

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report... 8TH APRIL 1947 When handed in at Local Office... 21ST APRIL 1947 Port of... GLASGOW

Survey held at... GRANGEMOUTH Date, First Survey... 26TH FEBRUARY Last Survey... 17TH MARCH 1947

on the... M.V. TRAQUAIR (EX GUERNSEY QUEEN.) Tons { Gross 565 Net 279

built at... BURNTISLAND By whom built... BURNTISLAND S.B. CO. LTD. Yard No... When built... 1939

owners... G. GIBSON & CO. Port belonging to... LEITH

Electrical Installation fitted by... MESSRS GRANGEMOUTH DOCKYARD CO. LTD. Contract No... 479 When fitted...

Vessel fitted for carrying Petroleum in bulk... No Is vessel equipped with D.F... YES E.S.D... YES Gy.C... YES Sub.Sig... YES

Plans been submitted and approved... YES System of Distribution... TWO WIRE Voltage of supply for Lighting... 110

Power... Direct or Alternating Current, Lighting... D.C. Power... If Alternating Current state periodicity... Prime Movers,

the governing been tested and found as per Rule when full load is suddenly thrown on and off... YES Are turbine emergency governors fitted with a

switch as per Rule... Generators, are they compound wound... YES, are they level compounded under working conditions... YES

not compound wound state distance between generators... TEN FEET and from switchboard... FIVE FEET Where more than one generator is fitted are they

enged to run in parallel... No, are shunt field regulators provided... YES Is the compound winding connected to the negative or positive pole

NEGATIVE Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing... YES Have certificates of

for machines under 100 kw. been supplied... YES and the results found as per rule... YES Are the lubricating arrangements and the construction

the generators as per rule... YES Position of Generators... ON STARBOARD SIDE OF ENGINE ROOM

is the ventilation in way of generators satisfactory... YES are they clear of inflammable material... YES, if situated

unprotected combustible material state distance from same horizontally... YES and vertically... YES, are the generators protected from mechanical

ry and damage from water, steam and oil... YES, are the bedplates and frames earthed... YES and the prime movers and generators in metallic

act... YES Switchboards, where are main switchboards placed... IN ENGINE ROOM NEAR GENERATORS

they in accessible positions, free from inflammable gases and acid fumes... YES, are they protected from mechanical injury and damage from water, steam

oil... YES, if situated near unprotected combustible material state distance from same horizontally... YES and vertically... YES, what insulation

material is used for the panels... SINDANYO, if of synthetic insulating material is it an Approved Type... YES, if of

insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... YES Is the frame effectually earthed... YES

the construction as per Rule... YES, including accessibility of parts... YES, absence of fuses on the back of the board... YES, individual fuses

lot and earth lamps, voltmeters, etc.,... YES locking of screws and nuts... YES, labelling of apparatus and fuses... YES, fuses on the "dead"

of switches... YES Description of Main Switchgear for each generator and arrangement of equaliser switches... 30 AMP. D.P. KNIFE

PATTERN SWITCH WITH FUSES

for each outgoing circuit... 30 AMP. D.P. DOUBLE OR SINGLE THROW KNIFE PATTERN SWITCHES

WITH FUSES

compartments containing switchboards composed of fire-resisting material or lined as per Rule... YES Instruments on main switchboard... 2

sters... 2 voltmeters... YES synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection... YES Earth Testing, state means provided... EARTH LAMPS

itches, Circuit Breakers and Fuses, are they as per Rule... YES, are the fuses an approved type... YES, are all fuses labelled as

Rule... YES If circuit breakers are provided for the generators, at what overload current did they open when tested... YES, are the reversed current

tection devices connected on the pole opposite to the equaliser connection... YES, have they been tested under working conditions, and at what current

they operate... YES Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... YES

les, are they insulated and protected as per the appropriate Tables of the Rules... YES, if otherwise than as per Rule are they of an approved type... W.E.

the maximum fall of pressure between bus bars and any point under maximum load... 3.7 VOLTS are the ends of all cables having a sectional area of 0.01

re inch and above provided with soldering sockets... YES Are paper insulated and varnished cambric insulated cables sealed at the ends... YES

supported and protected. MAINS: L.C.S.W.A. CABLE CLIPPED TO STEEL CABLE PLATE

MACHINERY SPACE. L.C. CABLE CLIPPED TO STEEL PLATE.

ACCOMMODATION: L.C. CABLE CLIPPED TO WOODWORK.

Are all lead sheaths, armouring and conduits effectually bonded and earthed.....YES..... Refrigerated chambers, are the cables and fittings as per Rule.....✓

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands.....YES....., where unarmoured cables pass through

beams, etc., are the holes effectively bushed YES and with what material LEAD Alternative Lighting, are

the groups of lights in the engine and boiler room arranged as per Rule...YES... Emergency Supply, state position...YES...

