

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

Ship's Name		"DAWNLIGHT I"		Port		GREENOCK	
Processing Number: LR		-		Date of completing rpt.		20.7.65	
Gross tons		199		Place of survey, if different from above		-	
No. of visits:							
In shops				First date		Last date	
On ship		Eighteen.		First date		15/4/65.	
				Last date		29/6/65.	
Owners		Ross & Marshall Ltd.		Port of registry		Greenock	
Ship built by		Scotts' Shipbuilding & Engineering Co. Ltd.		Yard No.		703	
Main engines made by		Crossley Bros. Ltd. Man.		Engine No.		149163	
Gearing made by		Modern Wheel Drive Ltd.		Gear No.		13230	
Machinery installed by		Scotts' Shipbuilding & Engineering Co. Ltd.					
Particulars of service of ship if limited for classification		For U.K. & Eire Service					
Particulars of vegetable oil or other special cargo notation, if required		None					
If ship is to be classed for navigation in ice, state whether class 1, 2 or 3		None					
Is ship an oil tanker?		No		Is refrigerating machinery fitted?		No	
If so, is it for cargo purposes?		-		Type of refrigerant		-	
Is the refrigerating machinery space isolated from the propelling machinery space?		-					
Is the refrigerated cargo installation to be classed?		-					
No. of main engines		1		Brief description of propulsion system		Oil Engine driving through reverse reduction gearbox and metalastik coupling.	
No. of propellers		1					
Fee		£30. 0. 0.		Expenses		-	
MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE							
To be reported on Rpt. 4b (Cons)		Port		Manchester		Rpt. No.	
						1079	
To be reported on Rpt. 4f (Cons)		Port				Rpt. No.	
Electrical particulars to be reported on Rpt. 4d		Port				Rpt. No.	
REDUCTION GEARING. (Internal combustion reciprocating engines or gas turbines)		Port		London		Cert	
To be reported on Rpt. 4e						Rpt. No. MWD.2990	
*Are flame guards or traps fitted to crankcase relief devices?				No. of lub. oil coolers		MAIN One AUX. one on gearbox	
*Is a torsional vibration damper or detuner fitted to the shafting?				Is engine fitted directly on tank top, or on a built-up seating?		Open floors	
*Where positioned?				*Can engine/turbine be reversed?			
*Type				*If not, how is reversing effected?			
Is the engine equipped to operate on heavy fuel?		No		Cooling medium for		CYLINDERS	
No. of fresh water coolers		One		PISTONS		FUEL VALVES	

CLUTCHES, FLEXIBLE COUPLINGS, &c. If a clutch or other flexible connection is fitted between engine/turbine and gearing, or between engine and line shafting, give Makers' name, brief description and, for clutches, state how operated.

Metalastic 21/842 Flexible Coupling.

If main engine can be used for purposes other than propulsion when declutched, state what purpose also at what maximum B.H.P. & R.P.M.

AIR COMPRESSORS AND RECEIVERS

State No. of independently driven air compressors, also capacity of each and whether a separator or filter is provided between each compressor and the air receivers, type of prime mover, position in ship, Port and No. of cert.

One - 12.25 cu.ft./min capacity. Yes separator provided.
Hand started oil engine. port side - Nottingham Cert. No. C46016

State No. of starting air receivers, both main and auxiliary, capacity of each, position in ship, Port and No. of cert.

2 - Main. One P.S. For'd one s.s. aft. 5 cu.ft. each
Nottingham C.29861 & C.30109.

How are air receivers first charged? Hand started
Oil engine driven air compressor.

Maximum working pressure of starting air system 350 lbs./sq.in.

Are the safety devices in accordance with the Rules? Yes
Are bursting discs or flame arresters fitted at the starting air valves on each cylinder? Yes

Has the starting of the main engines been tested and found satisfactory? Yes

STEAM INSTALLATION

No. of aux./donkey boilers (see Key to R.B.) burning oil fuel

Working pressure

Type

Position

Is a superheater fitted?

Are these boilers also heated by exhaust gas?

No. of aux./donkey boilers (see Key to R.B.) heated by exhaust gas only

Working pressure

Type

Position

Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil-fired boilers?

Port and rpt. or cert. Nos. for aux./donkey boilers

Is steam essential for the operation of the ship at sea?

If so, are any steam pipes over 3 ins. bore?

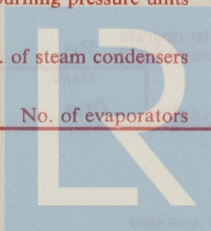
What is their material?

