DNV·GL

Certificate No:
TAE00001TX

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Battery (Accumulator)

with type designation(s)
HDV-P, HDH-P, HDM-P, HDS-P

Issued to
Honda Denki Co., Ltd.
Tokyo SHINAGAWA-KU, Japan

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

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

Issued at **Høvik** on **2017-02-24**
This Certificate is valid until **2021-12-31**.
DNV GL local station: **Yokohama**

Approval Engineer: **Marta Alonso Pontes**

for **DNV GL**

Andreas Kristoffersen
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.

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Product description

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

HDV-"X"P, HDH-"X"P, HDM-"X" P AND HDS-"X"P.

"X" to be replaced in each case by the rated capacity as indicated in the following table:

Type	[Ah]
HDV	10
HDV	20
HDV	30
HDV	40
HDV	50
HDV	60
HDV	80
HDV	100
HDV	120
HDV	150
HDV	200
HDV	250
HDV	300
HDV	350
HDV	400
HDV	450

Type	[Ah]
HDH	10
HDH	20
HDH	30
HDH	40
HDH	50
HDH	60
HDH	80
HDH	100
HDH	120
HDH	150
HDH	200
HDH	250
HDH	300
HDH	350
HDH	400
HDH	450
HDH	500
HDH	600
HDH	700

Type	[Ah]
HDM	10
HDM	20
HDM	30
HDM	40
HDM	50
HDM	60
HDM	80
HDM	100
HDM	120
HDM	150
HDM	200
HDM	250
HDM	300
HDM	350
HDM	400
HDM	450
HDM	500
HDM	600
HDM	700
HDM	800
HDM	900
HDM	1000

Type	[Ah]
HDS	10
HDS	20
HDS	30
HDS	40
HDS	50
HDS	60
HDS	80
HDS	100
HDS	120
HDS	150
HDS	200
HDS	250
HDS	300
HDS	350
HDS	400
HDS	450
HDS	500
HDS	600
HDS	700
HDS	800
HDS	900
HDS	1000

Application/Limitation

Mobile and stationary application and for use in ship and Offshore Units
Installation according to manufacturer's instructions and DNV GL rules Pt.4 Ch.8 Sec.2 [9.4].

Type Approval documentation

Tests carried out

Tested according to IEC 60623 (2001-09)

Marking of product

Honda Denki Co., Ltd. - Type designation - Lot number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are 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 Routine Tests (RT) checked (if not available tests according to 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.

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.

END OF CERTIFICATE