

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 2nd July 47 ... When handed in at Local Office... 2nd July 47 ... Port of... ABERDEEN ...

No. in Survey held at... ABERDEEN ... Date, First Survey... 3/ 3/ 47 ... Last Survey... 24:6: 19 47 ...  
Reg. Book. (Number of Visits... 10 ...)

on the... trawler "EGILL RAUDI" ... Tons { Gross... 648. ...  
Net... 217.31. ...

Built at... ABERDEEN ... By whom built... A. Hall & Co Ltd. ... Yard No... 716 ... When built... 1947 ...

Owners... ICELANDIC GOVERNMENT. ... Port belonging to... NESKAUPSTADUR. ...

Electrical Installation fitted by... CLAUD HAMILTON & CO. LTD. ... Contract No... 2462 ... When fitted... 1947 ...

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

Have plans been submitted and approved... Yes ... System of Distribution... D.C. Two wire lead and return ... Voltage of supply for Lighting... 220 V ...

Heating... 220 ... Power... 220 ... Direct or Alternating Current, Lighting... DC ... Power... DC ... If Alternating Current state periodicity... -- ... Prime Movers,

has 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

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

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

arranged 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... ✓ ... Have certificates of

test for machines under 100 kw. been supplied... No ... and the results found as per rule... Yes ... Are the lubricating arrangements and the construction

of the generators as per rule... Yes ... Position of Generators... Starboard Engine Room Fore and Aft. ...

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

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

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

contact... Yes ... Switchboards, where are main switchboards placed... Starboard Engine and Boiler Room. ...

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

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

material is used for the panels... Syndano ... if of synthetic insulating material is it an Approved Type... Yes ... if of

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

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

to pilot and earth lamps, voltmeters, etc.,... Yes ... locking of screws and nuts... Yes ... labelling of apparatus and fuses... Yes ... fuses on the "dead"

side of switches... Yes ... Description of Main Switchgear for each generator and arrangement of equaliser switches... One Double Pole ...

circuit breaker with overload trips and no volt release coils to each generator. ...

and for each outgoing circuit... D.P. change over Knife switches. ...

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... ✓ ... Instruments on main switchboard... 3 ...

ammeters... 3 ... voltmeters... -- ... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection... ✓ ... Earth Testing, state means provided... Lamp with switch and fuse on each pole ...

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

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

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

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

Cables, 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... ✓ ...

state maximum fall of pressure between bus bars and any point under maximum load... 6 volts ... are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets... Yes ... Are paper insulated and varnished cambric insulated cables sealed at the ends... not used. ...



with insulating compound. ☒ or waterproof insulating tape. ☒ Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. Yes, are cables laid under machines or floorplates. echo sounding so, are they adequately protected. yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered. yes or run in conduit. yes. State how the cables are supported and protected. Lead covered armoured and braided - supported and protected by steel plate.

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 rooms arranged as per Rule. yes. Emergency Supply, state position. none 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. no. Secondary Batteries, are they constructed and fitted as per Rule. ☒ what is the battery capacity in ampere hours. ☒

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. no, if so, how are they protected. ☒

and where are the controlling switches fitted. ☒ are all fittings suitably ventilated. yes

are all fittings and accessories constructed and installed as per Rule. yes. Searchlight Lamps, No. of 1, whether fixed or portable. Fixed

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

are the frames effectually earthed. yes, are heaters in the accommodation of the convection type. ☒ Motors, are all motors constructed and installed as per Rule. yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. yes, 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. Yes

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. none. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. yes. Control Gear and Resistances, are they constructed and fitted as per Rule. yes. Lightning Conductors, where required are they fitted as per Rule. none. 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	2	80	220	365	1000	Diesel Engine.	Oil	above 150° F.
Lighting	1	5	220	23	1500	Diesel "	Oil	"
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 Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	80	1	91/103	365	575	32 ft.	V.I.R.	Conduit.
" " <u>Transformer</u>	"	"	"	"	"	"	"	"
" " <u>5-K.W.</u>	80	1	91/103	365	575	28 ft.	V.I.R.	Conduit
	5	1	7/044	23	38	162 ft.	L.C.A.B.	Armoured & Braided.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