For oil-fired boilers, is the arrangement of pipes, valves, controls, &c., in accordance with Rules?

No. of oil-burning pressure units

No. of steam condensers

No. of evaporators



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Rpt. 4/4a/4b/4f (Inst)
(Sheet 2)

Ship's Name "DAWNLIGHT I"

Port GREENOCK

Rpt. No. 27750

Date of approval of torsional vibration characteristics of the
propelling machinery system with:—

Particulars of barred speed range(s) if imposed, with:—

(a) Working propeller 23rd March, 1965

(a) Working propeller None

(b) ~~Spare propeller~~(b) ~~Spare propeller~~

STRAIGHT SHAFTING

Max. BHP/SHHP approved for
each line of shafting
THRUST SHAFT. Separate
or integral with crank, wheel
or electric motor shaft?

300 at 750 rpm Corresponding RPM 200

Integral with
gearcaseThickness of liner
between bearings $\frac{1}{2}$ "
How is the after end of
the liner made watertight
in the propeller boss?

Rubber ring

Diameter adjacent to collar $5\frac{1}{4}$ "

Material of screw/shaft Forged steel

Material steel B.S.E.N.9

Minimum approved
tensile strength 28 tons/sq.in.Minimum approved
tensile strength 48 tons/sq.in.

Is an oil gland fitted? No

INTERMEDIATE SHAFT

Diameter $4\frac{5}{8}$ "

What type? —

Material Forged steel

If an approved type,
state name —Minimum approved
tensile strength 28 tons/sq.in.Length of bearing next
to and supporting propeller $1'8\frac{7}{8}"$ SCREWSHAFT. Dia. of
cone at large end $5\frac{1}{2}"$

Material of bearing Lignum Vitae

Is screwshaft fitted
with a continuous liner? Yes

Material of sterntube Cast iron

TUBE SHAFT (if separate)

Diameter N/A
Is tube shaft fitted with a
continuous liner in
way of stern tube?Is sterntube fabricated? No
In multiple screw ships, is
the liner between sterntube
& "A" bracket continuous? N/A
If not, is the exposed length
of shafting between liners
readily visible in drydock?Thickness of screw/
shaft liner at bearings $\frac{1}{2}"$

PROPELLER

If of special design, state type Not of special design

State method of control —

Is it of reversible pitch type? No

If so, is it of approved design? —

PROPEL- LER	BLADE MATERIAL	TENSILE STRENGTH tons/sq.in	BUILT OR SOLID	LEFT HAND (LH) OR RIGHT HAND (RH)	NO. OF BLADES	DIAMETER	PITCH mean	TOTAL DEVELOPED SURFACE
Working	Manganese Bronze	33.4	Solid	R.H.	4	6' 3"	5'2"	16sq.ft.
Spare								

FOR ICE STRENGTHENING ONLY

PROPEL- LER	DESIGN MOMENT OF INERTIA OF PROPELLER (DRY)	CLASS 1, 2 OR 3	THICKNESS OF BLADES			LENGTH OF BLADE SECTION AT 25% RADIUS	RAKE OF BLADES
			AT TOP OF ROOT FILLET	AT 25% RADIUS	AT TIP		
Working	1556 lbs.ft ²						
Spare							

OIL FUEL TANKS

No. and position of oil fuel
settling or service tanks not
forming part of ship structure

One. Top platform

LUBRICATION

1 gear box
1 elect. drive
No. of lub. oil pumps and how driven 2 Main EngineCan normal supply be maintained
with any one pump out of action? YesIs an emergency supply automatically
available as per Rule? (turbines only) —Is an alarm device fitted to
indicate failure or reduction
of supply from the pumps?

Yes

No. of oil coolers Two

No. of ~~lubrication~~ oil strainersSUCTION
NonePRESSURE
Two

Are the strainers of magnetic type? No

Note:—The particulars in this report are to be given as fully and as clearly as possible. Where the answer is "NO" or "NONE" say so. Ticks and other signs of doubtful meaning are not to be used. Wording not applicable to be cancelled.

