



SOCIALIST REPUBLIC OF VIETNAM

**QCVN 74: 2014/BGTVT**

**NATIONAL TECHNICAL REGULATION  
ON ANTI-FOULING SYSTEMS OF SEA-GOING SHIPS**

**HANOI 2014**

**Preamble**

National Technical Regulation on Anti-fouling systems of Sea-going ships QCVN 74: 2014/BGTVT is compiled by Vietnam Register, verified by the Ministry of Science and Technology, promulgated by the Minister of Transport under Circular No. 24/2014/TT-BGTVT dated June 30th 2014.

# NATIONAL TECHNICAL REGULATION ON ANTI-FOULING SYSTEMS OF SEA-GOING SHIPS

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# NATIONAL TECHNICAL REGULATION ON ANTI FOULING SYSTEMS OF SEA-GOING SHIPS

## I GENERAL REGULATIONS

### 1.1 Application and Scope

#### 1.1.1 Application

- 1 The present National Technical Regulation (hereinafter referred to as "Regulation") applies to the inspection and manufacture of systems which are used on sea-going ships surveyed and classed by Vietnam Register to control or prevent any attachment of unwanted organisms to those ships (hereinafter referred to as "Anti-fouling systems").
- 2 Notwithstanding the provisions of -1 above, this Regulation does not apply to any anti-fouling systems on ships of less than 24 m in length.

#### 1.1.2 Scope

The present Regulation is to apply to organizations and individuals involving activities relating to anti-fouling systems and falling under the application as specified in 1.1.1 above, including Vietnam Register (hereinafter referred to as "VR"); ship owners; ship yards; ship converting, renovating, repairing yards; ship operators.

### 1.2 References, Definitions and Explanations

#### 1.2.1 References

- 1 QCVN 21: 2010/BGTVT, "National Technical Regulation - Rules for the classification and construction of sea-going steel ships" promulgated in accordance with Circular 12/2010/TT-BGTVT dated 21 April 2010.
- 2 Circular No.32/2011/TT-BGTVT dated 19 April 2011 of the Ministry of Transport stipulated on amendment and supplement to a number of articles of the Regulations on verification registration of sea-going ships in Vietnam, accompanying Decision No. 51/2005/QD-BGTVT dated 12 October 2005 of the Minister of Transport.
- 3 AFS 2001: International Convention on the Control of Harmful Anti-Fouling Systems on Ships adopted by International Maritime Organization (IMO) on 05 October 2001.
- 4 Circular No.15/2013/TT-BGTVT dated 26 July 2013 of the Ministry of Transport stipulated on the form of certificate and book of technical safety survey and environment protection issued for sea-going ships, inland waterway ships and industrial products used on inland waterway ships.

#### 1.2.2 Definitions and explanations

Unless expressly provided elsewhere, the definitions in (1) to (6) below are to be applied in this Regulation:

- (1) "Anti-fouling system" means a coating, paint, surface treatment, surface, or device that is used on a ship to control or prevent attachment of unwanted organisms;
- (2) "The Convention" means the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001;

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- (3) "A ship at beginning stage of construction" is a ship complying with the definition specified in 1.2.14 Part 1A QCVN 21: 2010/BGTVT;
- (4) "Change of anti-fouling system" means the entire removal or the removal of any part of existing anti-fouling systems that do not comply with the requirements given in 3.2; or any changes in the types of such systems on ships;
- (5) "Replacement of anti-fouling system" means the application of any anti-fouling systems which are the same of those which were previously applied and is in compliance with the requirements given in 3.2;
- (6) "Length of ship" means the length defined in 1.2.1-8 Part 11 QCVN 21:2010/BGTVT.

## II TECHNICAL REGULATIONS

### CHAPTER 1 GENERAL

#### 1.1 General

##### 1.1.1 Equivalency

Anti-fouling systems which do not fully comply with the requirements of the Regulation may be accepted provided that they are deemed by VR to be equivalent to those specified in the Regulation.

