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STANDARD FOR CERTIFICATION  
No. 1.2

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TYPE APPROVAL

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APRIL 2009

DET NORSKE VERITAS

# FOREWORD

DET NORSKE VERITAS (DNV) is an autonomous and independent foundation with the objectives of safeguarding life, property and the environment, at sea and onshore. DNV undertakes classification, certification, and other verification and consultancy services relating to quality of ships, offshore units and installations, and onshore industries worldwide, and carries out research in relation to these functions.

## Standards for Certification

Standards for Certification (previously Certification Notes) are publications that contain principles, acceptance criteria and practical information related to the Society's consideration of objects, personnel, organisations, services and operations. Standards for Certification also apply as the basis for the issue of certificates and/or declarations that may not necessarily be related to classification.

A list of Standards for Certification is found in the latest edition of Pt.0 Ch.1 of the "Rules for Classification of Ships" and the "Rules for Classification of High Speed, Light Craft and Naval Surface Craft".

The list of Standards for Certification is also included in the current "Classification Services – Publications" issued by the Society, which is available on request. All publications may be ordered from the Society's Web site <http://webshop.dnv.com/global/>.

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

## Main changes

A completely new document has been made.

Comments may be sent by e-mail to [rules@dnv.com](mailto:rules@dnv.com)

Comprehensive information about DNV and the Society's services is found at the Web site <http://www.dnv.com>

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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.

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## 1. General

### 1.1 Introduction

The scope of Classification requires that specified materials, components and systems intended for vessels and offshore units are certified according to the classification rules.

This part of the Classification scope is defined as the CMC (Certification of Materials and Components) services.

The certification will normally include both

- approval of design, and
- survey during production and/or of the final product

Type Approval is a procedure for approval of the design of materials, products and systems and may be used as an alternative to design approval “case by case”, see Standard for Certification 1.1.

The Type Approval procedure should normally be used for approval of standard design of product produced in series.

For most products and systems Type Approval is a voluntary alternative for approval of design. However, for certain products and systems as defined in the applicable chapters of the DNV Rules, Type Approval is a mandatory procedure for design approval.

### 1.2 Objective of this publication

The objective of this publication is to give a description of the Type Approval procedure and service including some of the principles behind the service.

### 1.3 Definition

Type Approval is a procedure for approval of design and is defined as:

*Approval of conformity with specified requirements on the basis of a systematic examination of one or more specimens of a product representative of the production.*

### 1.4 Scope of the Type Approval service

The scope of the Type Approval procedure will normally include the following activities:

- initial Type Approval survey at the manufacturer
- type testing of the material, product or system
- approval of the design
- issuance of Type Approval Certificate

Further details are given in item 3.0 below.

When a Type Approval is granted, it will be valid for a certain period of time.

In order to retain the Type Approval through the period of validity, periodical retention surveys shall be carried out, see item 4.0.

At the end of the validity period, a renewal of the Type Approval may be applied for. The procedure for renewal of the Type Approval is described in item 5.0.

### 1.5 Abbreviations

CMC	Certification of Materials and Components
DNV	Det Norske Veritas
EC	European Community
EU	European Union
MED	Marine Equipment Directive
TA	Type Approval
TAC	Type Approval Certificate
TE	Type Examination
TEC	Type Examination Certificate

## 2. Who can obtain Type Approvals

### 2.1 Conditions for Type Approval

Type Approval (TA) is a procedure for approval of design of a material, product or system. When compliance with the requirements is confirmed, a Type Approval Certificate (TAC) is issued.

In order to issue a TAC to a company for a certain material, product or system, the following conditions have to be fulfilled:

- the company must be the owner of the design, or have a written acceptance from the owner of the design that the TAC can be issued in the name of the company
- the company must take the responsibility for that the type approved materials, products and systems are manufactured in accordance with the requirements and the type approved design
- the company must have the authority and take the responsibility of changing the design if necessary to fulfil the requirements of the applicable standard(s)
- the company must accept the conditions for retention of the type approval and possible suspension or withdrawal of the TAC
- in those cases other companies are allowed to manufacture the materials, products or systems on the basis of the type approved design, a list of these manufacturers shall be made available before the TAC is issued. The name and address of these manufacturers will be listed in the TAC.

### 2.2 Standards used for Type Approval

The scope of the TA service is to verify compliance with specified requirements.

The specified requirements that can be used as the basis for a TA are found in the following standards:

- DNV Rules for Classification of Ships, and/or
- DNV Offshore Standards, and/or
- DNV Type Approval Programmes.

Common for these standards is that their ability to secure fitness for the intended application on board ships and offshore units have been evaluated by DNV and found to be satisfactory.

The DNV Rules, Offshore Standards and Type Approval Programmes are hereafter in this publication referred to simply as DNV Rules.

### 2.3 Conditions for Design Assessment for Type Approval

For companies not manufacturing their own design, but entrusting the manufacturing to one or more licensees, an alternative to the type approval is available. For such designers a “Design Assessment for Type Approval” will be given instead of a TAC.

The conditions for issuance of a “Design Assessment for Type Approval” to a company will be the same as for TA with exception that it will not be required that the company takes the responsibility for the individual products manufactured in compliance with the requirements and the approved design.

The standards used as basis for the “Design Assessment for Type Approval” are the same as for TA.

A “Design Assessment for Type Approval” may form the basis for a TA if a licensee manufacturing the product is requesting a TA.

## 2.4 Conditions for Type Examination

In those cases a company want to have the design of a product verified for compliance with other standards than those applicable for TA, a Type Examination (TE) can be applied for.

The basis for TE can be any national or international standard as long as the standards (in English language) include specific requirements to the design of the product. In general, these standards are not evaluated for application on DNV classed vessels.

All relevant requirements of the standard must be complied with before a TEC can be issued.

The conditions that have to be fulfilled by the company applying for TE are the same as for TA.

In those cases the examination of the design is carried out on the basis of an EU Directive and the belonging international standards, an EC Type-Examination will be done.

The TA, the Design Assessment for Type Approval and the TE are hereafter in this publication referred to simply as TA.

## 3. How to obtain Type Approval

### 3.1 Application for Type Approval

The TA shall be applied for in writing to the local DNV office. A DNV application form for TA (Form no 90.01a, 86.02a or 90.03a, as applicable) shall be filled in and submitted to DNV.

The application form shall ensure that necessary and needed information is available before the TA assessment is started.

### 3.2 Quotation

A quotation for TA may be obtained on request. The quotation will normally include information about:

- scope of work
- documentation to be submitted for assessment
- certificate to be issued by DNV
- conditions for retention and renewal of the certificate
- estimated delivery time of certificate
- fees and conditions of payment
- validity of quotation.

### 3.3 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 the TA is requested. The initial survey may be omitted if the products are frequently certified by DNV, periodical audits are carried out or if the manufacturer is certified to ISO 9001:2000 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 TA documentation.

### 3.4 Type testing

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

The type testing shall be carried out on specimens or products representative of the production. This means that the samples or products are to be made in conformity with approved documentation and by using tools, methods and processes of the normal production.

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.

A type testing programme shall be worked out by the manufacturer, sent to the local DNV station and agreed upon prior to the commencement 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.

Upon completion of the testing, the manufacturer shall issue a test report of the results including the conclusion of the testing. The report shall be sent to the local DNV station for endorsement. The type testing report is considered to be part of the TA documentation.

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. DNV may base its acceptance on the test reports issued by the recognized laboratory confirming compliance with the requirements.

### 3.5 Design assessment

In order to carry out the design assessment, different kind of information and documentation need to be submitted to the local DNV station. Since there is a considerable variation of product designs, the needed documentation will also vary considerably.

The needed and required information and documentation for specific products are listed in the standards forming the basis for the type approval, see item 2.2.

Normally, the documentation required by the standard will as relevant comprise the following kind of documentation:

- application for TA
- main drawings of product / system (or other equivalent documentation)
- instruction manuals (if any)
- design calculations (if any)
- documentation of reliability by calculation and / or in service experience (if required)
- information regarding the manufacturer’s type designation marking (or other marking) of the product for unambiguous identification of the product with TAC
- reference to technical specifications, etc., which are to be the basis for the TA
- specification of materials applied
- operating characteristics
- type testing programme
- type testing report
- proposed field of application and operational limitations
- functional description
- survey report from initial survey.

When documentation is submitted in paper format, normally three copies of the documentation shall be submitted to DNV. One of the copies will be returned to the applicant when the TA has been completed.

The documentation that forms the basis for the TA must be easily detectable at the applicant.

English language shall be used in the documentation.

