

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Grating**

with type designation(s)

Grating fixture pins GFP and GFP-S

Issued to

KIST CO.

Busan, Republic of Korea

is found to comply with

DNV GL standard DNVGL-ST-0378 – Standard for offshore and platform lifting appliances

Application :

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

This Certificate is valid until **2021-11-23**.

Issued at **Høvik** on **2016-11-24**

DNV GL local station: **Busan**

for **DNV GL**

Approval Engineer: **Antonio Sendin Alvarez**

Aldo Matteucci
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: **262.1-024030-2**
Certificate No: **TAS00000T2**

Product description

Grating fixture pins GFP and GFP-S

Minimum tensile load = 2800 N

Minimum shear load = 2400 N

Design temperature = -30 °C

Application/Limitation

1. All materials are to be delivered with 3.1 certificates, documenting mechanical properties and chemical composition in accordance with the DNVGL-ST-0378 Sec. 3
2. It is the responsibility of the Holder of the Certificate to ensure that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.
3. Installation is to be carried out following the manufacturer's procedures.

Type Approval documentation

<i>Drawing No.</i>	<i>Rev.</i>	<i>Title</i>	<i>Status</i>	<i>Date</i>
	2016.11.23	GFP	Type approved	2016-11-17
	2016.06.22	GFP-S	Type approved	2016-11-17

Tests to be carried out

The above-mentioned minimum tensile and shear loads are to be demonstrated through testing, to be carried out in accordance to the manufacturer's procedures.

Marking of product

Each pin is to be marked according to DNVGL-ST-0378 Sec.14.5.

Periodical assessment

For retention of the type approval, a DNV GL surveyor shall perform a survey every second year and before expire date of this certificate to verify that the conditions for the type approval are complied with.

END OF CERTIFICATE