TYPE EXAMINATION CERTIFICATE

Certificate No:
TAP00000WG
Revision No:
2

This is to certify:

That the Replacement Filter Elements for Single, Double and Automatic Filters

with type designation(s)
SCREW-IN FILTER ELEMENTS, PLUG-IN FILTER ELEMENTS

Issued to
Fil-Tec Rixen GmbH
Hamburg, Germany

is found to comply with
Fil-Tec Rixen Werknorm 001 Rev. 02, dated 2020-11-10 (available on http://www.fil-tec-rixen.com)

Application :

Refer to section APPLICATION/LIMITATION in the certificate.

Max. working temp.: **150 °C**
Working media: **see chapter APPLICATION/LIMITATION**
Design pressure: **up to 16 bar**
Issued at **Hamburg** on **2020-08-27**

This Certificate is valid until **2025-08-26**.
DNV GL local station: **Hamburg**

Approval Engineer: **Thilo Pabst**

for **DNV GL**
Digitally Signed By: Drews, Olaf
Location: DNV GL SE Hamburg, Germany
Signing Date: 2021-01-05

Olaf Drews
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 Examination Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-025701-3**
Certificate No: **TAP00000WG**
Revision No: **2**

PRODUCT DESCRIPTION

Filter elements/candles made of stainless-steel according ISO 9044, for the use in single, double and automatic filters.
Two different types:

- installing by screw-in (short sign "G")
- installing by plug-in (short sign "S")

Production place: Fil-Tec Rixen GmbH, Osterrade 26, 21031 Hamburg, Germany

Scope / Technical data

Filter elements with different diameter, length, mesh sizes and mesh weaves are available according to below table.

Type	Marking / Drawing no.	Drawing dated	Filter Mesh Size (XX)[1] [µm]	Outer diameter [mm]	Element Length [mm]
Screw-In Elements	KX20GXX	2010-03-05	25 µm; 31 µm; 48 µm; 60 µm; 80 µm; 100 µm; 200 µm 70 µm Tela[2]; 80 µm Tela[2]	29.5 mm	220 mm
	KX30GXX	2009-07-31			315 mm
	KX40GXX	2013-05-08			439 mm
	KX49GXX	2009-09-13		50.0 mm	437 mm
	KX75GXX	2010-11-02		29.5 mm	720 mm
Plug-In Elements	KX20SXX	2012-01-16		29.5 mm	246 mm
	KX40SXX	2010-02-05			466 mm
	KX71SXX	2010-02-25			710 mm
	KX75SXX	2010-02-25			747 mm

Note[1]: wire diameter and open filter surface according ISO 4783-1
Note[2]: Tela – 5 heddle atlas weave

Design Data

Temperature Range [°C]	0 – 150 °C
Design pressure [bar]	up to 16 bar

Materials

End Cap, Reinforcement	1.4301 (AISI304)
Support Pipe	1.4316 (AISI308L)
Mesh	1.4401 (AISI316) 1.4404 (AISI 316L)

APPLICATION/LIMITATION

The filter candles / elements are approved for using on single, double and automatic filters and accepted for installation Piping systems on ship's, offshore units and other structures classed by DNVGL.

The filter candles/elements may be used under consideration of the mechanical and physical properties as well as the chemical resistance in following medias:

OIL:
Crude oil, Mineral oil, Synthetic oil, Hydraulic oil, Lubricating oil, Turbine oil, Hardening oil, Machine circulation oil, Cutting oil, Waste oil

FUEL:
Diesel, Light fuel oil, Petrol, Heavy fuel oil, Liquid coal, Crude oil

WATER:
Ballast water; Cooling water, Fire protection water, Wash water, Wastewater, Industrial water

CHEMICALS:
Acids, Cleaning agents, Alkaline

COOLANTS:
Emulsion, Cutting oil, Honing oil, Grinding oil, Rolling oil

The selection of the filter elements for the corresponding application and the right installation are to be in accordance with the instructions of the manufacturer.

Limitation

Components made of stainless-steel lower grades (e.g. AISI 304(L), 316(L), 321, 347, 17-4) are not sea water resistant and therefore not suitable for seawater applications like Marine atmospheric environment, flowing sea water and stagnant sea water.

The use of the pipe clamps outside the range of application is subject to special consideration by DNVGL in each individual case.

Assembling and Installation

For the assembling and installation, instructions of the manufacturer are to be observed.

TYPE APPROVAL DOCUMENTATION

Fil-Tec Rixen Werksnorm WN001 Rev. 02, dated: 2020-11-10

Spörl-Test Report 10/2013, Beta mesh R34/R48, dated: 2013-07-22
Spöhrl oHG

Technical drawings of all products (see table on page 2)

Extract from Catalogue Fil-Tec Rixen (filter candles)

ISO 9001:2015 Certificate, Cert. no. 10000406026-MSC-RvA-DEU, dated 2020-10-03
DNVGL – Business Assurance, Barendrecht, Netherlands

Documents by DNVGL:
- Type Approval Assessment Report, DNVGL Hamburg, dated 2020-10-21
- DNVGL Type Approval Certificate 14345-15 HH
- DNVGL-Ref-No.: 15-015483

TESTS CARRIED OUT

Documentation of tests performed and references provided, are the basis for this type approval.

Production testing

Performing of "Bubble Point" test on filter elements batches.

MARKING OF PRODUCT

For traceability of products, marking shall be legible and indelible.
Products are to be marked at least as follows:

- Manufacturers name or trademark - Type / Designation - Mesh Size - Production CW/YY (not mandatory)	Marking sample 

PERIODICAL ASSESSMENT

A condition for retention of the type approval certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the type approval have not been altered.
Regulations for the periodical assessment of the type approval certificate are to be find in the DNVGL Class Programme CP-0338.

To check the validity of this certificate, please look it up in https://approvalfinder.dnvgl.com

It is further to be noted that the Society shall be informed of any:

- Modifications to the product which are liable to affect its characteristics and functions, as originally specified and tested;
- Shifting of the production site and additional production site.

If such notifications are not made, the validity of the type approval certificate terminates.

END OF CERTIFICATE