DNV·GL

Certificate No:
TAM000003D

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Crankcase Explosion Relief Valve

with type designation(s)
HWG size: 122, 162, 173, 204, 224, 266, 320, 345, 420, 480, 565, 645, 735

Issued to
Zi In Cheol Co., Ltd. (ex name : Hyunwoo SMT Co., Ltd.(Suwon Factory))
Suwon-si, Republic of Korea

is found to comply with
Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft

Application :

The valves are approved for use on diesel and gas engines.

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

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2015-11-04**

for **DNV GL**

DNV GL local station: **Seoul**

Approval Engineer: **Amir Dzaferi**

Oddvar Deinboll
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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description
Crankcase explosion relief valve with flame arrestor.

Application/Limitation
The valves are approved for use as crankcase explosion relief valves for diesel and gas engines.

Type Approval documentation

Tests carried out
The following tests carried out according to IACS UR M66 rev. 3 at FTZU, Ostrava, Czech Republic:

Test Report No.	HWG size:
08.0696-47	122
08.0695-47	173
08.0694-47	266
09.0063-47	320
08.0687-47	420
09.0064-47	735

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Other conditions

The complete flame arrestor has to be replaced after a crankcase explosion. DNV product certificate is not required

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform a survey every second year and before the expiry of this certificate to verify that the conditions for the Type Approval are complied with.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued. The main scope of the Periodical Assessment will normally include:

- Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the Type Approval documentation and that this is still used as basis for the production.
- Review of possible changes to the design, the material and the performance of the product.
- Verification of the product marking.

END OF CERTIFICATE