## CHAPTER 2 SURVEYS

### 2.1 General

#### 2.1.1 Kinds of Surveys

1 Anti-fouling systems on ships registered or intended to be registered are subject to the following surveys:

(1) Registration Surveys (herein after referred to as "Initial surveys")

(a) Initial Surveys during Construction

Initial surveys carried out upon applications for those surveys submitted prior to any application of anti-fouling systems with respect to those ships to in which anti-fouling systems are to be applied during their Classification Surveys during Construction.

(b) Initial Surveys for ships not built under the Survey

Initial Surveys other than those specified in (a) above.

(2) Periodical Surveys;

(3) Occasional Surveys.

#### 2.1.2 Time of Surveys

1 Time of the Surveys is specified in the following (1) to (3).

(1) Initial Surveys are to be carried out at the time the application for registration is made;

(2) Periodical Surveys are to be carried out at the time of Docking Surveys for the Classification (e.g. the time given in 1.1.3-1(3) and (4) Part 1B QCVN 21: 2010/BGTVT);

(3) Occasional Surveys are to be carried out at the following occasions at times other than Initial Surveys or Periodical Surveys. Periodical Surveys can be substitute for the Occasional Surveys in cases where the causes of carrying out Occasional Surveys are cleared at the Survey.

(a) In cases where any anti-fouling systems on ships are changed or replaced. Repairs affecting less than 25% of anti-fouling systems need not be considered as changes or replacements of anti-fouling systems;

(b) In cases where any major conversion affecting anti-fouling systems on ships are carried out. The major conversions include:

(i) Conversions affecting any of the principal dimensions of the ship (length, breadth or depth);

(ii) Conversions with considerable changes of hull structures, including replacements and repairs of hull structural members with considerable changes of hull structures;

(iii) Other conversions but with considerable modifications of anti-fouling systems.

(c) In cases where any applications for surveys are submitted by owners;

(d) Other occasions when Occasional Surveys are considered to be necessary.



### **2.1.3 Periodical Surveys carried out in advance and Postponement**

The requirements for Periodical Surveys carried out in advance are to be in accordance with the provisions relevant to the Periodical Surveys for the Classification (e.g. 1.1.4 or 1.1.5 Part 1B QCVN 21: 2010/BGTVT).

### **2.1.4 Laid-up Ships**

Laid-up ships are not subject to those Periodical Surveys.

### **2.1.5 Preparation for Surveys and other related issues**

- 1 In cases where ships are to be surveyed in accordance with the Regulation, it is the responsibility of the owners to notify Surveyors of the locations where they wish to undergo such surveys. Surveyors are to be advised of surveys a reasonable time in advance so that such surveys can be carried out at proper times.
- 2 All such preparations as required for initial, periodical and other surveys specified in this Chapter as well as those which may be required by Surveyors in accordance with the provisions in this Chapter are the responsibility of Owners or their representatives.
- 3 Applicants for surveys are to arrange supervisors who are well conversant with all of the survey items required for the preparation of such surveys who are able to provide all necessary assistance to the Surveyor according to their requests during such surveys.
- 4 Surveys may be suspended in cases where necessary preparations have not been made, any appropriate supervisor is not present, or the Surveyor considers that the safety for execution of the survey is not ensured.
- 5 In cases where repairs are considered to be necessary as a result of surveys, the Surveyor notifies his findings to applicants of surveys. These applicants, when they receives such notification, is to obtain the Surveyor s verification after carrying out any necessary repairs.

## **2.2 Initial Surveys during Construction**

### **2.2.1 General**

In Initial Surveys during construction, issues related to anti-fouling systems on ships are to be examined in detail in order to ascertain whether it meets the relevant requirements in the Regulation.

