THE SOCIALIST REPUBLIC OF VIETNAM

QCVN 80: 2014/BGTVT

NATIONAL TECHNICAL REGULATION ON CONTROL OF NOISE LEVELS ON BOARD SHIPS

HANOI - 2014

QCVN 80: 2014/BGTVT

Introduction

National Technical Regulation on Control of Noise Levels on Board Ships, QCVN 80:2014/BGTVT is compiled by Vietnam Register, verified by the Ministry of Science and Technology, promulgated by Minister of Transport under Circular No. 68/2014/TT-BGTVT dated 13 November 2014.

This regulation is compiled on the basis of the mandatory requirements of the Code on Noise Levels on Board Ships adopted by the International Maritime Organization (IMO) under Resolution MSC.337(91).

NATIONAL TECHNICAL REGULATION
ON CONTROL OF NOISE LEVELS ON BOARD SHIPS

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NATIONAL TECHNICAL REGULATION
ON CONTROL OF NOISE LEVELS ON BOARD SHIPS

I GENERAL REGULATIONS

1.1 Application and Scope

1.1.1 Application

1 This National Technical Regulation (hereinafter referred to as the "the Regulation") applies to ships (hereinafter referred to as the "Ships") of 1600 gross tonnage and above, engaged in international voyages, inspected and classed by Vietnam Register, as follows:

(1) for which the building contract is placed on or after 1 July 2014; or

(2) in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2015; or

(3) the delivery of which is on or after 1 July 2018.

2 Ships to which the Regulation does not apply:

(1) dynamically supported craft;

(2) high-speed craft;

(3) pipe-laying barges;

(4) crane barges;

(5) mobile offshore drilling units;

(6) pleasure yachts not engaged in trade;

(7) ships of war and troopships;

(8) ships not propelled by mechanical means;

(9) pile driving vessels;

(10) dredgers; and

(11) fishing vessels.

3 Ships not covered by the above -1 and -2 may apply the requirements of this Regulation if the shipowner so requests.

4 In case of repairs, alterations and modifications of a major character and outfitting related thereto of existing ships, it shall be ensured that areas, in which changes have been made, meet the requirements of this Regulation for new ships, insofar as VR deems reasonable and practicable.

5 This Regulation is not intended to apply to passenger cabins and other passenger spaces, except in so far as they are work spaces and are covered by the provisions of This Regulation.

6 The Regulation covers only noise sources related to the ship such as machinery and propulsion but does not include wind/wave/ice noise, alarms, public address systems, etc.

7 For ships designed for and employed on voyages of short duration, or on other services involving short periods of operation of the ship, Table 4.1 may be applied only with the ship in the port condition.

1.1.2 Scope

This Regulation applies to organizations and individuals engaged in activities related to ships and falling under the application as specified in 1.1.1-1, including Vietnam Register (hereinafter referred to as "VR"); shipowners; ship designing centers; yards of building, altering, repairing and operating ships.

1.2 References and definitions

1.2.1 References in the Regulation

1 QCVN 21: 2010/BGTVT: National technical regulation - Rules for the Survey and Construction of Steel ships, issued in accordance with Circular No.12/2010/TT-BGTVT dated 21 April, 2010 of the Ministry of transport.

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 ISO 717-1: 1997, revised 1: 2006 - Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation.

4 IEC 61672-1 (2002-05) - Electroacoustics - Sound level meters - Part 1: Specifications.

5 ISO 4869-2: 1994 - Acoustics - Hearing protectors - Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn.

6 IEC 61260 (1995) - Electroacoustics. Octave-band and fractional-octave-band filters.

7 ISO 9612: 2009 - Acoustics - Determination of occupational noise exposure - Engineering method.

8 ISO 17025 - General requirements for the competence of testing and calibration laboratories.

9 IEC 60942 (2003-01) - Electroacoustics - Sound calibrators.

10 TCVN 6775: 2000 - Acoustics - Sound Level Meter.

11 TCVN 7192-1: 2002 - Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation.

12 TCVN 9800-2: 2013 - Acoustics - Hearing protectors - Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn.

13 TCVN 9799: 2013 - Acoustics - Determination of occupational noise exposure - Engineering method.

1.2.2 Definitions

1 This Regulation uses the definitions given in 1.2 Part 1A Section I of QCVN 21: 2010/BGTVT.

2 In addition, for the purpose of this Regulation, the following definitions and terms are used:

(1) IMO is the International Maritime Organization.

(2) Accommodation spaces are the spaces used for cabins, offices (for carrying out ship's business), hospitals, messrooms, recreation rooms (such as lounges, smoke rooms, cinemas, gymnasiums, libraries and hobbies and games rooms).

(3) Weighted sound reduction index, R_w, is a single number value expressed in decibels (dB) which describes the overall sound insulation performance (in laboratory) of walls, doors or floors provides (refer to ISO 717-1:1997, amendment 1:2006).

