

TYPE APPROVAL CERTIFICATE

Certificate No:
TAE00002TA
Revision No:
1

This is to certify:

That the Battery (Accumulator)

with type designation(s)
NICAMAX

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 62259 (2003-10)

Application :

Industrial Nickel-Cadmium batteries for mobile and stationary applications and for use in ships and Offshore Units.

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

Issued at **Høvik** on **2023-11-15**

This Certificate is valid until **2028-04-01**.

DNV local unit: **Sweden CMC**

Approval Engineer: **Nicolay Horn**



for DNV

Digitally Signed By: Elter, Frederik Tore
Location: DNV Høvik, Norway

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, tested in accordance with IEC 62259 (2003-10) / IEC 60623 (2017-01) with the following type designations are covered by this certificate:

TypeN NP1 L	Capacity (Ah)
Smallest type: NP1 L 15	15
Largest type: NP1 L 1700	1700

Type NP1 M	Capacity (Ah)
Smallest type: NP1 M 8	8
Largest type: NP1 M 1330	1330

Application/Limitation

Industrial Nickel-Cadmium batteries for mobile and stationary applications and for use in ships and Offshore Units.

Field of application: UPS systems, emergency lighting, telecommunication, power and substations, oil and gas industry (offshore + onshore), offshore wind converter installations

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

Type Approval documentation

Technical Info:

NICAMAX New Generation maintenance free NI-Cd Battery, brochure from SAFT

Drawings and specifications:

"Type Label SAFT" drawing no 31-02804 dated 1991-06-14.
 "Marking of Container side, Saft, module 4 drawing no 31-05664 dated 2007-10-02.
 "Cell block type NP1 M 170", drawing no 31-05614 dated 2007-09-10.
 "Cell block type NP1 L 185", drawing no 31-05577 dated 2007-09-10.
 "Cell block Module 4 NP1 M cells drawing no 31-05658 dated 2007-09-19.
 SAFT Technical instruction TF-1124E, Cell specifications NP1 L dated 2008-02-22.
 SAFT Technical instruction TF-1125E, Cell specifications NP1 M dated 2008-02-22.

Test reports:

NP1L (L-products IEC62259:2003 only)	Report number
Marking	REP1650
Dimensions	REP1662
Discharge at 20 degrees C	REP1669
Discharge +5/-18 degrees C	REP1724 / REP1729
High rate currents	REP1748
Endurance in cycles	REP1781
Charge acceptance at CV	REP1714
Charge retention	REP1719
Electrolyte retention	REP1764
Gas recombination	REP1782
Charge endurance	REP1840
Storage	REP1841

NP1M, (M-products IEC62259:2003 only)	Report number
Marking	REP1652
Dimensions	REP1661
Discharge at 20 degrees C	REP1665
Discharge +5/-18 degrees C	REP1725 / REP1730
High rate currents	REP1749
Endurance in cycles	REP1812
Charge acceptance at CV	REP1715

NP1M, (M-products IEC62259:2003 only)

Charge retention
Electrolyte retention
Gas recombination
Charge endurance
Storage

Report number

REP1720
REP1765
REP1783
REP1838
REP1842

Tests carried out

Type tests in accordance with IEC 62259 (2003 - 10) performed in a ISO17025 accredited test laboratory*:

item 7.2.1 - Discharge performance at +20°C
item 7.2.2 - Discharge performance at +5°C
item 7.2.3 - Discharge performance at -18°C
item 7.2.4 - High rate current test
item 7.3 - Charge retention
item 7.4.1 - Endurance in cycles
item 7.4.2 - Permanent charge endurance
item 7.5 - Charge acceptance at constant voltage
item 7.7 - Vent operation
item 7.8 - Electrolyte retention
item 7.9 - Determination of gas recombination efficiency
item 7.10 - Storage

* The type tests performed are also in accordance with IEC 60623 5th edition (2017-01) Item 7.3 (not 7.3.5 & 7.3.6) to 7.9.

Vibration test.

Marking of product

The product to be marked in accordance with IEC 62259: Manufacturers name, IEC 62259, type and manufacturing date.

Periodical assessment

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 Product sample tests (PST) checked (if not available, tests according to item 10.2 in IEC 62259 to be carried out)
- 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