#### MAIN DISTRIBUTION CABLES.

DESCRIPTION	No. in Parallel For Pole.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS								
Navigation Teak board 15 fuses	1	7/044	2.5	31	174		Rubber Armour & Braided.	
Aft " " " "	1	7/036	10.5	24	138		"	"
Midship " " " "	1	7/044	8.4	31	174		"	"
Forward " " " "	1	7/029	7.2	15	270		"	"
Heating Iron Clad " " " "	1	7/029	10	15	102		"	"
Ventilation " " " "	1	7/029	6.5	15	102		"	"
Fish room Teak board " " " "	1	7/029	7.95	15	270		"	"
Sounding " " " "	1	7/029	8.5	15	174		"	"

#### LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/044	*	31	174	Rubber Armoured & Braided.	
NAVIGATION LIGHTS	1	3/029	.18	5	372	"	"
LIGHTING AND HEATING							
Heating	1	3/029	4.5	5	102	"	"
Lighting in Engine & Boiler Room.	1	3/029	2	5	40	"	"
" " Accommodations.	1	3/029	1.2	5	30	"	Lead Covered.

The above are typical Circuits.

\* Not more than 31 amperes.

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.							
General Services Pump No 1.	1	14	1	19/064	50.7	83	162	Rubber Armoured & Braided.		
" " " No 2.	1	14	1	19/064	50.7	83	158	"	"	"
Fresh Water	1	3	1	7/029	13.5	15	123	"	"	"
Circulating	1	7-9	1	7/064	33	46	74	"	"	"
Air	1	15	1	19/052	57	64	102	"	"	"
Aux. Boiler Feed	1	24	1	19/064	88	183	102	"	"	"
Steering Gear.	1	8	1	7/064	31	46	84	"	"	"
Cod Liver Oil	1	4	1	7/036	17	24	84	"	"	"
Air Compressor	1	4.5	1	7/036	21	24	84	"	"	"
Refrig. Motor	1	2	1	7/029	8.5	15	144	"	"	"
Cod Liver Oil Plant	1	12	1	19/044	46	53	135	"	"	"
Forced Draught Fan.	1	6	1	7/044	24	31	180	"	"	"
Oil Fuel Pump No 1.	1	1.5	1	3/036	7.2	10	126	"	"	"
" " " No 2.	1	1.5	1	3/036	7.2	10	126	"	"	"
" " Transfer Pump.	1	5-6.5	1	7/044	26	31	132	"	"	"
Windlass.	1	15	1	19/052	57	64	306	"	"	"
Aft Ventilation	1	1.5	1	3/029	2.3	5	84	"	"	"
Galley Ventilation	1	1.5	1	3/029	2.3	5	54	"	"	"
Midship	1	1.5	1	3/029	2.3	5	99	"	"	"
Forward	1	1.5	1	3/029	2.3	5	198	"	"	"
Forward Heater	1	1.5	1	3/029	2.3	5	198	"	"	"
Fresh Water Pump	1	1.5	1	3/029	2.3	5	138	"	"	"
Engine Room Heater	1	1.5	1	3/029	2.3	5	114	"	"	"
Galley Compressor.	1	1.5	1	3/029	1.5	5	54	"	"	"

007401-002409-01332



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.

CLAUD HAMILTON (ABERDEEN) LTD.

ELECTRICAL ENGINEERS

254 UNION STREET, ABERDEEN

*/Houlked* Electrical Engineers.

Date *26/6/47*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass.....15'

Minimum distance between electric generators or motors and steering compass.....12'

The nearest cables to the compasses are as follows:—

A cable carrying .....1..... Ampères led into feet from standard compass led into feet from steering compass.

A cable carrying .....5..... Ampères .....3..... feet from standard compass .....3..... 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 nil degrees on any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

For ALEXANDER HALL &

*W. J. Smith*

Builder's Signature.

Date *26/6/47*

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.....3/5/46.....

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith.....No. Trawler - See Note below.....

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 in accordance with the Rules and approved plan, seen under working conditions and found satisfactory. The materials and workmanship are good.

Note. - Application has been made to Messrs A. Hall for works test certificates for generators and essential motors, but the firm have given the impression that they thought this would not be necessary in the case of Trawlers.

*Noted Ym 26.7.47*

Total Capacity of Generators.....165..... Kilowatts.

per J. C. Wright & Self.

The amount of Fee... £ 27 : 5 : -  
Credit Glasgow  
£13.10/-)  
Travelling Expenses (if any) £ : :  
When applied for,  
.....19.....  
When received,  
.....19.....

*Clive Bell*  
Surveyor to Lloyd's Register of Shipping.

FRI. 1 AUG 1947

Committee's Minute.....

Assigned.....*See F.E. mch. opt*.....