DNV·GL

Certificate No:
TAE000007E

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Power Switch Board with Bus Bar

with type designation(s)
NXPLUS C

Issued to
Siemens AG
Erlangen Bayern, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

Gas insulated Medium voltage switchbard for use onboard ships and offshore units.

Type approval covers system design principle

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Rated voltage (V)	**7.2, 12, 15, 17.5 kV & 24 kV**
Rated current (A)	**up to 2500**
Rated freq. (Hz)	**50 / 60**

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2015-09-23**

for **DNV GL**

DNV GL local station: **Augsburg**

Approval Engineer: **Nicolay Horn**

Marit Laumann
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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Job Id: **262.1-011548-2**
Certificate No: **TAE000007E**

Name and place of manufacturer

Siemens AG Schaltanlagenwerk Frankfurt Carl-Benz-Straße 22 60386 Frankfurt Germany	Siemens Medium Voltage Switching Technologies Ltd. No. 12 Hanjiang Road Wuxi City, Jiangsu Province, 214028 China

Product description

Gas filled medium voltage switchboard of partitioned type with 3 separate compartments for high voltage (busbar, switching compartment & outgoing circuit) and 1 separate compartment for control/ auxiliary devices. The type approval covers vacuum circuit breaker and vacuum contactor. Equipped with pressure relief ducts.

Technical data for NXPLUS C:

Rated insulation voltage [kV]			7.2	12	15	17.5	24
Rated Insulation level [kV]	Lighting impulse	Common value	60	75	95	95	125
		Across the isolating distance	70	85	110	110	145
	Power frequency	Common value	20	28	36	38	50
		Across the isolating distance	23	32	39	45	60
Rated current [A]			1250 1600 2000 2500	1250 1600 2000 2500	1250 1600 2000 2500	1250 1600 2000 2500	1250 1600 2000 2500
Rated short-time withstand current 3 s. [kA]			31.5	31.5	31.5	25	25
Rated peak withstand current 1 s. [kA]			80	80	80	63	63
Arc test 1 s. [kA]			31.5	31.5	31.5	25	25
IP rating:			34	34	34	34	34

Cubicle dimensions:

Height:	2250 mm (600 mm panel), 2550 (900 mm panel)
Width:	600 & 900 mm
Depth:	1225 mm

Application/Limitation

Medium voltage switchboard systems of partly partitioned type for use onboard ships and mobile offshore units.

Type approval regards system design principle in accordance with IEC 62271-200.

The switchboard system shall be divided into two independent and autonomous installations.

This Type Approval Certificate does not replace the requirement to a DNV Product Certificate . Documents and drawings for the actual application as stated in our Rules Pt.4, Ch.8. Sec.1, Table B2 except Short circuit strength calculation & Internal arc withstanding report shall be submitted for approval in each case by the end manufacturer.

Use of 17.5 & 24 kV must be in accordance with our DNV rules Pt.4, Ch.8, Sec. 2, A 202.

Type Approval documentation

Tests carried out

Type Testing according to IEC 62271-200/ IEC 60298, IEC 60460 and IEC 60694:
Temperature rise test, internal arc test, dielectric test, short time withstand test, short circuit test, mechanical operation test, vibration test and IP testing.

Marking of product

Makers name plate with type and key data in accordance with the DNV rules Pt.4, Ch.8, Sec.4 A 107.

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 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.

Assessment to be performed at least every second year.

END OF CERTIFICATE