

TYPE APPROVAL CERTIFICATE

Certificate No:
TAP000015C
Revision No:
2

This is to certify:

That the **Modular substructure system with accessories**

with type designation(s)
Siconnect

Issued to

Sikla GmbH
VS-Schwenningen, Germany

is found to comply with

EN 1990:2002+A1:2005+AC:2010 Eurocode: Basis of structural design
EN 1991-1-1:2002+AC:2009 Eurocode 1: Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings
EN 1993-1-1:2005+AC:2009 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings
EN 1993-1-3:2006+AC:2009 Eurocode 3: Design of steel structures – Part 1-3: General rules – Supplementary rules for cold-formed members and sheeting
EN 1993-1-5:2006+AC:2009+A1:2017+A2:2019 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements
EN 1993-1-8:2005+AC:2009 Eurocode 3: Design of steel structures – Part 1-8: Design of joints
RAL-GZ 655:2008-04 Pipe Supports – Quality Assurance
RAL-GZ 656:2010-05 Fire-tested Pipe Supports – Quality Assurance
VdS 2344:2014-07 Procedure for the testing, approval and certification of products and systems for fire protection and security technologies
EN 61537:2007 Cable management – Cable tray systems and cable ladder systems (IEC 61537:2006)

Application :

Assembly system for the modular construction of piping support systems and support of other components on board ships and other structures classed by DNV.

Issued at **Hamburg** on **2023-03-15**

This Certificate is valid until **2028-03-01** .

for **DNV**

DNV local unit: **Augsburg**

Approval Engineer: **Hagen Markus**

Sven Klingler
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.



Product description

Mounting Rail System

Designed and type tested according to the standards specified on page 1 and further standards specified in sikla document "Pressix 41, Mounting Rail System - as specified in sikla "Schiffbau / Shipbuilding Catalogue", edition 2022.

Materials

Carbon steel	High yield strength carbon steel acc. to DIN EN 10149-2, Steel grade S355MC, S235JR.
Stainless steel	1.4301, 1.4362, 1.4401/ 1.4404 and 1.4571
Aluminium U- shaped mounting rail (MS41)	Material designation EN AW-5083 H112 / EN AW-5754 H112 / EN AW-6082 T6 / EN AW-6060 T66
Liner Rubber clamps	NBR, Silicone, SBR/EPDM

Corrosion protection

Hot dip galvanised or High Corrosion Protection System (HCP) acc. to drawing 027/07

Applied corrosion protective surface coating depending on application and geometry. The protection level is always equal or exceeds conventional hot deep galvanised surface coating.

Overview of products

This certificate includes products of the sikla Siconnect pipe support system as part of the sikla product catalogue "Schiffbau / Shipbuilding, Edition 11/2022"(Draft) as follows:

Catalogue section	Component / System
1	Pressix CC 41-Assembly System
2	Brackets
3	Pipe clamp types Stabil D-A, D-3G, D-M16 with and without liners U Bolt RUC, RUB Chilled Water Clamp SKS, LKS Ratio S, Ratio S-K, Stabil RB-A, Stabil D-3G-K
4	Ducting clamp type PLU, Ducting Bracket LCO, Ducting Angle LUW
5	Slide Set series WD, WDL, WDQ , GS, GLH-ASP/CC, Pipe Shoe (floating bearing) - K HV90 Fixed Point Clamp FS, FKS, FPS-ASP HCP
6	Beam Clamps type series TCS, TCS F Universal Joint UG, Joint JOI R/ S, Support Joint SG, Beam Clip P/SPA 5P AU HCP/SPA 5P HCP, Clamp SB41, Bead flat steel clamps WFK HCP
7	Sound Absorber type series SDE, Channel Lining SAL 41, Rubber Profile NBR, SAL SBR/EPDM/Silicon
8	Standard parts (Fixings and Fastenings)
9	HCP High Corrosion Protection components
10	Stainless steel components 1.4571, 1.4404, 1.4401

Application/Limitation

The Siconnect Pressix CC41 – Assembly System is type approved for the modular construction of piping support systems and support of other components on board ships and other structures classed by DNV.

It shall be noted that this Type Approval certificate is not valid for designs, components, equipment, systems or products which are otherwise subject to classification by DNV.

For design and installation the Sikla “Installation Guideline (Montagetechnik)” and product data sheets specified in the sikla “Schiffbau/Shipbuilding catalogue” are to be observed. Additional information in view of specific dynamic load calculations can be found in project related subsystem catalogues.

Mounting rail (Channels MS41)

The following limitation needs to be observed:

Prior to select MS Alu channel, the end user must check its suitability for the intended purpose with regard to

- the maximum loads (SWL) that need to be supported
- possible exposure of salt water or water spray applicable to the intended installation area

Mounting rails made of aluminium are not approved in machinery space of category A and other spaces with similar level of fire risk.

If necessary, additional measures must be taken to ensure the usability and function of the channel.

Type Approval documentation

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Tests carried out

According to the standards specified on page 1.

In addition:

- Vibration and shock tests at WTD 71 according to the test specification of German Navy Korvette K130, Fregate F125.
- Smoke generation test on rubber elements NBR, EPDM, Silicone acc. to IMO FTP Code, Part 2
- Electrical conductivity acc. to DIN EN 61537(VDE 0639):2007-09; EN 61537:2007-Sub-clause 11.1

Marking of product

Scope of marking	Example
Manufacturers Mark	Sikla, S
Code for production site (in case multiple production site or approved products)	BC
Type - Material/Corrosion protection	41/41/2,5 – VA/HCP
Production date (month, year(one digit) Example November, 2022	11, 2

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.

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

End of certificate