DNV·GL

Certificate No:
MEDB000025U

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Navigation lights

with type designation(s)
TEF 2840, TEF 2850, TEF 2870, TEF 2898

Issued to
Tranberg AS
STAVANGER, Norway

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559,**
Annex A.1, item No. A.1/6.1 and Annex B, Module B in the Directive. COLREG 72 as amended, Annex I/14, IMO Res. A.694(17) and IMO Res. MSC.253(83)

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-01-12**.

Issued at **Høvik** on **2017-01-13**

DNV GL local station:
Stavanger

Approval Engineer:
Rolf Heger

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

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Product description

- Incandescent navigation lights (for exposed area)

Type Designation	Description	Capasity	Visibility
TEF 2840 M	Masthead light, white	12V 25W; 24V 25W	5 NM
TEF 2840 SB	Starboard light, green	12V 25W; 24V 25W	2 NM
TEF 2840 P	Port light, red	12V 25W; 24V 25W	2 NM
TEF 2840 ST	Stern light, white	12V 25W; 24V 25W	2 NM
TEF 2840 ST.Y	Towing light, yellow	12V 25W; 24V 25W	2 NM
TEF 2840 A	All-round light, white	12V 25W; 24V 25W	2 NM
TEF 2840 AG	All-round light, green	12V 25W; 24V 25W	2 NM
TEF 2840 AR	All-round light, red	12V 25W; 24V 25W	2 NM
TEF 2840 A.T	All-round light, white, fishing light (additional)	12V 25W; 24V 25W	1 NM
TEF 2840 AY.T	All-round light, yellow, fishing light (additional)	12V 25W; 24V 25W	1 NM
TEF 2840 AR.T	All-round light, red, fishing light (additional)	12V 25W; 24V 25W	1 NM
TEF 2850 M	Masthead light, white	120V 85W; 230V 85W; 24V 40W	6 NM
TEF 2850 SB	Starboard light, green	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 P	Port light, red	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 ST	Stern light, white	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 ST.Y	Towing light, yellow	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 ST.R	Stern Suez, red	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 A	All-round light, white, manoeuvring light	120V 85W; 230V 85W; 24V 40W	5 NM
TEF 2850 AG	All-round light, green	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 AR	All-round light, red	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850Ex M	Masthead light, white, Ex	120V 85W; 230V 85W; 24V 40W	6 NM
TEF 2850Ex SB	Starboard light, green, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850Ex P	Port light, red, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850 Ex ST	Stern light, white, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850Ex ST.Y	Towing light, yellow, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850Ex ST.R	Stern Suez, red, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850Ex A	All-round light, white, manoeuvring light, Ex	120V 85W; 230V 85W; 24V 40W	5 NM
TEF 2850Ex AG	All-round light, green, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2850Ex AR	All-round light, red, Ex	120V 85W; 230V 85W; 24V 40W	3 NM
TEF 2870 M	Masthead light, white	24V 40W	6 NM
TEF 2870 SB	Starboard light, green	24V 40W	3 NM
TEF 2870 P	Port light, red	24V 40W	3 NM
TEF 2870 ST	Stern light, white	24V 40W	3 NM
TEF 2870 ST.Y	Towing light, yellow	24V 40W	3 NM
TEF 2870 ST.R	Stern Suez, red	24V 40W; 120V 65W; 230V 65W	3 NM
TEF 2870 A	All-round light, white, manoeuvring light	24V 40W; 120V 65W; 230V 65W	5 NM
TEF 2870 AG	All-round light, green	24V 40W; 120V 65W; 230V 65W	3 NM
TEF 2870 AR	All-round light, red	24V 40W; 120V 65W; 230V 65W	3 NM
TEF 2870 A.T	All-round light, white, fishing light (additional)	24V 40W; 120V 65W; 230V 65W	1 NM
TEF 2870 AY.T	All-round light, yellow, fishing light (additional)	24V 40W; 120V 65W; 230V 65W	1 NM

Type Designation	Description	Capasity	Visibility
TEF 2870 AR.T	All-round light, red, fishing light (additional)	24V 40W; 120V 65W; 230V 65W	1 NM
TEF 2870Ex M	Masthead light, white, Ex	24V 40W	6 NM
TEF 2870Ex SB	Starboard light, green, Ex	24V 40W	3 NM
TEF 2870Ex P	Port light, red, Ex	24V 40W	3 NM
TEF 2870Ex ST	Stern light, white, Ex	24V 40W	3 NM
TEF 2870Ex ST.Y	Towing light, yellow, Ex	24V 40W	3 NM
TEF 2870Ex ST.R	Stern Suez, red	24V 40W; 120V 65W; 230V 65W	3 NM
TEF 2870Ex A	All-round light, white, manoeuvring light, Ex	24V 40W; 120V 65W; 230V 65W	5 NM
TEF 2870Ex AG	All-round light, green, Ex	24V 40W; 120V 65W; 230V 65W	3 NM
TEF 2870Ex AR	All-round light, red, Ex	24V 40W; 120V 65W; 230V 65W	3 NM
TEF 2870Ex A.T	All-round light, white, fishing light (additional), Ex	24V 40W; 120V 65W; 230V 65W	1 NM
TEF 2870Ex AY.T	All-round light, yellow, fishing light (additional), Ex	24V 40W; 120V 65W; 230V 65W	1 NM
TEF 2870Ex AR.T	All-round light, red, fishing light (additional), Ex	24V 40W; 120V 65W; 230V 65W	1 NM
TEF 2898 M	Masthead light, white	12V 25W; 24V 25W	3 NM
TEF 2898 SB	Starboard light, green	12V 25W; 24V 25W	2 NM
TEF 2898 P	Port light, red	12V 25W; 24V 25W	2 NM
TEF 2898 ST	Stern light, white	12V 25W; 24V 25W	2 NM
TEF 2898 ST.Y	Towing light, yellow	12V 25W; 24V 25W	2 NM
TEF 2898 A	All-round light, white	12V 25W; 24V 25W	2 NM
TEF 2898 AG	All-round light, green	12V 25W; 24V 25W	2 NM
TEF 2898 AR	All-round light, red	12V 25W; 24V 25W	2 NM
TEF 2898 A.T	All-round light, white, fishing light (additional)	12V 25W; 24V 25W	1 NM
TEF 2898 AY.T	All-round light, yellow, fishing light (additional)	12V 25W; 24V 25W	1 NM
TEF 2898 AR.T	All-round light, red, fishing light (additional)	12V 25W; 24V 25W	1 NM

Approved navigation light source : Danlamp with P28S, BAY 15d or B22 cap

Application/Limitation

- TEF 2840 lantern series for vessels less than 50 meters in length.
- TEF 2850 lantern series for vessels 50 meters or more in length. Light sources with capacity 24V 40W or 120V/ 230V 55W may be used for vessels less than 50 meters.
- TEF 2870 lantern series for vessels 50 meters or more in length.
- TEF 2898 lantern series for vessels less than 20 meters in length. Light sources with capasity 12V/24V 10W may be used for vessels 12 meters or less, except for All-round light red and green.
- For power driven vessels.
- The above navigation lights to be installed in accordance with the Convention on the International Regulations for Preventing Collisions at Sea, 1972 as amended, and maker's instructions.
- Any Ex-equipment (equipment to be used in areas with explosive atmosphere) are subject to separate Ex- approvals, and is hence not covered by this certificate.

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Type Examination documentation

DNV GL No	Doc. Ref.	Rev.	Description
4	K51.92.046	1	Test Report: NFT, Vibration, Shock and Bump TEF 2840 and 2870
35	200106127		Test Report: NEMKO, Vibration test TEF 2898
34	20014241		Test Report: NEMKO, Salt-corrosion test TEF 2898
62	L59954/01		Test Report: NEMKO, IP testing
8	199510114	1995-03-29	Test Report: NEMKO - Notice of Result, Salt mist test TEF2997/2870/2840/2435
9	400185.29	1992-11-18	Test Report: EFI Sintef Group - Målinger av lanterne type 2840
57	81-0526		Test Report: DNV, Vibration and Shock, TEF 855/860/2846/2850
99	DELTA-L102253-3500		Test Report: DELTA, Luminous intensity distribution, TEF 2898 Port
98	DELTA-L102253-3499		Test Report: DELTA, Luminous intensity distribution, TEF 2850 Port
97	DELTA-L102253-3498		Test Report: DELTA, Luminous intensity distribution, TEF 2840 Starboard
94	DELTA-L102253-3502		Test Report: DELTA, Luminous intensity distribution and colour coordinates, TEF 2870 Stern
110	DELTA-L102372-3610		Test Report: DELTA, Luminous intensity distribution and colour coordinates, TEF 2870 starboard
93	DELTA-L102253-3501		Test Report: DELTA, Luminous intensity distribution and colour coordinates, TEF 2870 Port
95	DELTA-L102253-3503		Test Report: DELTA, Luminous intensity distribution and colour coordinates, TEF 2870 Masthead
114	14 ATEX 5436X	01	TE Certificate Presafe: Navigation Lights TEF2850 and TEF2870
130	TUF1003		Manual: Tranberg, TEF 2898 Lantern User Manual
128	TUM1002		Manual: Tranberg, TEF 2870 Lantern User Manual
129	TUM4834		Manual: Tranberg, TEF 2870 Ex Navigation Light User Manual
126	TUM1001		Manual: Tranberg, TEF 2850 Lantern User Manual
127	TUM4769		Manual: Tranberg, TEF 2850 Ex Navigation Light User Manual
125	TUM1000		Manual: Tranberg, TEF 2840 Lantern User Manual

Tests carried out

- EN 14744 (2005 - including AC 2006)
- IEC 60945 (2002)

Marking of product

- According to EN14744