

CLARKE, CHAPMAN & CO., LTD.,
ENGINEERS,
VICTORIA WORKS, GATESHEAD, Co. Durham.

TEST RECORD OF TOWING WINCHES

FOR MESSRS. HENRY ROBB LTD. **SHIP No.** 335

COMML. O/NO- 9328R STOCK O/NO. 9330R TESTING O/NO. 9332R

85/480

DUTY

TONS	FROM	F.P.M.	H.P.	R.P.M.	AMPS.
3.1/8	WARP END	180	50	400	188
SLACK	" "	100	-	900	APPROX. 35
15	BARREL	30	50	600 ^x	188
SLACK	"	60	-	1200 ^x	APPROX. 35

^x WITH SERIES DIVERTER .0120 OHMS.

MOTOR PARTICULARS

M.C. NO. 17222 SIZE 15 1/2 x 14 H.P. 50 R.P.M. 400/800
VOLTS 220 AMPS. 188 PHASES - CYCLES -
ROTOR VOLTS - ROTOR AMPS. - RATING 1 HR, SHUNT & BRAKE CONT.
ENCLOSURE T.E.W.T. WINDING COMPOUND YEAR 1944 81 F
AIRGAP 8.98" CENTRE SHUNT FIELD RESISTANCE (Cold) 474 OHMS (TOTAL).
NO. BRUSH ARMS 4 BRUSHES PER ARM 2 - 1 1/4" x 3/4" QUALITY H.M.6
SIZE OF MAG. BRAKE 17 1/2 P.M.D. BRAKE SHUNT RESISTANCE (Cold) 456 OHMS.
RESISTANCE OF SERIES FIELD COILS = .0152 OHMS (COLD) TOTAL.
" " INTERPOLE " = .0114 " " "

TESTS REQUIRED LLOYDS INSPECTION.

TEMPERATURE TESTS:- a) 1 HOUR HEAT RUN AT 50 H.P., 400 RPM, 220 VOLTS, 188 AMPS.
b) 6 " STALLING " " 220 VOLTS, 125 AMPS.

LOAD TESTS:-

1) HAND GEAR. LIFT ABOVE LOADS AND RECORD SPEED AND CURRENT.

TORQUE LIMIT RELAY TO BE SET AT 275 AMPS TO OPEN AND AT 160 AMPS TO CLOSE.

2) AUTO GEAR. a) SET WINCH TO RENDER 34 TONS ON LAST STEP.

b) TEST MAXIMUM LOAD WINCH WILL LIFT ON LAST STEP.

c) LOADS UP TO 15 TONS TO BE HOISTED (AT LEAST TWO).

d) LOADS BETWEEN 15 TONS & 34 TONS (AT LEAST ONE) TO BE LOWERED)

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CLARKE, CHAPMAN & CO. LTD.

ORDER NO. 9330R.

Continuation Test Sheet for Motor No.

17222

Inspectors present at Test

Date

I.W.M. 252844

Time	Weight	Lift or Lower	Step on Con-roller	Volts	Amps	Revs. Arm.	Revs. on Controller	Distance Timed	Time in Seconds	F.P.M.	Effy.	Remarks
							Revs. on Controller SHUNT AMPS.					
BRUSH SETTING			FULL	220	188	425	.47	C.W.				
			FULL	220	188	425	.47	C.C.W.				
LOAD CURVE			25%	220	48	750	.47	C.W.				
			50%	220	93	560	.47	C.W.				
			75%	220	141	470	.47	C.W.				
			100%	220	188	428	.47	C.W.				
			125%	220	237	390	.47	C.W.				
			150%	220	282	368	.47	C.W.				RUN ON THIS LOAD FOR TWO MINUTES.
			6 HRS. STALL TEST ON 125 AMPS (5/7/44).									SHUNT RESIS. COLD = 485 OHMS.
9-0 AM				220	125	STALLED.						" " HOT = 535 "
10-00 "				220	125	STALLED						BRAKE SHUNT RES. COLD = 457 OHMS
11-00 "				220	125	STALLED.						" " " HOT = 537 "
12-00 "				220	125	STALLED.						
1-00 "				220	125	STALLED.						
2-00 "				220	125	STALLED.						
3-00 "				220	125	STALLED.						

