

TYPE EXAMINATION CERTIFICATE

This is to certify:**That the Modular substructure system with accessories**

with type designation(s)

siFRAMO - Hollow square and rectangular beam profile system for the modular construction of support systems and substructures

Issued to

**Sikla GmbH
VS-Schwenningen, Germany**

is found to comply with

EN 1993-1-3:2006 Eurocode 3: Design of steel structures – Part 1-3: General rules – Supplementary rules for cold-formed members and sheeting**EN 1993-1-8:2005 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 13480-3:2017 Metallic industrial piping – Part 3: Design and calculation****EN 61537:2007 Cable management – Cable tray systems and cable ladder systems (IEC 61537:2006)****Application :****Refer to certificate.**Issued at **Høvik** on **2017-11-20**This Certificate is valid until **2022-11-19**.for **DNV GL**DNV GL local station: **Augsburg**Approval Engineer: **Hagen Markus**

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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.



Product description

Hollow square and rectangular beam profile system for modular construction of support systems and substructures as specified in the "Schiffbau / Shipbuilding" catalogue, edition 2017.

Corrosion protection by Sikla High Corrosion Protection Systems (HCP) acc. to drawing 027/07. Applied corrosion protective surface coating depending on application and geometry.

Protection level is always equal or exceeds conventional hot deep galvanised surface coating.

The siFramo modular support system consists of the following main components:

Beam profiles	
Square	TP F 80 , TP F 100
Rectangular	TP F 80/30, TP F 100/160
End Covers	ADK
Brackets	
Corner Bracket	WD
Beam Bracket	TKO F 80
Cantilever Brackets	AK F 80/30, F 80
Supports	
Pipe Shoes	LA - HV / LC - HV / LD - HV / LK - HV
Individual components	
End supports	STA F 80/30E, F 80 WBD F 80
Pivot Joints	GE F 80
Welding Adapters / Welding Plates	ASA F 80 / ASA F 80 GPL 8kt
Profile couplings	PK F 80 8kt HCP PK F 80 4kt HCP
Adapter Plate	AP
Assembly Sets	MS / PS
Self-Forming Screw	FLS F
U-Holders	SB F 80
Beam Section Holders	TPH F 80
Accessories	Various types

Materials

Hollow square and rectangular beam profiles	High yield strength carbon steel acc. to DIN EN 10149-2, Steel grade S355MC. Hot dip galvanised or High Corrosion Protection System (HCP) acc. to drawing 027/07.
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Application/Limitation

The siFramo support system is type examined for the modular construction of support systems and substructures on board ships and other structures classed by DNV GL.

For each application, the Sikla "Systemunterbaukataloge / Sub system catalogues" need to be observed in view of the project specific static and dynamic load calculations in conjunction with the latest product data sheets.

For installation, the latest Sikla "siFramo and Simotec Installation Guideline" is to be observed.



Job Id: **262.1-024980-1**
Certificate No: **TAP0000125**

Type Examination documentation

Tests carried out

Test scope according to the standards specified on page 1.

In addition:

- Electrical continuity acc. to DINEN61537(VDE 0639):2007-09; EN61537:2007-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"

Certificate Retention Survey

For retention of the type examination certificate periodical assessments shall be carried out at production places by DNVGL surveyor.

The objective of the periodical assessment is to verify that the design and production conditions for the type examination have not been altered.

Main scope of the assessment:

- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application
- verification of the product marking

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.