..... and method of control

Navigation Lamps, are they separately wired YES controlled by separate

double pole switches YES and fuses YES. Are the switches and fuses in a position accessible only to the officers on watch YES, is an

automatic indicator fitted ☒ **YES** Secondary Batteries, are they constructed and fitted as per Rule ☒ **YES**, are they adequately ventilated ☒ **YES**

what is the battery capacity in ampère hours

234

24. Are fittings weather-tight in stowholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof ☒ YES Are fittings

1. All materials or inflammable or explosive dust or gases unlikely to be present **No** if so, how are they protected

1

837 10 17 13 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 1

and where are the controlling sanctions fixed.....

are all fittings and accessories constructed and installed as per Rule..... Sealing and Lamps, No. 6.....

....., are their fittings as per Rule..... Heating and Cooking, is the general construction as per above.....

are the frames effectually earthed....., are heaters in the accommodation of the convection type..... MOTORS, are all motors constructed and

installed as per Rule.....✓..... and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water,

steam and oil....., if situated near unprotected combustible material state minimum distance from same horizontally..... and vertically..... Are

motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment.....

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing..... Have certificates of test for motors under

100 BHP intended for essential services been supplied and the results found as per Rule..... Control Gear and Resistances, are they constructed and

fitted as per Rule..... ✓ Lightning Conductors, where required are they fitted as per Rule..... ✓ Ships carrying Oil having a Flash Point

less than 150° F. Have all the special requirements of the Rules for such ships been complied with....., are all fuses of the cartridge type.....

are they of an approved type..... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such

ships..... Are the cables lead covered as per Rule..... Spare Gear, if the vessel is for open sea service have spares been provided as per

Rule.....YES....., are they suitably stored in dry situations.....YES..... Insulation Tests, has the insulation resistance of all circuits and apparatus been tested

and found satisfactory.....YES.....

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	3 ✓	110 ✓	27 ✓	1500 ✓	I.C. ENGINE	OIL	ABOVE 150°F
	1	2 ✓	110 ✓	18 ✓	1000 ✓	I.C. ENGINE	OIL	ABOVE 150°F
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	3	1	7/044	27	31 ✓	20	W.E.	L.C.
" " EQUALISER ...								
AUXILIARY GENERATOR (SHUNT M/C)	2	1	7/036	18	24 ✓	20	W.E.	L.C.
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

LIGHTING AND HEATING, ETC., SYSTEM.							
WIRELESS	1	7/064	8	46 ✓	200	W.E.	L.C. S.W.A.
NAVIGATION LIGHTS	1	7/036	18	24 ✓	10	W.E.	L.C.
LIGHTING AND HEATING							
Aft Accommodation D.B.	1	7/064	16	31 ✓	40	W.E.	L.C.
Bridge D.B.	1	7/036	13	24 ✓	228	W.E.	L.C. S.W.A.
ENGINE ROOM.	1	3/036	9	10 ✓	40	W.E.	L.C.

MOTOR CABLES.

[illegible]

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

THE BRANGEMOUTH DOCKYARD COY., LTD.

A. A. McKerron

Electrical Engineers.

Date *9th April 1947*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *Twenty Feet*

Minimum distance between electric generators or motors and steering compass *Eighteen Feet*

The nearest cables to the compasses are as follows:—

A cable carrying *13* Ampères *10* feet from standard compass *9* feet from steering compass.

A cable carrying *23* Ampères *LED INTS* feet from standard compass *LED INTS* feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *Yes*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *Yes*

The maximum deviation due to electric currents was found to be *No* degrees on *Any* course in the case of the

standard compass, and *No* degrees on *Any* course in the case of the steering compass.

THE BRANGEMOUTH DOCKYARD COY., LTD.

Builder's Signature.

Date *9th April 1947*

A. A. McKerron

Secretary

Is this installation a duplicate of a previous case *No* If so, state name of vessel

Plans. Are approved plans forwarded herewith *No* If not, state date of approval *28th MARCH 1947*

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith *Yes*

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical installation of this vessel has been fitted on board under special survey, tested under working conditions and found satisfactory, with the exception that the 2kw. shunt wound generator be replaced by a compound generator of suitable capacity at the earliest opportunity. See accompanying Report 9.

Total Capacity of Generators *5* Kilowatts.

The amount of Fee ... £ *5 : 0 :* When applied for, *22 APR 1947*

Travelling Expenses (if any) £ *1 : 5 :* When received, *19*

M. Gardiner
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 22 APR 1947*

Assigned *THE ACCOMPANYING MACHINERY REPORT*



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Foundation