



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-9469
This Certificate consists of 3 pages

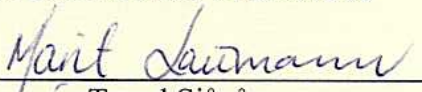
This is to certify that the
Battery (Accumulator)
with type designation(s)
NBLE

Manufactured by
SAFT AB
OSKARSHAMN, Sweden

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det
Norske Veritas' Offshore Standards
IEC 60623 (2001 - 09)
IEC 60092-305 (1980)

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

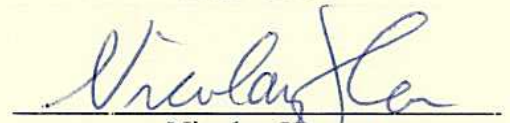

Place and date
Høvik, 2009-04-17
for DET NORSKE VERITAS AS


for Trond Sjøvåg
Head of Section



Local Office
DNV Stockholm

This Certificate is valid until
2013-06-30


Nicolay Horn
Surveyor 

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: E-9469
 File No.: 822.40
 Case No.: 262.1-007413

Product description

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

Type Designation	Rated Capacity C ₅ Ah
NBLE 7.5	7.5
NBLE 15	15
NBLE 22	22
NBLE 30	30
NBLE 40	40
NBLE 47	47
NBLE 62	62
NBLE 75	75
NBLE 95	95
NBLE 110	110
NBLE 140	140
NBLE 185	185
NBLE 230	230
NBLE 275	275
NBLE 325	325
NBLE 375	375

NBLE 415	415
NBLE 460	460
NBLE 510	510
NBLE 550	550
NBLE 600	600
NBLE 650	650
NBLE 700	700
NBLE 750	750
NBLE 830	830
NBLE 925	925
NBLE 1020	1020
NBLE 1100	1100
NBLE 1200	1200
NBLE 1300	1300
NBLE 1400	1400
NBLE 1500	1500
NBLE 1600	1600
NBLE 1660	1660

Application/Limitation

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

Type Approval documentation

Technical info:

Saft brochure for Ni-Cd block battery "Excellence in technology, reliability in performance", dated April 2007.

Drawings:

31-05466	Cell block, SBLE 230	31-02813	Marking of container
31-00541	Cell block Mod 3 and 4	31-02804	Type label

Test reports:

Saft report TR-1559, "Type testing according to IEC 60623, ed 4, of the cell programme SBLE", dated 2008-06-23.

DNV "Statement of inspection status", issued 2007-06-13, 2007-07-12, 2007-10-31, 2008-05-12 & 2008-06-13.



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Technical instructions TF-1109 ed. 29 dated 2009-01-22 & TF-1123.

Tests carried out

Type tests in accordance with IEC 60623 (Fourth edition 2001 - 09):

item 4.2 - Discharge performance

- sub-clauses
- 4.2.1 - Discharge performance at 20°C
- 4.2.2 - Discharge performance at 5°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

item 4.5 - Charge acceptance at constant voltage

item 4.8 - Electrolyte retention

item 4.9 - Storage

Vibration test.

Marking of product

The product to be marked in accordance with in IEC60623: Manufacturers name, IEC60623, type and manufacturing date.

Certificate retention survey

The scope of the retention/renewal survey 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 survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT 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.

Survey to be performed at least every second year.

END OF CERTIFICATE