

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Automatic Oil Fired Water Heater**with type designation(s)
FFH-nnnn

Issued to

Ulmatec Pyro AS
Søvik, Norway

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Products approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2020-07-03**This Certificate is valid until **2022-07-02**.DNV GL local station: **Norway Newbuilding**for **DNV GL**Approval Engineer: **Geir Bjørn Alnes**

Jan Tore Grimsrud
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: **262.1-031228-1**
Certificate No: **TAA00002D9**

Product description

Control and monitoring system for Ulmatech Pyro Fuel Fired Water Heater.

The control and monitoring system for the following model numbers are covered by this certificate:

Model	Heating effect (kW)	Burner type (Fremo)	Software	Revision
FFH-0025	25	F-3	SW_PG00101	1.0.01
FFH-0050	50	F-8		
FFH-0075	75	F-14		
FFH-0100	100	F-14	SW_PG00004 Configurable 1-step / 2-step / Modulating	1.0.01
FFH-0150	150	F-18		
FFH-0200	200	F-28		
FFH-0300	300	F-50-50		
FFH-0400	400			
FFH-0600	600	HF740-70		
FFH-0900	900	HF740-100		
FFH-1200	1200	HF930-150		
FFH-1500	1500	HF930-250		
FFH-2000	2000	HF930-250		
FFH-2500	2500	RG93		
FFH-3000	3000	RG515		
FFH-3500	3500	RG520		
FFH-4000	4000	RG520		

The following hardware is type approved, see Type Approval Certificate Nos:

PLC system: TAA00000G6 Crevis FnIO S-Series

Monitor: TAA00000N8 Beijer Electronics X2 HMI Panel

The software as indicated in the above table is included in the Type Approval.

The software number and version is listed in documents UPY-G00004-02PA SoftwareLog and G00101-02PA Software Version History.

Approval conditions

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- System block diagram (UPY-Bnnnnn-11OT)
- Power supply arrangement (UPY-Bnnnnn-11OR)

The Type Approval covers hardware and software listed under Product description.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 [1.4] will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Software update notification

When the type approved software is revised (affecting all future deliveries) DNV GL is to be informed by forwarding updated software version documentation. If the changes are judged to affect functionality for which rule requirements apply a new functional type test may be required and the certificate may have to be renewed to identify the new software version.

Type Approval documentation

Tests carried out

Functional testing according to test program UPY-G01003-01PF Revision A.

Marking of product

Fuel Fired Heater marking:

FFH type, Yard & Hull, Project no., Serial no., Project doc., Prod. Year, Working pressure, Test pressure, Effect

Control Cabinet marking:

Yard & Hull, Project no., Project doc., Prod. Year, Main Voltage, Effect

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE