



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE000010J
Revision No:
2

This is to certify:

That the **Battery (Accumulator)**

with type designation(s)
SBL, SBLE, SBM and SBH

Issued to
SAFT AB
OSKARSHAMN, Sweden

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft
IEC 60623 (2017-01)
IEC 60092-305 (1980)

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2023-04-03**

This Certificate is valid until **2028-04-02**.

for **DNV**

DNV local unit: **Sweden CMC**

Approval Engineer: **Nicolay Horn**

Frederik Tore Elter
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

Industrial pocket plate Ni-Cd batteries with the following type designation are covered by this certificate:

Type SBL	Capacity (Ah)
Smallest type SBL 7,5	7.5
Largest type SBL 1540	1540

Type SBM	Capacity (Ah)
Smallest type SBM 11	11
Largest type SBM 1465	1465

Type SBH	Capacity (Ah)
Smallest type SBH 8,3	8,3
Largest type SBH 920	920

Type SBLE	Capacity (Ah)
Smallest type SBLE 7,5	7,5
Largest type SBLE 1710	1710

Installation and maintenance to be done in accordance with Installation and Operating Instructions and/or the Technical Manual.

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 60623 (Fifth edition 2017 – 01) performed in a ISO17025 accredited test laboratory:

- item 4.2 - Discharge performance
 - sub-clauses
 - 4.2.1 - Discharge performance at 20°C
 - 4.2.3 - Discharge performance at - 18°C
 - 4.2.4 - High rate current test

item 4.3 - Charge retention

- item 4.4 - Endurance
 - sub-clauses
 - 4.4.1 - Endurance in cycles
 - 4.4.2 - Permanent charge endurance

item 4.5 - Charge acceptance at constant voltage

- item 4.8 - Electrolyte retention
 - sub-clauses
 - 4.8.1 - Test procedure

item 4.9 – Storage

Vibration test

Marking of product

The product to be marked in accordance with section 2 in IEC 60623: Manufacturers name, IEC 60623, type and manufacturing date.

Periodical assessment



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The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) checked (if not available tests to be carried out in accordance item 7.2 in IEC 60623)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at 2 and 3,5 year and at renewal.

END OF CERTIFICATE