

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAP0000125**  
Revision No:  
**2**

## This is to certify:

**That the Modular substructure system with accessories**

with type designation(s)  
**siFRAMO**

Issued to

**Sikla GmbH**  
**VS-Schwenningen, Germany**

is found to comply with

- EN 13480-3:2017 Metallic industrial piping – Part 3: Design and calculation**
- 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**
- EN 1090-2:2008 Execution of steel structures and aluminium structures – Part 2: Technical requirements for steel structures**
- EN ISO 9227:2017 Corrosion tests in artificial atmospheres – Salt spray tests**
- EN 61537:2007 Cable management – Cable tray systems and cable ladder systems (IEC 61537:2006)**

## Application :

**Modular construction of support systems and substructures for piping systems, components and secondary steel construction 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**

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**Sven Klinger**  
**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

Hollow square and rectangular beam profile system for modular construction of support systems and substructures. Designed and type tested according to the standards specified on page 1 and further standards specified in sikla document "siFRAMO - Hollow square and rectangular beam profile system for the modular construction of support systems and substructures – TAP0000125".

Main profiles available

siFramo 80	80x80mm, 80x30mm
siFramo 100	100x100mm, 100x160mm

## Materials

Carbon steel

High yield strength carbon steel acc. to DIN EN 10149-2, Steel grade S355MC, S235JR.

## 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 siFramo 80 and 100 modular support system main components as part of the "Schiffbau / Shipbuilding" catalogue, Edition 12/2022 as follows:

## Beam Sections

Square	TP F 80, TP F 100
Rectangular	TP F 80/30, TP F 100/160

## Components

Components and their abbreviated names in the catalogue

Self-Forming Screw	FLS
End Supports	STA, WBD
Cantilever Brackets	AK
Beam Brackets	TKO
Bracing Arm	SKO
Picot Joints	GE
Insulated Feet	SHB
Joining Plates	AP
Welding Adapters / Welding Plates	ASA, SPL
Corner Brackets	WD
Channel Adapters	SA
Assembly Sets	MS 5P
U-Holders	SB
Beam Section Holders	TPH
Profile Couplings	PK
Slide Sets	GS
Mounting Plates	GPL
U-Bolt Fasteners	UB
End Caps, Pads for U Bolts	ADK, UB
Pipe Shoes and accessories	LA, LC, LD, LK

### Application/Limitation

The siFRAMO – is type approved for the modular construction of support systems and substructures for piping systems, components and secondary steel construction 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 “Simotec Installation Guidelines” and product data sheets specified in the sikla “Schiffbau/Shipbuilding catalogue” are to be observed.

### Type Approval documentation

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### Tests carried out

Test scope according to the standards specified on page 1.

In addition:

- 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
Production date (month, year one digit)	11, 7
CE conformity sign	“CE”

### 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