(4) A-weighted equivalent continuous sound level $L_{Aeq}(T)$ is the A-weighted sound pressure level of a continuous steady sound that, within a measurement time interval, T, has the same mean square sound pressure as a sound under consideration which varies with time. It is expressed in decibels A (dB(A)) and is given by the following equation:

$$L_{Aeq,T} = 10log\frac{1}{T}\int_0^T \frac{p_a(t)^2}{p_0^2}dt$$

Where:

T: measurement time

$p_a(t)$: A-weighted instantaneous sound pressure

$p_0 = 20\mu Pa$ (the reference level)

(5) A-weighted sound pressure level or noise level is the quantity measured by a sound level meter in which the frequency response is weighted according to the A-weighting curve (see IEC 61672-1).

(6) C-weighted equivalent continuous sound level $L_{Ceq}(T)$ is the C-weighted sound pressure level of a continuous steady sound that within a measurement time interval, T, has the same mean square sound pressure as a sound under consideration which varies with time. It is expressed in decibels C (dB(C)) and is given by the following equation:

$$L_{Ceq,T} = 10log\frac{1}{T}\int_0^T \frac{p_c(t)^2}{p_0^2}dt$$

Where:

T: measurement time

$p_c(t)$: C-weighted instantaneous sound pressure

$p_0 = 20\mu Pa$ (the reference level)

(7) C-weighted peak sound level L_{Cpeak} is the C-weighted maximum instantaneous sound pressure level. It is expressed in decibels C (*dB*(*C*)) and is given by the following equation:

$$L_{Cpeak} = 10log\frac{P_{peak}^2}{P_0^2}$$

where:

P_{peak} : C-weighted maximum instantaneous sound pressure

$P_0 = 20\mu Pa$ (the reference level)

(8) C-weighted sound pressure level or noise level is the quantity measured by a sound level meter in which the frequency response is weighted according to the C-weighting curve (see IEC 61672-1 (2002-05)).

(9) Continuous room is room that needs to have crew members continuously or for extended periods of time during normal operation.

(10) Noise is the all sound which can result in hearing impairment, or which can be harmful to health or be otherwise dangerous or disruptive.

(11) Calibration check is the calibration of the instrument at the site of measurement before and after the measurement at the site, using standard calibrated signals or calibrated to zero.

(12) Reference calibration is the calibration of the instrument, which is performed by a calibration and accredited testing laboratory, with reference to national or international standards.

(13) Duty stations are those spaces in which the main navigating equipment, the ship's radio or the emergency source of power are located or where the fire recording or fire control equipment is centralized and also those spaces used for galleys, main pantries, stores (except isolated pantries and lockers), mail and specie rooms, workshops other than those forming part of the machinery spaces and similar such spaces.

(14) Hearing protector is a device worn to reduce the level of noise reaching the ears. Passive noise-cancelling headsets block noise from reaching the ear. Active noise-cancelling headphones generate a signal that cancels out the ambient noise within the

headphone.

(15) Integrating sound level meter is a sound level meter designed or adapted to measure the level of the mean squared time averaged A-weighted and C-weighted sound pressure.

(16) Machinery spaces are any space which contains steam or internal-combustion machinery, pumps, air compressors, boilers, oil fuel units, major electrical machinery, oil filling stations, thrusters, refrigerating, stabilizing, steering gear, ventilation and air conditioning machinery, etc., and trunks to such spaces.

(17) Navigating bridge wings are those parts of the ship's navigating bridge extending towards the ship's sides.

(18) Port condition is the condition in which all machinery solely required for propulsion is stopped.

(19) Repairs, conversions and modifications of a major character are means a conversion of a ship which substantially alters the dimensions, carrying capacity or engine power of the ship, which change type of the ship, which otherwise so alters the ship that, if it were a new ship, it would become subject to the relevant provisions.

(20) Sound means the energy that is transmitted by pressure waves in air or other materials and is the objective cause of the sensation of hearing.

(21) Sound pressure level L_p is the sound pressure level expressed in decibel (dB), of a sound or noise given by the following equation:

$$L_p = 10log\frac{p^2}{p_0^2}$$

where:

p: sound pressure, in Pascal

$p_0 = 20\mu Pa$ (the reference level)

(22) Voyages of short duration is the voyages where the ship is not generally underway for periods long enough for seafarers to require sleep, or long off-duty periods, during the voyages.

(23) Fishing vessel is a vessel used commercially for catching fish, whales, seals, walrus or other living resources of the sea.

(24) Code is Code on noise levels on board ships of IMO.

II TECHNICAL REGULATIONS

CHAPTER 1 GENERAL

1.1 Submission of Plans and Documents for Approval

1.1.1 Plans and Documents submitted to VR Approval

1 Plans

Plans of living rooms (vertical and horizontal projections, including deck, including details of deck, soundproofing characteristics of the bulkhead and deck in the area living).

2 Measuring plan

(1) Measurement plan is to be prepared and submitted for approval, which serves the main purpose is to identify points to measure to demonstrate and confirm compliance with noise regulations.

(2) The measuring plan is to include the following information:

(i) Required design information, including the ship's noise characteristics, including arrange drawings, indicates the locations of all sources of noise and noise equipment. The information is to be detailed so that the Surveyor can determine compliance with the requirements of this Regulation.