Ship's Name "DAWNLIGHT I"

Port GREENOCK

Rpt. No. 27750

STEAM AND OIL ENGINE AUXILIARIES

REF	POSITION OF EACH	TYPE	MADE BY
a	Port Side	Oil Engine	Lister Blackstone
b		2 cy. 4 SA	Marine Ltd.
c			-
d			-
e			
f			
g			
h			

REF	PORT & No. OF REPORT OR CERTIFICATE	DRIVEN MACHINERY (for electric generators state kw, volts & amps)
a	Bristol Cert. No. S.C. 350 ✓	One G.S. pump. One air-cooled Air
b	-	Compressor, One 5 Kw D.C. Generator
c		110 V. 45.5 A.
d		
e		
f		
g		
h		

If electric current is used for essential services at sea, state the minimum No. and capacity of generators required

- (1) So that the ship may operate at sea Not required
- (2) ~~For emergency use~~

Has the spare gear required by the Rules been supplied? Yes

Has all the machinery been tried under full working conditions & found satisfactory? Yes

Date & duration of full-power sea trials of main engines 28.6.65 2 hrs.

Has the manœuvring of the main engines been tried and found satisfactory? Yes

DECLARATION TO BE SIGNED BY INSTALLING ENGINEERS

To the best of our knowledge this machinery has been installed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of main and auxiliary machinery and pressure vessels (as shown on sheets 1, 2 & 3) are correct.

SCOTTS' SHIPBUILDING AND ENGINEERING CO. LTD.

(date) 27TH JULY 1965

(signature) James Nicol

A previous similar case was for (name) M.S. "RAYLIGHT"

Port and Rpt. No. Greenock No.27341

IDENTIFICATION MARKS (copies of certificates to be forwarded)

Thrust shaft Integral with gear case

Intermediate shafts Lloyds JM Sld. 4696/3.12.64

Screw and nut shafts Lloyds SLD. 4695 2.12.64

Propellers Lloyds A.J. 19/5/65 ZS 1875 B.R.H.

Other important items -

NOTE:—The particulars in this report are to be given as fully and as clearly as possible. Where the answer is "NO" or "NONE" say so. Ticks and other signs of doubtful meaning are not to be used. Wording not applicable to be cancelled.

DATES OF APPROVAL OF PLANS

Straight shafting 11th November, 1964

Compressed air system -

Air receivers -

Clutch

Reversing gear & control -

Flexible coupling -

Separate fuel tanks 10th June 1965

General pumping arrangements 21st Dec. 1964

Bilge, ballast & oil fuel pumping arrangements in the machinery space 2nd Nov. 1964

~~Oil fuel pump & fuel lines~~
~~starting & service tanks~~

~~Engine room pumping~~
~~arrangements~~

~~Feed water~~
~~generators~~

~~Standardised steam~~
~~generators~~
Propeller
(including spare, if supplied)

Stern gear
(if not shown on shafting plan)

11th Nov. 1964

DATES OF EXAMINATION OF:-

Fitting of stern tube May 24th 1965

Alignment* of straight shafting

June 16th 1965 Light

Fitting of propeller May 28th 1965

Testing of pumping arrangements

June 25th 1965

Completion of sea connections June 1st 1965

Oil fuel lines

June 28th 1965

Alignment* of crankshaft on board June 17th 1965 light

~~Boiler support~~

Alignment* of turbines/engines & gearing June 17th 1965 light

Steering machinery

June 28th 1965

Holding down bolts & chocks June 17th 1965

Windlass

June 28th 1965

*State if aligned when ship in light, ballast or loaded condition

† The machinery reported above has been constructed and installed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the machinery is eligible, in my opinion, to be classed. ‡ LMC 6,65 T.S. (CL) 6,65

NOTE:- The screwsaft keyway is in accordance with C.1102 of the Rules.

H.K.T.

W. Lihmer Lee
Surveyor to Lloyd's Register of Shipping

Date of Committee

GLASGOW 110 AUG 1965

Minute

+ LMC ES }
TS. CL } 6,65

† (a) If the installation contains any features of a novel or experimental nature, give particulars.

‡ (b) If centralised and/or bridge control is fitted for main propelling and/or essential auxiliary machinery, state on a Rpt. (cont.) where the control room is situated, the machinery controlled from it and give a brief description of the control system, including any automatic system for controlling essential auxiliary machinery.

‡ Include any special notation to be assigned.

* See Rpt. 4 Cont. Sheet

Lloyd's Register
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NOTE.—Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.

Rpt.

(cont.)

Ship's Name ~~SS~~MS "DAWNLIGHT I"

Port GREENOCK

Rpt. No. 27750

Manual control (Bloctube System) for the main machinery is provided on the bridge by means of which speed regulation of the main engine can be carried out, together with starting stopping and reversing control of the reverse reduction gear box. This is in addition to the normal hand controls at the engine.

Both systems were tested under working conditions during the sea trial and found to operate satisfactorily.

