INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended to amend the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 related thereto, (hereinafter referred to as "the Convention") under the authority of the Government of

GOVERNMENT OF IRELAND

By BUREAU VERITAS MARINE & OFFSHORE

| Name of Ship BV No : 15277H | Distinctive Number or Letters | Port of Registry | Gross Tonnage |
|---------------------------------------|-------------------------------|------------------|---------------|
| ARKLOW MUSE | EINV3 404743 | ARKLOW | 9758 |

IMO number: 9509487 THIS IS TO CERTIFY

- 1. That the ship has been surveyed in accordance with Regulation 5 of Annex VI of the Convention; and
- 2. That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of Annex VI of the Convention.

Completion date of the survey on which this Certificate is based: 17 July 2023

This Certificate is valid until * 31 October 2023

Issued at Newcastle Upon Tyne, UK, on the 16 October 2023

Valid only when the Supplement No. LDR0/IUW/20231016104354/SUPP is available for inspection.

BUREAU VERITAS MARINE & OFFSHORE

Lisa Hardy



This document is electronically signed and does not require a manual signature as defined in IMO guideline FAL.5-Circ.39.

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By Order of the Secretary

^{*}Short term maximum validity 2 months.

PROVISIONAL IAPP CERTIFICATE No: LDR0/IUW/20231016104354

NAME OF SHIP: ARKLOW MUSE

BV REGISTER : 15277H

<u>Details of Recommendations:</u>

- 1) EPL to be installed
- 2) Fuel sampling point technical drawings to be approved.

SUPPLEMENT TO THE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE (IAPP CERTIFICATE)

RECORD OF CONSTRUCTION AND EQUIPMENT

Notes:

- 1. This Record shall be permanently attached to the IAPP Certificate. The IAPP Certificate shall be available on board the ship at all times.
- 2. The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
- 3. Entries in boxes shall be made by inserting either a cross (X) for the answers "yes" and "applicable" or a dash (-) for the answers "no" and "not applicable" as appropriate.
- 4. Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and resolutions or circulars refer to those adopted by the International Maritime Organization.

1. PARTICULARS OF SHIP

1.1. Name of ship: ARKLOW MUSE

BV Register: 15277H

1.2. IMO Number: 9509487

1.3. Date on which keel was laid or ship was at a similar stage of construction: 30 November 2009

1.4. Length (metres)*:



^{*} completed only in respect of ships constructed on or after 1 January 2016, that are specially designed, and used solely for recreational purposes and to which, in accordance with regulation 13.5.2.1 or regulation 13.5.2.3, the NOx emission limit as given by regulation 13.5.1.1 will not apply.

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NAME OF SHIP: ARKLOW MUSE

BV REGISTER: 15277H

2. CONTROL OF EMISSIONS FROM SHIPS

2.1 Ozone-depleting substances (regulation 12)

2.1.1 The following fire-extinguishing systems, other systems and equipment containing ozone depleting substances, other than hydro-chlorofluorocarbons, installed before 19 May 2005 may continue in service

| System or equipment | Location on board | Substance |
|---------------------|-------------------|-----------|
| | | |

2.1.2 The following systems containing hydro-chlorofluorocarbons (HCFCs) installed before 1 January 2020 may continue in service

| System or equipment | Location on board | Substance |
|---------------------|-------------------|-----------|
| | | |

- 2.2 Nitrogen oxides (NOx) (regulation 13)
- 2.2.1 The following marine diesel engines installed on this ship are in accordance with the requirements of regulation 13, as indicated:

| Applicable regulation of MARPOL Annex VI (NTC = NOx Technical Code 2008) (AM = Approved method) | | | Engine #1 | Engine #2 | Engine #3 |
|---|--|---|--|-----------------------------|-----------------------------|
| 1 | Manufacturer and model | | CATERPILLAR MOTOREN ROSTOCK GmbH MAK 6M43 C | YANMAR CO., LTD. 6AYL-ET | YANMAR CO., LTD. 6AYL-ET |
| 2 | Serial number | | 68317 | 0762 | 0763 |
| 3 | Use (applicable application cycle(s) – NTC 3.2) | | E2 | D2 | D2 |
| 4 | Rated power (kV | W) (NTC 1.3.11) | 5400 | 438 | 438 |
| 5 | Rated speed (RF | PM) (NTC 1.3.12) | 500 | 1500 | 1500 |
| 6 | Identical engine installed on or after 1/1/2000 exempted by 13.1.1.2 | | - | - | - |
| 7 | Identical engine installation date (dd/mm/yyyy) as per 13.1.1.2 | | - | - | - |
| 8a | | 13.2.1.1 & 13.2.2 | - | - | - |
| 8b | Major conversion | 13.2.1.2 & 13.2.3 | - | - | - |
| 8c | (dd/mm/yyyy) | 13.2.1.3 & 13.2.3 | - | - | - |
| 9a | | 13.3 | X | X | X |
| 9b | | 13.2.2 | - | - | - |
| 9c | Tier I | 13.2.3.1 | - | - | - |
| 9d | | 13.2.3.2 | - | - | - |
| 9e | | 13.7.1.2 | - | - | - |
| 10a | | 13.4 | - | - | - |
| 10b | | 13.2.2 | - | - | - |
| 10c | | 13.2.2 | - | - | - |
| 10d | Tier II | (Tier III not possible) 13.2.3.2 | | _ | |
| 10a | 1 161 11 | 13.5.2 (Exemptions) | - | - | - |
| 10f | 1 | 13.7.1.2 | <u>-</u> | - | - |
| 11a | | 13.5.1.1 | _ | - | - |
| 11b | Tier III | 13.2.2 | - | - | - |
| 11c | (ECA-NOx only) | 13.2.3.2 | - | - | - |
| 11d |] | 13.7.1.2 | - | - | - |
| 12 | | Installed | - | - | - |
| 13 | AM* | Not commercially available at this survey | - | - | - |
| 14 | 1 | Not applicable | - | - | - |

^{*} Refer to the 2014 Guidelines on the approved method process (resolution MEPC.243(66)).

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- 2.3 Sulphur oxides (SOx) and particulate matter (regulation 14)
- 2.3.1 When the ship operates outside of an Emission Control Area specified in regulation 14.3, the ship uses:
 - [X].1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0,50% m/m and/or
 - [-].2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6 that is at least as effective in term of SOx emission reductions as compared to using a fuel oil with a sulphur content limit value of 0,50% m/m
- 2.3.2 When the ship operates inside an Emission Control Area specified in regulation 14.3, the ship uses:
 - [X].1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.10% m/m and/or
 - [-].2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6 that is at least as effective in terms of SOx emission reductions as compared to using a fuel oil with a sulphur content limit value of 0,10% m/m
- [X] 2.3.3 For a ship without an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6, the sulphur content of fuel oil carried for use on board the ship shall not exceed 0.50% m/m as documented by bunker delivery notes
- [X] 2.3.4 The ship is fitted with designated sampling point(s) in accordance with regulation 14.10 or 14.11
- [-] 2.3.5 In accordance with regulation 14.12, the requirement for fitting or designating sampling point(s) in accordance with regulation 14.10 or 14.11 is not applicable for a fuel oil service system for a low-flashpoint fuel for combustion purposes for propulsion or operation on board the ship
- 2.4 Volatile organic compounds (VOCs) (regulation 15)
 - [-] 2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585
 - [-] 2.4.2.1 For a tanker carrying crude oil, there is an approved VOC Management Plan.
 - 2.4.2.2 VOC Management Plan approval reference:
- 2.5 Shipboard incineration (regulation 16):

The ship has an incinerator:

- .1 installed on or after 1 January 2000 that complies with:
 - $\left[X\right]$.1 resolution MEPC.76(40) as amended by resolution MEPC.93(45).
 - [-] .2 resolution MEPC.244(66).
- .2 installed before 1 January 2000 that complies with:
 - [-] .1 resolution MEPC.59(33), as amended by resolution MEPC.92(45).
 - [-] .2 resolution MEPC.76(40) as amended by resolution MEPC.93(45).

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2.6 Equivalents (regulation 4):

The ship has been allowed to use the following fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex:

| System or equipment | Equivalent used | Approval reference |
|---------------------|-----------------|--------------------|
| | | |

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at Newcastle Upon Tyne, UK, on the 16 October 2023

BUREAU VERITAS MARINE & OFFSHORE

Lisa Hardy



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