	Arm. Core	Arm. Winding	Commu-tator	Shunt	Series	Inter
Air Temp. °F	116	110	114	120	124	114
Temp. Rise °F	70	70	70	70	70	70
	46	40	44	50	54	44

Tested	R. LUMLEY & E. FAIRLESS.
Passed	
Date	

INSULATION TEST.
 2000 Volts A.C. applied to Whole
 Equipment for..... 2minutes.
 Insulation Resistance..... 4Megohm.



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CLARKE, CHAPMAN & CO. LTD.

Continuation Test Sheet for Motor No **17222**

Inspectors present at Test **MR. WHITE (LLOYDS)**

Date **27/7/44**

J.W.M. 252844

Time	Weight	Lift or Lower	Step on Controller	Volts	Amps	Revs. Arm.	Revs. Barrel or Warp Ends	Distance Timed	Time in Seconds	F.P.M.	Effy.	Remarks
LIFTING OVER ONE PULLEY ON BOTTOM LAYER.												
	21-TONS	LIFT	1	220	140			JUST MOVING.				CENTRIFUGAL BRAKE SET TO
	"	"	2	220	120			3FT	96	1.875		OPERATE AT 1400 R.P.M.
	"	"	3	220	123			6FT	27.2	13.4		
	"	"	4	220	123			6FT	21	17.25		OVERLOAD RELAY SET TO
	"	"	5	220	123			6FT	18.9	19		OPERATE AT 285 AMPS.
	"	"	6	220	123			6FT	18	20		
	"	FULL		220	158			6FT	14	25.75		TORQUE LIMIT SET TO
												OPEN AT 275 AMPS.
												RESET " 150 AMPS.
RENDERING	43 TONS	ON BOTTOM LAYER "AUTO" POSITION.										
	LOWER	6TH		220	143			3FT	50.2	3.58		B.E.M.F. RELAY -
												SATISFACTORY.
LIGHT RUN		FULL		220	32	1150						

Air Temp. °F

Temp. Rise °F

Arm. Core	Arm. Winding	Commu-tator	Shunt	Series	Inter		

Tested

R. LUMLEY & W. MCGLADE.

Passed

G. BROWN.

Date

27/7/44

INSULATION TEST.

Volts A.C. applied to Whole

Equipment for.....minutes.

Insulation Resistance.....Megohm.



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CLARKE, CHAPMAN & CO. LTD.

Continuation Test Sheet for Motor No **17222**

Inspectors present at Test **MR. WHITE (LLOYDS)**

Date **27/7/44**

J.W.M. 252844

Time	Weight	Lift or Lower	Step on Controller	Volts	Amps	Revs. Arm.	Revs. Barrel or Warp Ends	Distance Timed	Time in Seconds	F.P.M.	Effy.	Remarks
RECOVERING & RENDERING ON BOTTOM LAYER.												
			CONTROLLER IN "AUTO" POSITION.									
			5-TONS OVER ONE PULLEY.									
RENDER			OFF	220	17.5	-		3FT	14.5	12.5		WINCH GRADUALLY ACCELERATING.
			1ST	220	30	-						
			2ND	220		-						
			3RD	220		-						
			4TH	220	62.5	120/140		3FT	26.6	6.8		
			5TH	220	62.5	250/270		3FT	13	13.8		
			6TH	220	62.5	360		3FT	9.8	18.5		
RECOVERING & RENDERING 12 TONS OVER ONE PULLEY 1 ST LAYER.												
			1ST STEP TAKEN TOO FAST FOR TEST FIGURES.									
RENDER			2ND	220	50	-		3FT	31	5.8		
STALLED			3RD	220	60	-						
"			4TH	220	60	-						
RECOVER			5TH	220	90	-						
"			6TH	220	90	140		3FT	26	6.9		

			Arm. Core	Arm. Winding	Commutator	Shunt	Series	Inter	
Air Temp. °F									
Temp. Rise °F									

Tested	R. LUMLEY & W. MCGLADE.
Passed	
Date	

INSULATION TEST.

Volts A.C. applied to Whole

Equipment for.....minutes.

Insulation Resistance.....Megohm.



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