vessel is intended **151 Ocean-going steam trawler.**

ENGINES, &c. Description of Engines **Triple Expansion Reciprocating** Revs. per minute **125**

Dia. of Cylinders **14", 24", 40"** Length of Stroke **27"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals as per Rule **app.** Crank pin dia. **8 1/4"** Mid. length breadth **15 1/2"** Thickness parallel to axis **5 1/4"**

as fitted **8 1/4"** Crank webs Mid. length thickness **5 1/4"** shrunk Thickness around eye-hole **3 5/8"**

Intermediate Shafts, diameter as per Rule **app.** Thrust shaft, diameter at collars as per Rule **app.**

as fitted **7 3/8"** as fitted **8 1/4"**

Tube Shafts, diameter as per Rule **app.** Screw Shaft, diameter as per Rule **app.** Is the tube screw shaft fitted with a continuous liner **YES**

as fitted **9"** as fitted **9"**

Bronze Liners, thickness in way of bushes as per Rule **app.** Thickness between bushes as per Rule **app.** Is the after end of the liner made watertight in the propeller boss **YES**

as fitted **5/8"** as fitted **1/2"**

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **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**

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 at **YES**

If so, state type **at top of cone** Length of Bearing in Stern Bush next to and supporting propeller **3'-6"**

Propeller, dia. **10'-9"** Pitch **10.8/10.55** No. of Blades **4** Material **Mang. Bronze** whether Movable **no** Total Developed Surface **39** sq. feet

Feed Pumps worked from the Main Engines, No. **2** Diameter **2 1/2"** Stroke **15"** Can one be overhauled while the other is at work **YES**

Bilge Pumps worked from the Main Engines, No. **2** Diameter **2 1/2"** Stroke **15"** Can one be overhauled while the other is at work **YES**

Feed Pumps No. and size **TWO 2 1/2" x 15", ONE 7 1/2" x 5 x 6"** Pumps connected to the Main Bilge Line { No. and size **TWO 2 1/2" x 15", ONE 7 1/2" x 5 x 6", ONE 3" EJECTOR**

How driven **ME** **IND. STM.** **STM. INJECTOR** How driven **ME** **IND. STM.** **STM.**

Ballast Pumps, No. and size **NONE** Lubricating Oil Pumps, including Spare Pump, No. and size **TECAL MIT BRENTFORD MECH. LUBRICATOR**

Are two independent means arranged for circulating water through the Oil Cooler **YES** Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room **TWO 2 1/2"**

In Pump Room **YES** In Holds, &c. **ONE 2" IN EACH FOLLOWING - STORE, MAIN FISHROOM, RESERVE FISHROOM, MAIN SLUSHWELL, RESERVE SLUSHWELL**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **ONE 5"** Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size **ONE 3"** 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** Are they fitted with Valves or Cocks **BOTH**

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 **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 **WINDLASS & WINCH ST & EX. FOR Suctions** How are they protected **STL. PLATES.**

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 **PART E.R.** Is it fitted with a watertight door **YES** worked from **YES**

MAIN BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **2350 FT² + SH 875' = 3225 #**

Which Boilers are fitted with Forced Draft **SINGLE BOILER** Which Boilers are fitted with Superheaters **SINGLE BOILER**

No. and Description of Boilers **ONE SINGLE END CYLINDRICAL MULTITUBULAR** Working Pressure **220 LB.**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **YES**

IS A DONKEY BOILER FITTED? **NO** If so, is a report now forwarded? **YES**

Can the donkey boiler be used for other than domestic purposes **YES**

PLANS. Are approved plans forwarded herewith for Shafting **20.7.45** Main Boilers **1.6.45** Auxiliary Boilers **YES** Donkey Boilers **YES**

(If not state date of approval)

Superheaters **11.2.46 & 20.8.45.** General Pumping Arrangements **3.10.45.** Oil fuel Burning Piping Arrangements **YES**

SPARE GEAR. **2350 875 3225**

Has the spare gear required by the Rules been supplied **YES**

State the principal additional spare gear supplied **as per attached list.**

The foregoing is a correct description.
 For AMOS & SMITH LTD.
W. E. Brown. Manufacturer.



"BORELLA"

1945. Sept 18, Oct 25, 31, Nov. 8, 13, 23, Dec. 4, 17, 31.
 During progress of work in shops --- (1946. Jan. 2, 3, 5, 8, 9, 11, 18, 21, 24, 25, 30, Feb. 8, 11, 19,
 During erection on board vessel --- (Mar. 1, 8, Feb. 9, 20, 21, 22, 26, Mar. 5, 7, 14, 26,
 Total No. of visits **34**

Dates of Examination of principal parts—Cylinders **5.1.46** Slides **18.1.46** Covers **5.1.46**
 Pistons **9.1.46** Piston Rods **17.12.45** Connecting rods **18.1.46**
 Crank shaft **2.1.46** Thrust shaft **2.1.46** Intermediate shafts **23.11.45**
 Tube shaft **✓** Screw shaft **13.11.45** Propeller **8.1.46**
 Stern tube **8.1.46** Engine and boiler seatings **9.2.46** Engines holding down bolts **7.3.46**

Completion of fitting sea connections **8.1.46**
 Completion of pumping arrangements **26/3/46** Boilers fixed **22.2.46** Engines tried under steam **14/3/46** **26/3/46**
 Main boiler safety valves adjusted **14/3/46** Thickness of adjusting washers **25/6/46 F 3/8 SUP HTR 1/32**
 Crank shaft material **F.I. STL** Identification Mark **B 670, FW, 3/8/45** Thrust shaft material **F.I. STL** Identification Mark **841, FW, 24.10.45**
 Intermediate shafts, material **D9** Identification Mark **B (57) FW, 24/10/45** Tube shaft, material **✓** Identification Mark **✓**
 Screw shaft, material **D9** Identification Mark **B 668, FW, 1/8" Cu letter 21.5.46** Steam Pipes, material **STL ✓** Test pressure **660 lbs.** Date of Test **5.3.46**

Is an installation fitted for burning oil fuel **No ✓** Is the flash point of the oil to be used over 150° F. **✓**
 Have the requirements of the Rules for the use of oil as fuel been complied with **✓**
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo **No ✓** If so, have the requirements of the Rules been complied with **✓**
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with **✓**
 Is this machinery duplicate of a previous case **No ✓** If so, state name of vessel **✓**

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

The above machinery constructed under Special Survey in accordance with the Secretary's Orders, approved plans & the Rules, of approved materials and good workmanship, has been installed in "BORELLA", tried under working conditions and on completion of all tests found satisfactory. Eligible in my opinion to be classed in the Register Book.
 1/2 LMC 3.46 & L. 3 Cy. 18", 24", 42" - 27" **M.N. 158.**
 1 SB. 220 lb 3 cf. GS 67.5 FT² H.S. 3225 FT²
 Superheat F.D.

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

The amount of Entry Fee ... £ **3 : 0** : When applied for,
 Special **+ LMC** ... £ **39 : 10** : **15 MAY 1946**
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) ... £ : : **10**

Date **FRI. 14 JUN 1946**

Committee's Minute **+ LMC 3.46.**
F.D. C.L. Spl.

W.S. Shields
 Engineer-Surveyor to Lloyd's Register of Shipping.