### **2.2.2 Submission of Plans and Documents for Reference**

- 1 At Initial Surveys during construction, the following plans and documents are to be submitted to VR. Copies of them are to be maintained on board.
  - (1) Purchase order sheets of anti-fouling systems;
  - (2) Receipt of anti-fouling systems issued by manufacturers;
  - (3) Plans and/or documents showing specifications of anti-fouling systems applied to ships, including plans/documents showing areas where such anti-fouling systems are applied and their procedures, Material Safety Data Sheets (MSDS) for those anti-fouling systems applied to ship;
  - (4) Declaration letter certifying the anti-fouling system used on the ship complying with the requirements in 3.2 issued by the manufacturer, including the Chemical Abstract Service Registry Number (CAS No.).

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- 2 For ships of less than 400 gross tonnage, declarations signed by owners or their authorized agents and deemed appropriate by VR are to be carried out on board and their copies are to be submitted to VR.

### **2.2.3 Presence of Surveyor**

The presence of Surveyors is in general required at the following stages of work in relation to anti-fouling systems. However, it may be modified having after showing regard to the actual status of facilities, technical abilities and quality control at the places of manufacture.

- (1) In cases where materials, paints, etc. manufactured away from the site are being applied to the ship concerned;
- (2) Appropriate occasions during or after the works for anti-fouling systems.

## **2.3 Initial Surveys for ships not built under the Survey**

### **2.3.1 General**

- 1 In the Initial Survey for ships not built under the survey, issues related to the anti-fouling systems on ships as shown in (1) to (3) are to be examined in order to ascertain that they meets the relevant requirements of the Regulation. In cases where deemed necessary by VR, samplings of coatings such as any existing anti-fouling systems may be required to verify such compliance.
  - (1) In cases where those anti-fouling system complying with those requirements given in 3.2 have been applied to ships: the existing anti-fouling system and the system to be newly applied and its application works;
  - (2) In cases where any anti-fouling systems not complying with those requirements given in 3.2 have been applied to ships and compliant anti-fouling systems are applied to ships after the removal of any non-compliant anti-fouling systems: removal works of the existing non-compliant anti-fouling system and the compliant system to be newly applied and its application works;
  - (3) In cases where any anti-fouling systems not complying with those requirements given in 3.2 have been applied to ships and compliant anti-fouling systems are applied on barriers which cover any existing non-compliant anti-fouling systems and are applied in accordance with the provisions of 3.3: the barrier and the system to be newly applied and their application works.

### **2.3.2 Submission of Plans and Documents for Reference**

- 1 In the case of 2.3.1-1(1), the following plans and documents are to be submitted to VR. Copies of them are to be maintained on board.
  - (1) Purchase order sheets of anti-fouling systems;
  - (2) Receipts of any anti-fouling system issued by manufacturers;
  - (3) Plans and/or documents showing the specifications of any existing anti-fouling systems applied to ships (including any systems previously applied which remain as existing coatings), including plans/documents showing areas where anti-fouling systems are applied and their procedures, Material Safety Data Sheets (MSDS) for any anti-fouling systems applied to ships;

- (4) Certificates or declaration letters certifying any existing anti-fouling systems used on ships complying with those requirements given in 3.2 issued by manufacturers, including the Chemical Abstract Service Registry Number (CAS No.);
  - (5) Documents or certificates showing the inauguration of any works relating to existing anti-fouling systems issued by builders and/or contractors;
  - (6) In cases where anti-fouling systems are newly applied to ships, declaration letters certifying that any anti-fouling systems used on ships comply with those requirements given in 3.2 issued by manufacturers, including the Chemical Abstract Service Registry Number (CAS No.), and documents or certificates showing the inauguration of any works relating such anti-fouling systems issued by builders and/or contractors.
- 2** In the case of 2.3.1-1(2), the following plans and documents in addition to those listed in - 1(1), (2), (5) and (6) above are to be submitted to VR. Copies of them are to be maintained on board.
- (1) Plans and/or documents showing specifications of works for the removal of any existing anti-fouling systems on ships;
  - (2) Documents or certificates showing the inauguration of any works for the removal of existing anti-fouling systems issued by builders and/or contractors.
- 3** In the case of 2.3.1-1(3), the following plans and documents in addition to those listed in - 1(1), (2), (3), (5) and (6) above are to be submitted to VR. Copies of them are to be maintained on board.
- (1) Purchase order sheets of sealer coats;
  - (2) Receipts of sealer coats issued by manufacturers;
  - (3) Plans and/or documents showing specifications of works for covering all existing anti-fouling systems on ships;
  - (4) Certificates or declaration letters for sealer coats issued by manufacturers, including the Chemical Abstract Service Registry Number (CAS No.);
  - (5) Documents or certificates showing the inauguration of any works for covering existing anti-fouling systems on ships issued by builders and/or contractors.
- 4** For ships of less than 400 gross tonnage, declarations signed by owners or their authorized agents and deemed appropriate by VR are to be carried on board and copies are to be submitted to VR.

