

REPORT ON MACHINERY.

No. 16554

Received at London Office

WED. OCT. 22, 1913

Date of writing Report

19

When handed in at Local Office

17/10/1913 Port of Greenock

No. in Survey held at
Reg. Book.

Greenock

Date, First Survey

14th Feb 1913

Last Survey

10th Oct. 1913

(Number of Visits)

on the SCREW STEAMER

H.M.S. Cantharus

Gross Tons

Net Tons

Master

Built at Trieste

By whom built

Cantieri nav. Triestini

When built

1913

Engines made at

Greenock

By whom made

John S. Kinnaird & Co. Ltd. 403 when made

1913

Boilers made at

Greenock

By whom made

John S. Kinnaird & Co. Ltd. 403 when made

1913

Registered Horse Power

Owners

Port belonging to

Horse Power as per Section 28

520

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

LINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

Three

No. of Cranks

Three

No. of Cylinders

27-44-73

Length of Stroke

48

Revs. per minute

75

Dia. of Screw shaft

as per rule 14.8

Material of

Steel

The screw shaft fitted with a continuous liner the whole length of the stern tube

Yes

Is the after end of the liner made water tight

The propeller boss

Yes

If the liner is in more than one length are the joints burned the length

Between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

If two are fitted, is the shaft lapped or protected between the liners

Length of stern bush

60 1/2

No. of Tunnel shaft

as per rule 13.3

as fitted 13.3

Dia. of Crank shaft journals

as per rule 13.99

as fitted 13.99

Dia. of Crank pin

14 1/4

Size of Crank webs

21 1/2 x 9

Dia. of thrust shaft under

ars

No. of Feed pumps

2

Diameter of ditto

4

Stroke

27

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4 1/2

Stroke

27

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Two

Sizes of Pumps

8 x 8

9 x 10

No. and size of Suctions connected to both Bilge and Donkey pumps

In Holds, &c.

Engine Room

No. of Bilge Injections

1

sizes

9

Connected to condenser, or to circulating pump

C. P.

Is a separate Donkey Suction fitted in Engine room & size

Yes: 3 1/2

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

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

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections

of Stern Tube

Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record S.)

Manufacturers of Steel Plates

Steel Coy of Scotland, Sons, Llanarkshire Steel Coy

Total Heating Surface of Boilers

4419

Is Forced Draft fitted

Yes

No. and Description of Boilers

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: 1001: 1002: 1003: 1004: 1005: 1006: 1007: 1008: 1009: 1010: 1011: 1012: 1013: 1014: 1015: 1016: 1017: 1018: 1019: 1020: 1021: 1022: 1023: 1024: 1025: 1026: 1027: 1028: 1029: 1030: 1031: 1032: 1033: 1034: 1035: 1036: 1037: 1038: 1039: 1040: 1041: 1042: 1043: 1044: 1045: 1046: 1047: 1048: 1049: 1050: 1051: 1052: 1053: 1054: 1055: 1056: 1057: 1058: 1059: 1060: 1061: 1062: 1063: 1064: 1065: 1066: 1067: 1068: 1069: 1070: 1071: 1072: 1073: 1074: 1075: 1076: 1077: 1078: 1079: 1080: 1081: 1082: 1083: 1084: 1085: 1086: 1087: 1088: 1089: 1090: 1091: 1092: 1093: 1094: 1095: 1096: 1097: 1098: 1099: 1100: 1101: 1102: 1103: 1104: 1105: 1106: 1107: 1108: 1109: 1110: 1111: 1112: 1113: 1114: 1115: 1116: 1117: 1118: 1119: 1120: 1121: 1122: 1123: 1124: 1125: 1126: 1127: 1128: 1129: 1130: 1131: 1132: 1133: 1134: 1135: 1136: 1137: 1138: 1139: 1140: 1141: 1142: 1143: 1144: 1145: 1146: 1147: 1148: 1149: 1150: 1151: 1152: 1153: 1154: 1155: 1156: 1157: 1158: 1159: 1160: 1161: 1162: 1163: 1164: 1165: 1166: 1167: 1168: 1169: 1170: 1171: 1172: 1173: 1174: 1175: 1176: 1177: 1178: 1179: 1180: 1181: 1182: 1183: 1184: 1185: 1186: 1187: 1188: 1189: 1190: 1191: 1192: 1193: 1194: 1195: 1196: 1197: 1198: 1199: 1200: 1201: 1202: 1203: 1204: 1205: 1206: 1207: 1208: 1209: 1210: 1211: 1212: 1213: 1214: 1215: 1216: 1217: 1218: 1219: 1220: 1221: 1222: 1223: 1224: 1225: 1226: 1227: 1228: 1229: 1230: 1231: 1232: 1233: 1234: 1235: 1236: 1237: 1238: 1239: 1240: 1241: 1242: 1243: 1244: 1245: 1246: 1247: 1248: 1249: 1250: 1251: 1252: 1253: 1254: 1255: 1256: 1257: 1258: 1259: 1260: 1261: 1262: 1263: 1264: 1265: 1266: 1267: 1268: 1269: 1270: 1271: 1272: 1273: 1274: 1275: 1276: 1277: 1278: 1279: 1280: 1281: 1282: 1283: 1284: 1285: 1286: 1287: 1288: 1289: 1290: 1291: 1292: 1293: 1294: 1295: 1296: 1297: 1298: 1299: 1300: 1301: 1302: 1303: 1304: 1305: 1306: 1307: 1308: 1309: 1310: 1311: 1312: 1313: 1314: 1315: 1316: 1317: 1318: 1319: 1320: 1321: 1322: 1323: 1324: 1325: 1326: 1327: 1328: 1329: 1330: 1331: 1332: 1333: 1334: 1335: 1336: 1337: 1338: 1339: 1340: 1341: 1342: 1343: 1344: 1345: 1346: 1347: 1348: 1349: 1350: 1351: 1352: 1353: 1354: 1355: 1356: 1357: 1358: 1359: 1360: 1361: 1362: 1363: 1364: 1365: 1366: 1367: 1368: 1369: 1370: 1371: 1372: 1373: 1374: 1375: 1376: 1377: 1378: 1379: 1380: 1381: 1382: 1383: 1384: 1385: 1386: 1387: 1388: 1389: 1390: 1391: 1392: 1393: 1394: 1395: 1396: 1397: 1398: 1399: 1400: 1401: 1402: 1403:


