

Type Approval Certificate

This is to certify that the undernoted product has been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER Terragon Environmental Technologies Inc.

PLACE OF 651 Bridge Street

PRODUCTION Montreal

Quebec, H3K 2C8

Canada

APPLICATION Incineration of solid waste and sludge oil in marine and offshore

installations.

SPECIFIED STANDARDS Lloyd's Register's Rules and Regulations for the Classification of

Ships, Part 5, Chapters 12 and 14;

IMO Resolution MEPC.76(40) - Standard Specification for Shipboard

Incinerators

RATINGS Maximum Capacity:

Net designed heat release (kW): 112 Specified waste: (kg/hr): 40

(kg/day): 720

Sludge: (kg/hr): 12.4 (kg/day): 298

Emissions:

O, average in combustion

chamber/zone (%): 8
CO average in flue gas (mg/MJ): 10.8
Soot average number (Bacharach): 1.53

Combustion chamber flue gas outlet

temperature average (°C): 1015

Unburned components in ash

residue (%):

Certificate No. 13/00007

Issue Date 8 February 2013

Expiry Date 7 February 2018

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P.F. Moysey London Design Support Office Lloyd's Register EMEA

Lloyd's Register EMEA

71 Fenchurch Street, London EC3M 4BS

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OTHER CONDITIONS

- 1. The unburnt residue (CHAR) must be disposed of ashore at a recognised reception facility.
- 2. For installation onboard a ship, the incinerator may require an IMO Type Approval Certificate issued by the applicable Administration.
- 3. The shipboard incinerators covered by this certificate are to satisfy the requirements of the codes referenced above. Specifically, the Installation Tests in Section 7.3 of IMO resolution MEPC.76(40) are to be satisfactorily completed.
- 4. The shipboard incinerators covered by this certificate are to be accompanied by operating manuals specifying how the incinerators are to be operated within the limits defined above.
- 5. Flexible hoses to supplementary burners to be protected with external wire braid.
- Connection into the ship's systems for oil pipework, electrical supplies and alarms are to be in accordance with the LR Rules to the satisfaction of the attending Surveyor.
- 7. For the purpose of construction, arrangement and installation, incinerator spaces and waste stowage spaces are to be treated as Category A machinery spaces and service spaces respectively.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. 13/00007 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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