### **2.3.3 Presence of Surveyor**

The presence of Surveyors is in general required at the following stages of work in relation to anti-fouling systems. However, it may be modified paying regard to the actual status of facilities, technical abilities and quality control at such places of manufacture.

- (1) In cases where any materials, paints, etc. manufactured away from the site are being applied to the ship concerned;
- (2) In cases where any existing non-compliant anti-fouling systems on ships are removed or covered by barriers, appropriate occasions during or after such works for the removal/covering;
- (3) In cases where any compliant anti-fouling systems are newly applied to ships, appropriate occasions during or after the works for the anti-fouling system.

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### **2.4 Periodical Surveys**

#### **2.4.1 General**

- 1 During Periodical Surveys, management conditions of those plans and documents specified in 2.2.2 or 2.3.2 as applicable are to be examined. In cases where deemed necessary by VR, samplings of coatings such as anti-fouling systems may be required to verify such compliance.
- 2 During any Periodical Surveys carried out at the time of Docking Surveys in dry docks or on slipways, in addition to those items mentioned in -1 above, the conditions of any barriers covering existing anti-fouling systems are to be examined. In cases where deemed necessary by VR, samplings of coatings such as anti-fouling systems may be required to verify such compliance.
- 3 Notwithstanding the provisions of -1 and -2 above, Periodical Surveys substituting the Occasional Surveys in accordance with the provisions of 2.1.2-1(3), are to be carried out in accordance with those requirements given in 2.5.

### **2.5 Occasional Surveys**

#### **2.5.1 General**

- 1 In cases where anti-fouling systems are changed or replaced, Occasional Surveys are to be carried out and such anti-fouling systems on ships are to be confirmed as complying with those requirements of the Regulation in line with those requirements given in 2.3.
- 2 Notwithstanding the provisions of -1 above, in cases where anti-fouling systems are not changed and all of the plans and documents listed in 2.3.2 are submitted to VR and compliance with the Regulation can be confirmed from such plans/documents, on site inspections by Surveyors may be omitted.

**CHAPTER 3 ANTI-FOULING SYSTEMS AND BARRIERS****3.1 General****3.1.1 Application**

The provisions of this Chapter are applied to the anti-fouling systems of all ships falling under the application specified in 1.1 Section I of this Regulation.

**3.2 Anti-Fouling Systems****3.2.1 General**

Anti-fouling systems on ships are to be controlled so as to limit any substances deemed harmful to the marine environment from being used in anti-fouling systems in accordance with those requirements given in 3.2.2.

**3.2.2 Organotin Compounds**

Anti-fouling systems on ships are not to use any organotin compounds exceeding the content provided separately by VR.

In case where paint is used in anti-fouling system, the content of organotin compounds is not to exceed 2,500 mg total tin per kg of dry paint.

**3.3 Barriers****3.3.1 General**

In cases where any anti-fouling systems not complying with those requirements given in 3.2 have been applied to ships and cannot be removed, existing non-compliant systems are to be covered by sealer coats complying with requirements in (1) and (2) below to form a barrier against organotin compounds leaching out from underlying non-compliant anti-fouling systems.