No.	None					Description
Made at	By whom made		When made		Where fixed	
Working pressure	tested by hydraulic pressure to		Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted		Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler			Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength		Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint		Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates		Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates		Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates		Radius of do.		Stayed by	
Diameter of uptake	Thickness of uptake plates		Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 1 Propeller, 1 Propeller shaft 2 Main Receiving Bolts, 2 Conn Rod Bottom End Bolt, 2 Conn. Rod top End Bolt, 1 Set Coupling Bolts, 1 Set Feed & Bilge Pump valves, 1 Set L & C Springs for each Piston. 3 Main Feed check valves, 1 Bonkey Feed check valve. 12 Junk Ring Bolts, 4 Boiler tubes 12 Condenser tubes & 120 Ferrules, 1 Escape valve spring of each size, 2 Safety valve springs, 1 Feed Pump discharge valve, 1 Bilge Pump discharge valve, 50 Bolts & nuts assorted, 8 Bars of Iron Round, 2 Bars of Iron Flat, five John G. Nicolson & Co Ltd Manufacturer, Bars, Baffle plates etc.

Dates of Survey while building	During progress of work in shops --	1913. Feb. 14. 18. 25. 28. Mar. 4. 6. 12. 18. 20. 26. Apr. 1. 10. 14. 17. 23. May 2. 6. 8. 14. 20. 23. June 3.	
	During erection on board vessel --	5. 9. 10. 20. July 28. 29. 31. Aug. 5. 7. 11. 14. 19. 21. 25. Sept. 2. 3. 5. 10. 15. 17. 23. 24. 29. 30. Oct. 7. 10.	
	Total No. of visits	48.	
	Is the approved plan of main boiler forwarded herewith		Yes.

Dates of Examination of principal parts—Cylinders		7/8/13	Slides	31/7/13	Covers	7/8/13	Pistons	19/8/13	Rods	19/8/13	
Connecting rods		3/6/13	Crank shaft	See Reports	Thrust shaft	See Reports	Tunnel shafts	See Reports	Screw shaft	30/9/13	
Propeller		30/9/13	Stern tube		30/9/13	Steam pipes tested		Engine and boiler seatings		Engines holding down bolts	
Completion of pumping arrangements		Boilers fixed		Engines tried under steam							
Main boiler safety valves adjusted		Thickness of adjusting washers									
Material of Crank shaft		Steel	Identification Mark on Do.		3058	Material of Thrust shaft		Steel	Identification Mark on Do.		3057
Material of Tunnel shafts		Steel	Identification Marks on Do.		3095, 4 3098 3103, 5 3105	Material of Screw shafts		Steel	Identification Marks on Do.		3058, 3072
Material of Steam Pipes		Test pressure									

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

The Engines and Boilers of this vessel were built under Special Survey and the materials and workmanship are good. They have now been shipped to Trieste where they will be fitted on board of the vessel. When this has been done to the satisfaction of the Society's Surveyors, the machinery tested under full steam, the Spare Gear checked, and the requirements of the Rules in all other respects duly carried out; the vessel will in my opinion be eligible to have the record of  (with date of completion) marked in the Society's Register Book.

Certificate (if required) to be sent to _____ below the space for Committed's Minute.)

The amount of Entry Fee .. £ 3 : : :	When applied for,
for Feb & 30-11-6 & £ 6 2-8	17/10/19..
for Feb = Special £ 11-6 & £ 5-6 .. £ 46 :	
Acad's Trustees note & sign	
Donkey Boiler Fee .. £ 9 : 4 :	When received,
Acad's Trustees sign	24-10-19..
Travelling Expenses (if any) £ : : :	

Committee's Minute

Assigned Deferred for complu

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Lloyd's Register
Foundation