DNV·GL

Certificate No:
TAK000000M

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Shop Primers

with type designation(s)
KCI Zinc 1000

Issued to
Kunsul Chemical Ind. Co., Ltd.
Gyeongsangnam-do, Republic of Korea

is found to comply with
Det Norske Veritas' Type Approval Programme 1-602.2, 2009, Shop Primers for Corrosion Protection of Steel Plates and Sections.
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Offshore Standards

Application :

The shop primer is approved for application on blast cleaned steel plates and sections.

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

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2015-06-26**

for **DNV GL**

DNV GL local station: **Gimhae MC & FIS**

Approval Engineer: **Gisle Hersvik**

Martin Strande
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

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The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

KCI Zinc 1000; Two-component solvent based inorganic zinc rich silicate shop primer.

Application/Limitation

The shop primer is approved for application on blast cleaned steel plates and sections.

The approval test does not include an examination of possible effects of welding with this primer on the welder's state of health.

This approval only verifies that the shop primer tested has no detrimental effect on the finished weld, on condition that the film thickness applied is in accordance with the manufacturer's recommendation.

Type Approval documentation
Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**. Ref. Technical Report No. 2011-TBU-336, Rev. 00 "Welding Test for Shop Primer" from KTR of 2011-03-11, with the following test result:

- max. 6.24% porosity (max. allowed porosity 15%)

Marking of product

Product shall be marked with *manufacturer's name*; **Kunsul Chemical Industrial Co., Ltd., Korea** and *type designation*.

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 GL 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 Assessment to be performed after two (2) years (Certificate Retention) and at renewal after four (4) years (Certificate Renewal).

The main elements of the Periodical Assessment are to:
- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and DNV GL Type Approval Certificate.

END OF CERTIFICATE