

UK Type Examination Certificate CML 22UKEX9543X Issue 0**United Kingdom Conformity Assessment**

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **Turbolite**
- 3 Manufacturer **Wolf Safety Lamp Company Ltd**
- 4 Address **Saxon Road Works
Sheffield
S8 0YA
UK**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.


8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018

IEC 60079-33:2012

10 The equipment shall be marked with the following:

 II 2 G D

Ex sb IIC T4 Gb

Ex sb IIIC T135°C Db

A-TL44C Ta= -15°C to +55°C

A-TL45C Ta= -20°C to +55°C





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11 Description

The Turbolite Luminaire is fitted with a 250W lamp and is powered by a compressed air driven integral turbine generator at 4 to 8 bar. The luminaire is manufactured from aluminium with either a reflector head assembly Type 45 or a bay light assembly Type 44. The air outlet is fitted with a particle trap that vents into the hazardous area. When the particle trap is replaced with additional hose fitted to the air outlet to take air to a safe area, this permits the luminaire to be used where there is a hazard from dust or fibres. The enclosure has blind threaded holes that provide mounting facilities. A bridle assembly may be fixed to these holes to permit the luminaire to be mounted on a hook.

The luminaire is connected to the air supply via suitable anti-static hose. The air inlet to the equipment includes an air regulator that is capable of adjustment using special tools. Adjustment of the regulator to achieve the correct lamp output is carried out in the safe area according to the manufacturer's instructions. The air supply is fed through the enclosure to the reflector head or bay light assembly, then back to the generator housing to power the turbine generator. The generator comprises a rotor fitted with permanent magnets, turbine wheel and ball bearings that runs inside a wound stator. The air is directed on to the turbine wheel and then exits the enclosure through the turbine housing cover via a particle trap or hose depending on the type reference. The housing cover is fixed in position by a machined spigot joint and three cap head screws.

The stator winding leads are connected to insulated connection screws with crimped cable lugs. The studs pass through the wall of the enclosure and further leads from the lamp holder are fitted to them with crimped cable lugs. The lamp holder is fixed to the turbine enclosure with screws and is able to accept M36 or M33 type lamps rated at 250W, 24V.

The reflector head assembly comprises a conical housing with a toughened glass lens retained by a lens ring and high tensile strength cap head screws. A moulded gasket is used to seal the lens in the reflector head. A reflector is fitted inside the housing and this is also retained by the lens ring. The reflector head is fitted to the generator housing by a screw thread and an O-ring is used to seal the joint.

The bay light assembly comprises a ball glass fitted with a sealing gasket that fits into a recess in the generator housing. A metal washer is fitted over the gasket and a polycarbonate guard with integral lock screw ring is screwed on to the generator housing to provide clamping pressure. The lock screw ring has a number of holes to prevent the guard becoming pressurised in the event of a seal or ball glass failure.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	25 Oct 2023	R15714A/00	Issue of Prime Certificate

Note: Drawings that describe the equipment are listed in the Annex.



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13 Conditions of Manufacture

None

14 Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. The equipment shall only be supplied with air from a clean dry source, free from contamination with hazardous gas, dust or fibres.
- ii. When used in the presence of combustible dust the equipment air outlet shall be fitted with additional hose so that this can be piped to a safe area instead of venting into the hazardous area.
- iii. Hoses fitted to the equipment shall be anti-static with a resistance between 10^4 and 10^8 ohms

Certificate Annex

Certificate Number CML 22UKEX9543X
Equipment Turbolite- Models A-TL44C & A-TL45C
Manufacturer Wolf Safety Lamp Company



The following documents describe the equipment defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A4-901	1 of 1	4	25 Oct 2023	Stator Assembly (ATEX)
A-7000	1 to 2	01	25 Oct 2023	Model C ATEX Turbolite General Assembly
A-8000	1 to 2	01	25 Oct 2023	Model C Generator Assembly
A-9000	1 of 1	01	25 Oct 2023	Model C approval plates