DNV·GL

Certificate No:
TAP00000VV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Separator for Primary Refrigerant Side

with type designation(s)
OSF

Issued to
FrioNordica AS
Malmefjorden, Norway

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.7 Pressure equipment

Application :

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

Temperature range:	**10°C to 100°C**
Operating media:	**NH3**
Design pressure:	**22.1 bar**

Issued at **Høvik** on **2017-09-11**

This Certificate is valid until **2021-12-31**.

for **DNV GL**

DNV GL local station: **Kristiansund N**

Approval Engineer: **Mehdi Rowshan**

Marianne Spæren Marveng
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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Product description

The oil separator in 3 units with following specifications:

Type	Outer diameter	Length	Corrosion allowance	Class
OSF 20	508 mm	2500 mm	1 mm	I
OSF 24	610 mm	2750 mm	1 mm	I
OSF 28	711 mm	3000 mm	1 mm	I

Materials:

Main shell:	P235GH EN 10216-2
Ellipsoidal head:	P265GH EN 10028-2
Nozzles:	P235GH EN 10216-2
End plates:	P265GH EN 10028-2

Application/Limitation

Material certificates according to DNVGL Rules Ship Pt.4 Ch.7 Sec.1 Table 5.

Manufacturing, workmanship and testing shall be done according to DNV GL Rules Pt.4 Ch.7 Sec.7

Internal components of the separator are excluded from this Type Approval Certificate.

Each separator shall be certified by DNV GL surveyor and is to be delivered with DNV GL Product certificate.

Type Approval documentation

Tests carried out

N/A

Marking of product

Each pressure vessel shall be permanently and legibly marked on the pressure part or on a nameplate permanently attached to a principal pressure part to show its identity and origin.
The marking of pressure vessels shall show at least the following particulars:

- manufacturer's name and address
- type designation and serial number
- year of manufacture
- maximum allowable working pressure
- hydrostatic test pressure.

Periodical assessment

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