DNV·GL

Certificate No:
TAE00001UH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Battery (Accumulator)

with type designation(s)
Ni-Cd Batteries GAZ LOMAIN KGL...P, KGM...P

Issued to
GAZ Geräte- und Akkumulatorenwek Zwickau GmbH
Zwickau, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2017-05-09**
This Certificate is valid until **2022-05-08**.
DNV GL local station: **Magdeburg**

Approval Engineer: **Maik Gagern**

for **DNV GL**

Duy Nam Le
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.

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Job Id: **262.1-025088-1**
Certificate No: **TAE00001UH**

Product description

Ni-Cd Batteries

Series KGL..P .
KGL 12P up to KGL 1570P
Nominal capacity C5(Ah), 1.00V (12Ah - 1570Ah)

Series KGM...P
KGM 11P up to KGM 1350P
Nominal capacity C5(Ah), 1.15V (11Ah - 1350Ah)

Application/Limitation

Field of application:
UPS systems, emergency lighting, telecommunication, power and substations, oil and gas industry (offshore + onshore), offshore windconverter installations

For charging and discharging conditions manufacturers requirements have to be observed.

Type Approval documentation

Tests carried out

DNV GL Class Guideline DNVGL-CG-0339, Edt. Nov. 2016
IEC 62259:2003 (EN 62259:2004) as far as applicable

Marking of product

Maker, Type of Product

Periodical assessment

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

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE