Certificate No: TO.DEB.21-1650

TÜRK LOYDU

TYPE APPROVAL CERTIFICATE

This Certificate consists of 2 pages.

This is to certify that the

Cooler for Acoustic Enclosure

With type designations

Material number : 200154495 & 200154496

Manufactured by

KELVION MACHINE Cooling Systems GmbH

Is found to comply with

Türk Loydu Rules, Part A, Chapter 2 – Material (January 2021)
Türk Loydu Rules, Part A, Chapter 2 – Material (January 2021)
Türk Loydu Rules, Part E, Chapter 103 - Metallic Materials, Special Materials for Naval Ships (January 2006)
Türk Loydu Rules, Part E, Chapter 107 - Naval Ship Technology, Ship Operation Installations and Auxiliary SysAtems (January 2016)

Application	: Cooling set may be used for sound capsule cooling unit
Design	: KELVION MACHINE Cooling Systems GmbH
Sizes	: According the approved drawings.
Address of Manufacturer	: Südstrasse . 48, 44625 Herne - GERMANY
Place and date	: İSTANBUL / 08.12.2021

Subject to the conditions referred to in the following pages, this certificate is valid until 23.11.2026.

82456

Emrah SÖĞÜTÇÜ
New Building Division Manager

Product description:
Type Designation : 200154495 (Port - left)
200154496 (Starboard - right)

Materials used :

	Designation	Dimension	Material Quality
1	Tubes	Ø 11.9x0.8x7500	CuNi30Mn1Fe
2	Tubes plate	18x250x543	CuNi30Mn1Fe
3	Nozzle Headers	40x240x543	CuNi30Mn1Fe
4	Return Header	30x240x543	CuNi30Mn1Fe

Application/ Limitation (Approval conditions):
1- Heat Exchanger must have a shut-off device at their inlets and outlets.
2- Heat exchangers must have a closable pressure gauge, a spring-loaded safety valve, pressure and temperature control devices.

Documentation :
TL approved plans (PAE-EPAS/010574/21-1650/ŞÜ on 04.10.2021& PAE-EPAS/011044/21-1650/ŞÜ on 22.11.2021), test reports, Production quality audit report

Test carried out (and results) :
The following scope of inspection was carried out with satisfactory results.
- Visual inspection : Acoustic Enclosure Cooling Unit was visually checked
- Dimensional measurement control : Dimensional measurement has been carried out according to approved drawing.
- Material : Reviewed of material certificates
- Hydrostatic test : Hydrostatic test was performed at 9 bar pressure.

Place of test carried out : Südstrasse . 48, 44625 Herne - GERMANY

Marking of product:
The product to be marked same as below mentioned.
- Manufacturer name and trade mark
- Type designation
- Serial number
- Year of manufacture
- Capacity
- Max. allowable working pressure
- Max. allowable working temperature
- Additionally marked with TL stamp and project number

Hasan HABİBOĞLU
Surveyor

This certificate is subject to terms and conditions described below:

- Any significant change in design or construction may render this Certificate invalid. Type Approval Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to the equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.