

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Shop Primers**with type designation(s)
HilonShop 1100

Issued to

Shanghai Hilong Shine New Materials Co., Ltd.
1825 Luodong Rd., Shanghai, China

is found to comply with

DNV GL class programme DNVGL-CP-0109 – Type approval – Shop primers for corrosion protection of steel plates and sections
DNV GL rules for classification – Ships
DNV GL 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.**Issued at **Hamburg** on **2019-06-25**This Certificate is valid until **2024-06-30**.for **DNV GL**DNV GL local station: **Shanghai**Approval Engineer: **Christine Löll**

Thorsten Lohmann
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.



Job Id: **262.1-018404-2**
Certificate No: **TAK00001R2**

Product description

HilonShop 1100: A two-pack, zinc ethyl silicate shop (pre-construction) primer.

Manufactured by

Shanghai Hilong Shine New Materials Co., Ltd., 1825 Luodong Rd., Shanghai, China

DNV GL local station: Shanghai

Responsibility

The Company (stated on the front page of this Certificate) takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

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

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

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

Tests carried out

Type Testing carried out in accordance with DNV GL CP-0109, ref. Test Report from Synthetic test institute of Hudong-Zhonghua Shipbuilding Group No. W1455-DNV, Rev. 01, "Type Approval Test Report for Shanghai HilonShop 1100 Shop Primer" of 2014-12-28, with the following result:

- max. 2.0% porosity (max. allowed porosity 15%)

Marking of product

Product/package shall be marked with *manufacturer's name*; **Shanghai Hilong Shine New Material Co., Ltd., China** 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 (Certificate Retention) and renewal after 5 years (Certificate Renewal) shall be performed acc. DNV GL CP-0338.