



Certificate No:  
**TAK0000258**

# TYPE APPROVAL CERTIFICATE

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## This is to certify:

**That the Composite Repair Systems**

with type designation(s)  
**DRAGON STD**

Issued to

**Metalyte Pipeworks Ltd**  
**Tamworth, United Kingdom**

is found to comply with

**ISO 24817:2017 "Petroleum, petrochemical and natural gas industries – Composite repairs for pipework – Qualification and design, installation, testing and inspection", Edition 2, Corrected version 2018-01**  
**ASME PCC2-2015 Part 4 – Article 4.1 "Nonmetallic Composite Repair Systems: High-Risk Applications"**

## Application :

**Composite repair of all geometries of pipe work and structural members including tanks, vessels and decks with various defect sizes and operating conditions.**

Issued at **Høvik** on **2022-08-31**

This Certificate is valid until **2027-08-30** .

for **DNV**

DNV local unit: **UK & Ireland CMC & VMC**

Approval Engineer: **Gisle Hersvik**

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**Gustav Heiberg**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 281

Revision: 2021-03

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Page 1 of 2

## Product description

**DRAGON STD:** a two-component epoxy resin system with a glass fibre reinforcement

The fibre reinforcements are:

- Quadri-axial glass fibre fabric (0°/+45°/90°/-45°)

## Application/Limitation

This Type Approval certificate is not valid for designs, components, equipment, systems or products which are subject to classification by DNV.

- Composite repair of all geometries of pipe work and structural members including tanks, vessels and decks with various defect sizes and operating conditions.
- Surface preparation of substrates to be according to Metalyte Pipeworks' *Detailed Installation Guide, Dragon-Quad-STD, Pre-impregnated fibreglass for pipe repairs*.
- For specific substrates the manufacturer must be consulted.
- The repair must be applied in accordance with Metalyte Pipeworks' *Detailed Installation Guide, Dragon-Quad-STD, Pre-impregnated fibreglass for pipe repairs*, using qualified, competent installers.

Design calculations to be performed as per ISO 24817:2017, or as later amended.

Any significant changes in design and / or quality of the material will render the approval invalid.

## Type Approval documentation

### Tests carried out

Testing has been carried out in accordance with ISO 24817:2017 *Petroleum, petrochemical and natural gas industries - Composite repairs for pipework - Qualification and design, installation, testing and inspection* and ASME PPC2:2015, Part 4 Article 4.1 "Nonmetallic Composite Repair Systems: High-Risk Applications".

### Marking of product

Product/package to be marked with *manufacturer's name*: **Metalyte Pipeworks Ltd, UK** and in accordance with above *type designation/product name*, and *storage conditions*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV Type Approval Certificate.

### Periodical assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical assessments (for Certificate Retention / Certificate Renewal) shall be performed according to DNV-CP-0338.

This certificate is only valid if required Periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE