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# **RULES FOR ANTI-FOULING SYSTEMS ON SHIPS**

**RULES**

## **ESTABLISHMENT**

Rule No.62      5th September 2008

Resolved by Technical Committee on 25th June 2008

Approved by Board of Directors on 22nd July 2008

Rule No.62      5th September 2008  
“Rules for anti-fouling systems on ships” has been established as follows:

## **RULES FOR ANTI-FOULING SYSTEMS ON SHIPS**

### **Chapter 1    GENERAL**

#### **1.1      General**

##### **1.1.1    Application**

**1**    The Rules for Anti-Fouling Systems on Ships (hereinafter referred to as “the Rules”) apply to systems that are used on ships to control or prevent any attachment of unwanted organisms to those ships classed with NIPPON KAIJI KYOKAI (hereinafter referred to as “the Society”) and intended to be registered as Anti-Fouling Systems on Ships under **Chapter 3 of the Regulations for the Classification and Registry of Ships**.

**2**    Notwithstanding the provisions of **-1** above, the Rules do not apply to any anti-fouling systems on ships of less than 24 *m* in length.

##### **1.1.2    Equivalency**

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

##### **1.1.3    Definitions**

For the purpose of the Rules, the following definitions **(1)** to **(5)** apply:

- (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.
- (3) “A ship at beginning stage of construction” are those ships complying with the definition specified in **2.1.44, Part A of the Rules for the Survey and Construction of Steel Ships (2.1.52, Part 1 of the Rules for High Speed Craft** for a high speed craft).
- (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**.

##### **1.1.4    Installations Character(s)**

Anti-fouling systems on ships complying with those requirements given in **3.2** will be distinguished by the character “*AFS*”. However, in cases where compliant anti-fouling systems are applied on barriers which have covered any existing underlying non-compliant anti-fouling systems in accordance with the provisions of **3.3**, such systems will be distinguished by the characters “*AFS·C*”.

## Chapter 2 SURVEYS

### 2.1 General

#### 2.1.1 Kinds of Surveys

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

- (1) Registration Surveys
  - (a) Registration Surveys during Construction  
Registration 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) Registration Surveys for ships not built under the Survey  
Registration Surveys other than those specified in (a) above
- (2) Periodical Surveys
- (3) Occasional Surveys

#### 2.1.2 Time of Surveys

Time of the Surveys is specified in the following (1) to (3). Surveys specified in (1) and (3) are in general to be carried out in dry docks or on slipways.

- (1) Registration 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 **1.3.1-1(3) and (4), Part B of the Rules for the Survey and Construction of Steel Ships**).
- (3) Occasional Surveys are to be carried out at the following occasions at times other than Registration 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
  - (b) In cases where any major conversion affecting anti-fouling systems on ships are carried out
  - (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 B of the Rules for the Survey and Construction of Steel Ships**).

#### 2.1.4 Ships Laid-up

Ships laid-up are not subject to those Periodical Surveys specified in **2.1.1-1**.

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

**1** In cases where ships are to be surveyed in accordance with the Rules, 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 registration, 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 Registration Surveys during Construction**

### **2.2.1 General**

In Registration 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 Rules.

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

**1** At Registration Surveys during construction, the following plans and documents are to be submitted to the Society. 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.*)

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

### **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 Registration Surveys for ships not built under the Survey**

### **2.3.1 General**

In the Registration 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 meet the relevant requirements of the Rules. In cases where deemed necessary by the Society, samplings of coatings such as any existing anti-fouling systems may be required to verify such compliance.

- (1) In cases where those anti-fouling systems 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)**, the following plans and documents are to be submitted to the Society. 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 to such anti-fouling systems issued by builders and/or contractors

**2** In the case of **2.3.1(2)**, the following plans and documents in addition to those listed in **-1(1)**, **(2)**, **(5)** and **(6)** above are to be submitted to the Society. 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(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 the Society. 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 the Society are to be carried on board and copies are to be submitted to the Society.

### **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

## **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 the Society, 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 the Society, 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(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 Rules 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 the Society and compliance with the Rules 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.

### **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 the Society.

### **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 deemed appropriate by the Society to form a barrier against organotin compounds leaching out from underlying non-compliant anti-fouling systems.

### **EFFECTIVE DATE AND APPLICATION**

- 1.** The effective date of the amendments is 17 September 2008.

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# **GUIDANCE FOR ANTI-FOULING SYSTEMS ON SHIPS**

**GUIDANCE**

## **ESTABLISHMENT**

Notice No.66      5th September 2008

Resolved by Technical Committee on 25th June 2008

Notice No.66 5th September 2008

“Guidance for anti-fouling systems on ships” has been established as follows:

## **GUIDANCE FOR ANTI-FOULING SYSTEMS ON SHIPS**

### **Chapter 1 GENERAL**

#### **1.1 General**

##### **1.1.1 Application**

The “length” referred to in **1.1.1-2 of the Rules** is a length as defined in the International Convention on Load Lines, 1966, as modified by the Protocol of 1988 relating thereto, or any successor Convention.

##### **1.1.4 Installations Character(s)**

In cases where anti-fouling systems on ships designated by the installations character “*AFS·C*” are changed in accordance with the provisions of **2.5.1-1 of the Rules**, the installations character is changed to “*AFS*”.

## Chapter 2 SURVEYS

### 2.1 General

#### 2.1.2 Time of Surveys

**1** For the application of the Rules, repairs affecting less than 25% of anti-fouling systems need not be considered as changes or replacements of anti-fouling systems. In cases where anti-fouling systems not complying with those requirements given in **3.2 of the Rules** have been applied to ships and covered in accordance with the provisions of **3.3 of the Rules**, the areas of any underlying anti-fouling systems are to be taken as the areas of such anti-fouling systems for any calculations. In any case, any newly applied anti-fouling systems are to comply with those requirements given in **3.2 of the Rules** and plans and documents relevant to any repair work or their copies are to be maintained on board in the same manner as those plans and documents required by the Registry Survey specified in **2.2.2** and **2.3.2 of the Rules**.

**2** Major conversions affecting anti-fouling systems on ships as referred to in **2.1.2(3)(b) of the Rules** are conversions which fall into any of the categories **(1)** to **(3)** given below:

- (1) Conversions affecting any of the principal dimensions of the ship (length, breadth or depth)
- (2) Conversions with considerable changes of hull structures, including replacements and repairs of hull structural members with considerable changes of hull structures
- (3) Conversions other than those listed in **(1)** and **(2)** above, but with considerable modifications of anti-fouling systems

**3** For the purpose of the Rules, appropriate attention is to be paid to the following issues in relation to the implementation schemes of the Convention.

- (1) Ships which were at the beginning stage of construction before 17 September 2008 and on which anti-fouling systems complying with those requirements given in **3.2 of the Rules** before that date are subject to initial surveys for the Convention carried out until the first time of any change or replacement of their anti-fouling systems on or after that date.
- (2) For ships which were at the beginning stage of construction before 17 September 2008 and on which anti-fouling systems not complying with those requirements given in **3.2 of the Rules** have been applied before that date, any existing non-compliant anti-fouling systems on these ships are to be removed or covered and then compliant anti-fouling systems are to be applied to them before that date. These ships are subject to initial surveys for the Convention carried out until 16 September 2010 or the first time of any changes or replacements of their anti-fouling system on or after 17 September 2008, whichever is earlier.

### 2.2 Registration Surveys during Construction

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

A declaration deemed appropriate by the Society referred to in **2.2.2-2 of the Rules** means those declarations prepared according to the model form given in Appendix 2 to Annex 4 of the Convention.

## **2.3 Registration Surveys not built under the Survey**

### **2.3.1 General**

**1** In cases where deemed necessary by the Society referred to in **2.3.1 of the Rules** means such cases where those plans and/or documents specified in **2.3.2 of the Rules** are found to be unsatisfactory and it is considered necessary that existing coatings are to be examined.

**2** With respect to the provisions of **2.3.1 of the Rules**, samplings of coatings are to be carried out in accordance with the following:

- (1) Sample points on hulls are to be selected as per Surveyor direction. In cases where necessary for verification of the overall conditions of the coatings of ships, in general, 9 points from the bottom and both sides in forward, middle and afterward parts are to be taken.
- (2) Samplings of coatings and analysis are to be made by manufacturers or public agents deemed appropriate by the Society referring to the Annex of resolution *MSC.104(49)*.
- (3) The criteria for the results of such analysis are to be in accordance with those requirements given in **3.2 of the Rules**.

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

**1** In cases where those plans and documents specified in **2.3.2-1 of the Rules** cannot be prepared, it is considered that such anti-fouling systems on ships do not comply with those requirements given in **3.2 of the Rules**. In such cases, Registration Surveys are to be carried out in accordance with the provisions of **2.3.1(2) or (3) of the Rules**.

**2** Regarding the preparation of those plans and documents specified in **2.3.2-1(1) of the Rules**, attention is to be paid to any possibilities of change in those areas where such anti-fouling systems were applied.

**3** With respect to the provisions of **2.3.2-2 and -3 of the Rules**, in cases where parts of any existing anti-fouling systems are removed, but any remaining parts are covered by means deemed appropriate by the Society, in addition to those plans and documents specified in **2.3.2-2 and -3 of the Rules**, additional plans and/or documents clearly showing the removed parts and covered parts are to be submitted to the Society.

**4** Declarations deemed appropriate by the Society referred to in **2.3.2-4 of the Rules** means those declarations prepared according to the model form given in Appendix 2 to Annex 4 of the Convention.

### **2.3.3 Presence of Surveyor**

With respect to those provisions of **2.3.3-1(2) of the Rules** for removal work of existing anti-fouling systems, taking account of the history of paints, it is to be appropriately examined that any anti-fouling systems not complying with the requirements in **3.2 of the Rules** do not remain in the coatings on ships after the completion of such work.

## **2.4 Periodical Surveys**

### **2.4.1 General**

**1** In cases where deemed necessary by the Society referred to in **2.4.1-1 of the Rules** means those cases such as where those plans and documents specified in **2.2.2 or 2.3.2 of the Rules** cannot be prepared and in those cases where any evidence of considerable paint work on hulls after previous surveys.

**2** In case where deemed necessary by the Society referred to in **2.4.1-2 of the Rules** means cases

other than those where it is clear that any barriers or anti-fouling systems applied on barriers remain on hulls.

**3** Samplings of coatings as specified in **2.4.1 of the Rules** are to be carried out in accordance with the provisions of **2.3.1-2**.

## Chapter 3 Anti-Fouling Systems and Barriers

### 3.2 Anti-Fouling Systems

#### 3.2.2 Organotin Compounds

Content provided separately by the Society referred to in **3.2.2 of the Rules** is to be taken as 2,500 *mg* total tin per *kg* of dry paint.

### 3.3 Barriers

#### 3.3.1 General

**1** Sealer coats deemed appropriate by the Society referred to in **3.3.1 of the Rules** means those paints recommended by manufactures to form barriers preventing organotin compounds from leaching out of any underlying non-compliant anti-fouling systems.

**2** For the purpose of the Rules, 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.

#### EFFECTIVE DATE AND APPLICATION

- 1.** The effective date of the amendments is 17 September 2008.