



STANDARD FOR CERTIFICATION

No. 2.9

Type Approval Programme No. 6 - 800

ELECTRICAL EQUIPMENT

APRIL 2010

DET NORSKE VERITAS

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FOREWORD

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The Society reserves the exclusive right to interpret, decide equivalence or make exemptions to this Standard for Certification.

This issue supersedes Approval Programme 6 - 800.00 - 1 of December 1995.

Main Changes

- The technical requirements are moved to appendices.
- Technical requirements are updated in accordance with applicable IEC standards or other relevant rules. Contact NACNO371@dnv.com for a total overview for the most recent versions.

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1. DNV TYPE APPROVAL

1.1 Scope

This type approval programme gives the requirements on which Det Norske Veritas bases its type approval of products or systems specified in appendix A.

In general the conditions outlined in this programme and in the Standard for Certification No. 1.2 Type Approval shall be fulfilled before the type approval certificate is issued.

1.2 Documents to be submitted

Application for type approval (form no. 90.01a) is to be submitted.

Further documents and number of copies to be submitted are specified in the relevant programmes listed in Appendix A.

2. Design Requirements

The product or system is to comply with the rules and regulations as specified in the relevant programmes listed in Appendix A.

3. Elements of Type Approval

3.1 Procedure

Type approval procedure consists of the following elements:

- Initial Survey
- Design Assessment
- Type Testing
- Issuance of Type Approval certificate.

3.2 Initial Survey

An initial survey will normally have to be carried out in order to confirm that the manufacturer has a production line and quality control for consistent production of the products for which type approval is requested.

The initial survey at the manufacturer may be omitted if products are frequently certified by DNV, periodical audits are carried out or if the manufacturer is certified to ISO 9001 by an accredited body.

In those cases the product is manufactured at other companies/locations than the "designer" of the product, the initial survey has to be carried out at both designer and manufacturer.

A report will be made after the initial survey, and a copy of the report shall be part of the type approval documentation.

3.3 Design Assessment

The design assessment is to assess that the design of the product conforms to the requirements specified in 2. Design Requirements above.

3.4 Type Testing (TT)

The main objective of the testing is to verify the ability of a material, product or system to meet specified requirements which cannot be verified by analyses and calculations with reasonable reliability.

The tests referred to in the documents in 2. Design requirements shall be carried out initially.

The type testing can be carried out at the manufacturer's premises when he has suitable facilities available to undertake the testing as required. The testing shall be carried out and witnessed by a DNV surveyor as required and described in the DNV Rules or in the relevant programmes listed in appendix A.

A type testing programme shall be worked out by the manufacturer, sent to DNV and agreed upon prior to the commence-

ment of the testing. The test programme shall among others include information on which tests that shall be carried out in the presence of the DNV surveyor. Further, the test programme shall define the acceptance criteria for the testing.

Type testing may be carried out by laboratories recognized for the kind of type testing that is required for the different products according to the DNV Rules or in the relevant programmes listed in appendix A. DNV may base its acceptance on the test reports issued by the recognized laboratory confirming compliance with the requirements.

3.5 Recognition of Test laboratory

Testing in accordance with the regulations and standards required by the DNV type approval programmes as stated in Appendix A will be accepted when carried out either:

- 1) at an European Laboratory accredited by an EA (European Accreditation) member, or
- 2) at a non-European laboratory accredited by an organization who has signed an MLA (multilateral agreement) with EA (examples are: HOKLAS/Hong Kong and NATA/Australia), or
- 3) at a laboratory having the quality system approved by DNV based on ISO/IEC/EN 17025. A "Statement of Recognition" shall be issued, or
- 4) at a laboratory recognized/certified by an IMO Member State's Marine Administration
- 5) at a non-recognized/certified laboratory when testing is witnessed by a DNV Surveyor.

For detailed test requirements see relevant programmes listed in Appendix A.

3.6 Product Marking

The product or packing is to be marked with the name of the manufacturer, type designation and technical rating, as specified in Appendix A.

The marking should be carried out in such a manner that it is visible, legible and last throughout the anticipated life of the equipment, and traceable to the type approval certificate.

3.7 Issuance of type approval certificate

The type approval certificate will be issued to the applicant in question when compliance with the requirements for the design is confirmed.

The type approval certificate will be given a validity of 4 years.

3.8 Retention of Type Approval

The objective of the retention survey is to verify that the conditions for the type approval are not altered since the type approval certificate was issued.

The scope of the retention survey will normally include:

- verification of the manufacturer's production line and quality control
- review of the TA documentation and that this is still used as basis for the production
- review of possible changes to the design, the material and the performance
- verification of the product marking.

A report is to be made and submitted to the client after a certificate retention survey has been carried out. Survey Report Form 90.02a shall be used.

3.9 Renewal of Type Approval Certificate

A reminder letter will be sent to the certificate holder at least 3 months prior to the expiry of the certificate by the local DNV station. The certificate holder may then apply to the local DNV station for renewal of the certificate.

If there are any changes to the product design, the design documentation and / or the type approval certificate, information about this and revised documentation shall be enclosed the application sent to the local DNV unit.

Upon receipt of the request for renewal, the local DNV station

will arrange with the certificate retention survey as stated in 3.8 above.

The certificate retention survey report will constitute the basis for renewal of the type approval certificate.

Appendix A

Type Approval Programmes No. 6 - 800 Specified Requirements for Products

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- 811.91 Bus Trunk
- 821.10/20 Rotating Electric Machines
- 822.10 Transformers - Power and Measurement
- 822.20 Semiconductor Converters
- 823.10/20/30 Switchgear and Control gear rated voltage 1000V AC and 1200V DC
- 824.70 Instruments for switchboard
- 826.10 Luminaries
- 827.10/20 Electric Cables
- 827.11 Lightweight Electric Cables
- 827.30 Electric High Voltage Cables
- 827.50-1 Fibre Optical Cables
- 827.50-2 Data Communication Cables
- 827.50-3 Maritime LAN - Horizontal Cabling - Copper Permanent Link
- 827.91 Fire Protective Systems for Cables
- 828.20-2 Heat Shrinkable tubing
- 828.50 Cable ties
- 828.90 Cable glands.