- (1) Sealer coats are to be those paints recommended by manufactures to form barriers preventing organotin compounds from leaching out of any underlying non-compliant anti-fouling systems;
- (2) Colours of barriers are to be selected so that such barriers can be distinguished from any underlying anti-fouling systems and any newly applied anti-fouling systems on such barriers.

### III REGULATIONS ON MANAGEMENT

#### 1.1 General

##### 1.1.1 Installations Character(s)

- 1 Where the anti-fouling systems on ship comply with requirements in 3.2 Chapter 3 Section II of this Regulation, an installation notation "AFS" is affixed to the characters of classification defined in Chapter 2 Part 1A Section II QCVN 21: 2010/BGTVT.
- 2 Where the anti-fouling systems on ship comply with requirements in 3.3 Chapter 3 Section II of this Regulation, an installation notation "AFS-C" is affixed to the characters of classification defined in Chapter 2 Part 1A Section II QCVN 21: 2010/BGTVT.

#### 1.2 Regulations on technical supervisions

Anti-fouling systems on ships are to be surveyed in accordance with requirements in Chapter 2 Section II of this Regulation.

#### 1.3 Certification

##### 1.3.1 Certificate

- 1 For ships engaged on international voyages having anti-fouling system in compliance with requirements in this Regulation, a certificate in a form specified in Circular No.15/2013/TT-BGTVT is to be issued.
- 2 For ships not engaged on international voyages having anti-fouling system in compliance with requirements in this Regulation, a "Certificate of compliance for anti-fouling system on ship" is to be issued in the form specified in Appendix of this Regulation.
- 3 Certificates mentioned in -1 and -2 above are to be valid as long as the anti-fouling system on ship is maintained in accordance with requirements in this Regulation and are to be expired itself if that maintainain is not carried out in compliance with the Regulation or the system is altered, replaced without inspection and endorsed accordingly.

##### 1.3.2 Procedure for certification

Procedure for certification is to be in accordance with Article 9a Decision No. 51/2005/QĐ-BGTVT, supplemented by Paragraph 4 Article 1 of Circular No. 32/2011/TT-BGTVT of Ministry of Transport of Vietnam dated 19 April 2011.

## IV RESPONSIBILITIES OF ORGANIZATIONS, INDIVIDUALS

### 1.1 Responsibilities of ship owners and operators, yards of manufacturing, converting, renovating and repairing the anti-fouling systems

#### 1.1.1 Ship owners and Operators

To apply all relevant requirements in this Regulation for anti-fouling systems in manufacturing, converting, renovating, operating in order to ascertain and maintain good technical condition of the systems.

#### 1.1.2 Yards of manufacturing, converting, renovating and repairing the anti-fouling systems

- 1 Are to be capable in terms of warehouse, manufacturing shop, building facilities etc. and competent manpower to meet requirement for new manufacture, conversions, renovations and repairs of the anti-fouling systems.
- 2 Are to comply with standards of quality, safety while manufacturing, converting, renovating and repairing the anti-fouling systems.
- 3 Are to undergo VR's supervision on the technical quality and safety of the anti-fouling systems.

### 1.2 Responsibilities of Vietnam Register

#### 1.2.1 Supervision

To assign surveyors having competence and of sufficient standard to carry out the technical supervision during manufacture, conversions, renovations, repairs and operation of the anti-fouling systems in accordance with technical requirements specified in this Regulation.

#### 1.2.2 To give instructions for implementation/application

To give instructions for the application of requirements of this Regulation to ship owners and operators, yards of manufacture, conversions, renovations and repair of anti-fouling systems, inspection offices of Vietnam Register throughout the country.

#### 1.2.3 To amend and supplement the Regulation

Based on the fact, Vietnam Register is to have responsibility to petition the Ministry of Transport for amendment, supplementation of the Regulation where necessary or on schedule specified in the Law of Standards and Technical Regulations.

### 1.3 Responsibilities of the Ministry of Transport

The Ministry of Transport (Science and Technology department) is responsible for verifying on the regular or random basis the implementation of this Regulation by relating organizations.

