DNV·GL

Certificate No:
TAK00001TU

TYPE APPROVAL CERTIFICATE

This is to certify:

That the TBT-Free Anti-Fouling Systems

with type designation(s)
SeaForce 60

Issued to
Jotun A/S
SANDEFJORD, Norway

is found to comply with
DNV GL class programme DNVGL-CP-0110 – Type approval – Anti-fouling systems

Application :

Organo-tin free self-polishing hydrating type anti-fouling system.

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

Issued at **Høvik** on **2019-11-11**
This Certificate is valid until **2024-12-31**.
DNV GL local station: **Sandefjord**

Approval Engineer: **Stefan Marion**

for **DNV GL**

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.

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Job Id: **262.1-020648-6**
Certificate No: **TAK00001TU**

Product description

Organo-tin free self-polishing hydrating type anti-fouling paint; **SeaForce 60**

Colours:
The product may be available in various colours. Please contact the local Jotun representative for details.

Active ingredients:

Cuprous oxide	CAS No. 1317-39-1
Cuprous Pyrithione	CAS No. 14915-37-8
Zineb	CAS No. 12122-67-7

Manufactured by

Jotun U.A.E Ltd. (L.L.C.), P.O.Box 3671, Al Quoz Industrial Area, Dubai, U.A.E.

DNV GL local office: Dubai

El-Mohandes Jotun S.A.E., P.O.Box 203, Ismailia Industrial Area, Egypt

DNV GL local office: Alexandria

Jotun Thailand Ltd., Amata Nakorn Ind. Estate (BIPII), 700/353 Moo 6 Tumbol Donhualoh Amphur Muang, Chonburi 20000, Thailand

DNV GL local office: Bangkok

P.T. Jotun Indonesia Paints and Chemicals, Kawasan Industri MM2100 Blok KK-1, Cikarang Barat, Bekasi 17520, Indonesia

DNV GL local office: Jakarta

Jotun Paints South Africa Pty. Ltd., Wimbledon Road, P.O. Box 187, 7581 Blackheath, Cape Town 8000, South Africa

DNV GL local office: Cape Town

Jotun India Private Ltd. – Pune, Plot no D 280, Ranjangaon MIDC, Taluka Shirur, District Pune 412 220, India

DNV GL local office: Mumbai

Jotun Ibérica SA, Poligon Industrial Santa Rita Calle Estàtica, no 3 08755 – Castellbisbal, Barcelona, Spain

DNV GL local office: Barcelona

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 issuance of this certificate is solely connected to the control of the Anti-Fouling System, AFS, with regard to compliance with the International Convention on the Control of Harmful Anti-Fouling Systems on Ships.

It does not cover verification of surface preparation, corrosion protection, fire, health and safety precautions, durability of the AFS or environmental properties other than regulated by the Convention.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, with the following test results, ref. Test Report from SINTEF of 2004-08-31:

- **SeaForce 60:** 0,063% (No TBT-compounds detected)

Marking of product

Product shall be marked with *manufacturer's name*, *place of production* 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 assessments (for Certificate Retention and Certificate Renewal) shall be performed according to DNVGL-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.dnvgl.com.

END OF CERTIFICATE