### 3.6 Type Approval Certificate

A TAC will be issued to the applicant for the material, product or system in question when compliance with the requirements for the design is confirmed. The TAC will be given a validity of 2 or 4 years depending on type of material, product or system. The validity date will be either 30 June or 31 December.

The TAC will include information about:

- type of material, product or system
- designer's / manufacturer's name and address
- the rules/standard the product is found to comply with
- application and limitation
- validity
- product description
- product certification
- the documentation the TA has been based on
- tests carried out
- marking of the product
- certificate retention survey requirements (extent and frequency).

Only one original TAC will be issued. If any duplicate or copy of the TAC is needed, such copies may be produced by the company holding the certificate.

In those cases the TAC is issued to the Designer of the product and the manufacturing is done by other authorised companies, the authorised manufacturers shall be listed in the TAC.

All current TAC are listed on DNV Exchange on the Internet, see <http://exchange.dnv.com/tari/>.

In order to enable identification and traceability between the product and the TAC, the product or its packing shall be marked with the manufacturer's name, trade mark and the same type designations as given in the TAC.

**Note:**

The difference between a Type Approval Certificate and a Product Certificate should be observed.

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A *Type Approval Certificate* states that the *design* of a product type is in conformity with specified requirements. The certificate is valid for any number of products to be manufactured of that approved design within the validity period of the Type Approval Certificate.

A *Product Certificate* states that the *manufactured product* is in conformity with specified (design and production) requirements. A product certificate is issued for each manufactured product or product batch and is stating conformity with the specified requirements at the time of issue.

## 4. Retention of Type Approval

One of the conditions for the manufacturer to retain his TAC is that periodical surveys for retention of the certificate are successfully carried out.

The objective of the retention survey is to verify that the conditions for the TA are not altered since the TAC 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.

Retention surveys will be carried out at least every second year. When possible, this survey may be harmonised with normal surveys for product certification and / or other surveys and audits carried out.

Unscheduled surveys for retention of certificate may be carried out when there is reason to believe that the manufacturer has not adhered to the obligations stipulated in the TAC.

In those cases the type approved product is manufactured at other companies/locations than the "designer" of the product,

the retention survey has to be carried out at both designer and manufacturer.

A short survey report will be made and submitted to the manufacturer when the retention survey has been carried out.

## 5. Renewal of Type Approval

Approximately 3 months prior to the expiry date of the TAC, a reminder letter for renewal of the TA will be sent to the company holding the certificate. This letter will include information about:

- which TACs that are due for renewal
- estimated fee for the renewal (provided there are no changes to the product and / or the certificate)
- information about necessary retention surveys
- application for renewal of the TAC.

When the holder of the certificate has decided to request a renewal of the certificate, an application for renewal shall be submitted to the local DNV unit.

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

When the application for renewal is received, a retention survey for renewal of the certificate will be carried out and constitute some of the basis for the renewal, see item 4.0.

The renewal of the TA will be based on the current requirements of the standard being the basis for the TA.

If the TA is based on a "Design Assessment for Type Approval", see item 2.3, a confirmation from the holder of the Design Assessment for Type Approval stating that the manufacturer still has the permission to apply for TA on the basis of the Design Assessment for Type Approval, must be made available before the renewal can take place. If the Design Assessment for Type Approval is not renewed, no TA based on this will be renewed.

When the renewal has been finished, a new TAC will be issued and sent to the holder of the certificate together with one set of the type approved documentation, if any.

The listing of the type approved products on the Internet will be updated when the new / updated TAC has been issued, see item 3.6.

## 6. Suspension and withdrawal of Type Approval Certificates

If DNV finds it justified, an issued TAC may be suspended or withdrawn at any time.

The decision to suspend or withdraw a certificate is made by DNV.

Suspension or withdrawal of a certificate may take effect immediately or after a specified period of time. In special cases the withdrawal of a certificate may be made with retroactive effect.

When a certificate is suspended or withdrawn, DNV will:

- notify the holder of the certificate in writing
- make the information publicly available.

In the case of suspension, a time limit will be given for when the certificate will be withdrawn.

If a TAC is suspended or withdrawn, this will have no retroactive influence on the fee initially charged for the TA.

## **7. Fees**

Upon receipt of the application for TA, DNV will inform the applicant on the fee to be charged for the TA. Agreement on

the fee and terms of payment is to be reached between DNV and the applicant before work can be started.

A fee will be charged separately for the surveys carried out.