**V IMPLEMENTATION**

- 1.1** It is the responsibility of Vietnam Register to manage the survey system, technical supervision, classification and technical registration of anti-fouling systems on sea-going ships. It is also to include organizing the printing, dissemination and instructions for the application of this Regulation for organizations and individuals falling within the scope of this Regulation.
- 1.2** In case of inconsistency between the requirements in this Regulation and those in other rules, standards or technical regulations relating to anti-fouling systems, the requirements of this Regulation are to prevail over those of others.
- 1.3** In case the documents referred to in this Regulation are amended, supplemented or replaced, the latter is to prevail over the former.
- 1.4** In case of inconsistency between the requirements of this Regulation and those of international Conventions to which Vietnamese government is a member, the requirements of those international Conventions are to prevail over the requirements of this Regulation.
- 1.5** This Regulation and its amendment are to apply to anti-fouling systems installed on sea-going ships of which the beginning stage of construction is on or after effective date of this Regulation. For sea-going ships of which the beginning stage of construction is before effective date of this Regulation, the compliance is to be made at the first docking survey on or after effective date of this Regulation.



## APPENDIX - PHỤ LỤC

### MẪU GIẤY CHỨNG NHẬN – FORM OF CERTIFICATE (FOR SHIPS NOT ENGAGED IN INTERNATIONAL VOYAGES)



CỤC ĐĂNG KIỂM VIỆT NAM  
VIETNAM REGISTER

### GIẤY CHỨNG NHẬN PHÙ HỢP CHO HỆ THỐNG CHỐNG HÀ CỦA TÀU

Cấp theo các quy định của Quy chuẩn kỹ thuật quốc gia: QCVN 74: 2014/BGTVT

Số: .....

CỤC ĐĂNG KIỂM VIỆT NAM cấp theo các quy định của "Quy chuẩn kỹ thuật quốc gia về hệ thống chống hà tàu biển" (QCVN 74: 2014/BGTVT, sau đây gọi tắt là "Quy chuẩn").

#### Đặc điểm tàu

Tên tàu	Số đăng ký hoặc hồ hiệu	Cảng đăng ký	Tổng dung tích	Số phân cấp

Hệ thống chống hà được kiểm soát theo Chương 3 Mục II của Quy chuẩn đã không được sử dụng trong quá trình hoặc sau khi đóng tàu này .....

Hệ thống chống hà được kiểm soát theo Chương 3 Mục II của Quy chuẩn đã được sử dụng cho tàu trước đây, nhưng đã được loại bỏ

bởi<sup>1</sup> ..... vào ngày: .....

Hệ thống chống hà được kiểm soát theo Chương 3 Mục II của Quy chuẩn đã được sử dụng cho tàu trước đây, nhưng đã được phủ bằng một lớp bọc

bởi<sup>1</sup> ..... vào ngày: .....

Hệ thống chống hà được kiểm soát theo Chương 3 Mục II của Quy chuẩn đã được sử dụng cho tàu trước ngày<sup>2</sup>:

nhưng phải được loại bỏ hoặc phủ bằng một lớp bọc trước ngày<sup>3</sup>: .....

#### CHỨNG NHẬN RẰNG:

1 Tàu đã được kiểm tra theo Chương 2 Mục II của Quy chuẩn; và

2 Đợt kiểm tra cho thấy hệ thống chống hà của tàu tuân thủ các yêu cầu áp dụng ở Chương 3 Mục II của Quy chuẩn.

Ngày hoàn thành kiểm tra làm cơ sở để cấp giấy chứng nhận này: .....

Cấp tại: ..... Ngày: .....

**CỤC ĐĂNG KIỂM VIỆT NAM**

Ghi chú:

- 1 Tên của cơ sở sửa chữa;
- 2 Ngày có hiệu lực của biện pháp kiểm soát;
- 3 Ngày hết hạn của bất kỳ giai đoạn áp dụng quy định ở 1.5 Mục V của Quy chuẩn.