

# REPORT ON BOILERS.

No. 85779

Received at London Office

When handed in at Local Office 23rd May 1930 Port of NEWCASTLE-ON-TYNE

Survey held at Scotwood Date, First Survey 8 Oct. 1929 Last Survey 16 May 1930  
 on the M.V. "EVINA" (Number of Visits ✓) Gross 6121  
 Tons Net 3570  
 Built at Walker. By whom built Sir W.G. Armstrong Whitworth & Co. Ltd. and No. 1060 When built 1930  
 By whom made Sir W.G. Armstrong Whitworth & Co. Ltd. Engine No. 87. When made 1930  
 By whom made Sir W.G. Armstrong Whitworth & Co. Ltd. Boiler No. 87. When made 1930.  
 Indicated Horse Power 583. Owners Hansen, Tønder. Port belonging to KRISTIANSAND.

## LOW PRESSURE AIR RECEIVER.

~~TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel David Colville & Sons Ltd Glasgow. (Letter for Record ✓)  
 CAPACITY OF AIR RECEIVER 42 cu. ft. Is forced draught fitted ✓ Coal or Oil fired ✓  
 Description of Boilers One Riveted Air Receiver Working Pressure 180 lb/sq. in.  
 Tested by hydraulic pressure to 320 lb/sq. in. Date of test ✓ No. of Certificate ✓ Can each boiler be worked separately ✓  
 of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 2 Spring loaded  
 of each set of valves per boiler per Rule ✓ Pressure to which they are adjusted 180 lb/sq. in. Are they fitted with easing gear ✓  
 as fitted 6.28 sq. in.  
 of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓  
 Test distance between boilers or uptakes and bunkers or woodwork ✓ Is oil fuel carried in the double bottom under boilers ✓  
 Test distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated ✓  
 Test internal dia. of boilers 2'-6" Length 7'-0" Shell plates: Material Steel Tensile strength 28-32 tons  
 Thickness 5/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams end S.R. Lap  
inter. ✓  
 seams D.R. Lap Diameter of rivet holes in circ. seams 1 1/16" Pitch of rivets 2"  
long. seams 1 1/16" 2 1/4"  
 Percentage of strength of circ. end seams plate 65.5% Percentage of strength of circ. intermediate seam plate  
rivets 48.8% 71.4%  
 Percentage of strength of longitudinal joint plate 81.3% Working pressure of shell by Rules 184 lb/sq. in.  
combined 83.35%  
 No. and Description of Furnaces in each Boiler ✓  
 Tensile strength ✓ Smallest outside diameter ✓  
 Thickness of plates ✓ Description of longitudinal joint ✓  
 Working pressure of furnace by Rules ✓  
 plates in steam space: Material Steel Tensile strength 26-30 tons Thickness F 3/8" B 1/2" Pitch of stays Radius 7 1/2"  
 Are stays secured ✓ Working pressure by Rules 250 lb/sq. in.  
 plates: Material front Tensile strength ✓ Thickness ✓  
back  
 Pitch of stay tubes in nests ✓ Pitch across wide water spaces ✓ Working pressure front  
back  
 Stays to combustion chamber tops: Material ✓ Tensile strength ✓ Depth and thickness of girder ✓  
 Length as per Rule ✓ Distance apart ✓ No. and pitch of stays ✓  
 Working pressure by Rules ✓ Combustion chamber plates: Material ✓  
 Thickness: Sides ✓ Back ✓ Top ✓ Bottom ✓  
 of stays to ditto: Sides ✓ Back ✓ Top ✓ Are stays fitted with nuts or riveted over ✓  
 Working pressure by Rules ✓ Front plate at bottom: Material ✓ Tensile strength ✓  
 Lower back plate: Material ✓ Tensile strength ✓ Thickness ✓  
 of stays at wide water space ✓ Are stays fitted with nuts or riveted over ✓  
 Main stays: Material ✓ Tensile strength ✓  
 No. of threads per inch ✓ Area supported by each stay ✓  
 Screw stays: Material ✓ Tensile strength ✓  
 No. of threads per inch ✓ Area supported by each stay ✓

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Working pressure by Rules Are the stays drilled at the outer ends Margin stays: Diameter { At turned off part, or Over threads  
No. of threads per inch Area supported by each stay Working pressure by Rules  
Tubes: Material External diameter { Plain Stay Thickness No. of threads per inch  
Pitch of tubes Working pressure by Rules Manhole compensation: Size of opening in shell plate Section of compensating ring No. of rivets and diameter of rivet holes  
Outer row rivet pitch at ends Depth of flange if manhole flanged Steam Dome: Material  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets  
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays Inner radius of crown Working pressure by Rules  
How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes Steel castings  
Number of elements Material of tubes Internal diameter and thickness of tubes  
Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler  
Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

FOR The foregoing is a correct description,  
SIR W. G. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED  
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

Dates of Survey { During progress of work in shops - - - While building { During erection on board vessel - - - Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Total No. of visits

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Receiver has been built under Special Survey, and in accordance with the Society's Rules & approved beam. The materials & workmanship are sound & good. The safety valves were adjusted to the approved working pressure.

Survey Fee ... £ See Tricky Report. When applied for, 19 Travelling Expenses (if any) £ When received, 19

L. Pickett. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 3 JUN 1930 Assigned See report attached