



Certificate No:
TAP00002EH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pressure Vessel

with type designation(s)

Steam coils Y21001, Y21002, Y21003, Y21004, Y21005, Y21006, Y21007

Issued to

Ulmatec Pyro AS
Søvik, Norway

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.7 Pressure equipment

DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021

Application :

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

Max. working temp.: 170°C

Design pressure: 7 bar

Operating Medium Steam

Issued at **Høvik** on **2022-03-28**

This Certificate is valid until **2027-03-27**.

DNV local station: **Norway Newbuilding**

Approval Engineer: **Andreas Hansen**

for **DNV**

.....
Zeinab Sharifi
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

Seven types of steam coil tube sheets with flanged connections designed according to ASME BPVC Sec.VIII Div.1:

Component	Material	Standard
Cover	P265GH	EN 10028-2
Flange	S235JR/RST37.2	DIN 2527 – PN16
Tube sheet	P245GH / P250GH	DIN 2527 – PN16
Tube	ST 35.8	EN 10216-2
Seal	Graphite / Stainless Steel	-

Manufacturing location:

Ulmatec Pyro AS
Hamnsundvegen 370
6280 Søvik, Norway

Application/Limitation

Model	Y21001	Y21002	Y21003	Y21004	Y21005	Y21006	Y21007
Heating effect (kW)	160	330	330	850	550	550	1250
Volume (l)	5.02	11.5	9.95	21.38	17.84	17.84	34.4
Design pressure (bar)	7						
Test pressure (bar)	10.5						
Design temperature (°C)	170						
Pressure vessel class	III						
Medium	Steam						
Joint efficiency	0.75						
Corrosion allowance (mm)	1						

Materials for pressure retaining parts shall be delivered with material certificates according to DNV-RU-SHIP Pt.4 Ch.7 Sec.1 [Table 7], and shall meet the requirements of relevant parts of DNV-RU-SHIP Pt.2 Ch.2.

Type Approval documentation

Production testing and Certification

Production Testing and Certification for the actual intended application shall follow the latest applicable edition of the Rules (as mentioned on the front page of this certificate).

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 the steam coil 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
- design temperature range.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions of the approval are complied with. Reference is made to DNV-CP-0338.