(ii) Measurement locations: specify details, on appropriate drawings, all spaces or areas to be measured. In addition, the measurement locations are also to be indicated on the drawings.

(iii) Measurement and processing equipment: methods and instruments used to measure and collect data. Details of the characteristics of the measuring equipment shall include the type of measuring device, accuracy, sensitivity and calibration.

(iv) Data analysis: methods, software and equipment used for data analysis.

(v) Measuring plan: includes information about the intended measurement program.

(vi) Measuring person.

1.1.2 Plans, documents for reference

Plans and other documents that VR considers necessary are to be submitted to VR for reference.

1.1.3 Time to submit plans, documents

Plans and documents mentioned in 1.1.1 and 1.1.2 above are to be submitted to VR at the time of submitting the files, plans for classification as specified in 2.1.2 Part 1B Section II of QCVN 21: 2010/BGTVT.

CHAPTER 2 MEASURING EQUIPMENT

2.1 Technical character of the measuring equipment

2.2 Sound level meter

Measurement of sound pressure levels is to be carried out using precision integrating sound level meters subject to the requirements of this chapter. Such meters are to be manufactured to IEC 61672-1(2002-05) type/class 1 standard as applicable, or to an equivalent standard acceptable to VR. Class/Type 1 sound level meters manufactured according to IEC 651/IEC 804 or TCVN 6775: 2000 may be used until 1 July 2016.

2.1.2 Octave filter set

The octave filter set is to conform to IEC 61260 (1995) or the equivalent recognized standard.

2.2 Use of equipment

2.2.1 Calibration

Sound calibrators are to comply with IEC 60942 (2003-01) and are to be approved by the manufacturer of the sound level meter used.

2.2.2 Checking instruments and calibration equipment

Calibrator and sound level meter is to be verified at least every two years by a national standard laboratory or a competent laboratory accredited according to ISO 17025 (2005) as corrected by (Cor 1:2006).

2.2.3 Microphone wind screen

A microphone wind screen is to be used when taking readings outside and below deck where there is any substantial air movement. The wind screen is not to affect the measurement level of similar sounds by more than 0.5 dB(A) in “no wind” conditions.

CHAPTER 3 NOISE MEASUREMENTS

3.1 General

3.1.1 Noise levels

1 Measurements of the A-weighted equivalent continuous sound level, L_{Aeq}(T) are to be made for the purpose of ensuring compliance with Table 4.1.

2 Measurements of the C-weighted equivalent continuous sound level L_{Ceq}(T) and the C-weighted peak sound level L_{Cpeak} are to be made in spaces where L_{Aeq}(T) exceeds 85 dB(A) for the purpose of determining appropriate hearing protection according to the HML-method described in ISO 4869-2: 1994 or TCVN 9800-2: 2013.

3.2 Personnel requirements

3.2.1 Measuring personnel

The person conducting measurements is to have knowledge in the field of noise, sound measurements and the handling of the equipment used as well as training concerning the procedures specified in this Regulation.

3.3 Measuring condition

1 Measurements are to be made during sea trials with the following conditions set forth in (1) to (8):

(1) Measurements are to be taken with the ship in the loaded or ballast condition.

(2) Measurements are to be taken at a course that is as straight as possible.

(3) Measurements are to be taken at normal service speed and no less than 80% of the maximum continuous rating (MCR). Controllable pitch propellers and Voith-Schneider propeller (if any) are to be in the normal seagoing position. This does not apply to special vessels and ships with special propulsion and power configurations.

(4) All machinery, navigation instruments, radio and radar sets, etc., normally in use at normal seagoing condition and levels, including squelch are to operate throughout the measurement period. However, neither energized fog signals nor helicopter operations shall take place during the taking of these measurements.

(5) Measurements in spaces containing emergency diesel engine driven generators, fire pumps or other emergency equipment that would normally be run only in emergency, or for test purposes, are to be taken with the equipment operating. Measurements are not intended for determining compliance with maximum noise level limits specified in Table 4.1, but as a reference for personal protection of seafarers carrying out maintenance, repair and test activities in such spaces.

(6) Mechanical ventilation, heating and air-conditioning equipment are to be in normal operation, taking into account that the capacity is to be in accordance with the design

conditions.

(7) In general, doors and windows are to be closed.

(8) Spaces are to be furnished with all necessary equipment. Measurements without soft furnishings may be taken but no allowance is to be made for their absence. Rechecks or follow-up readings may be taken with soft furnishings included.

3.3.2 Equipment used for a long time

1 In cases where stabilizers are provided, measurements are to be taken at positions around such machinery when in operation as well as in adjacent accommodation spaces and duty stations. For thrusters, etc. which are intended for short temporary use only, measurements are to be taken for reference at 40% thruster power and the ship's speed is to be appropriate for thruster operation.

2 In the case of ships with Dynamical Positioning (DP), which is intended for use under normal working conditions, additional noise measurements at the DP mode, which would approximate station-holding at or above 40% of maximum thruster power for design environmental conditions that the ship operates in, are to be made at control station, duty stations, and accommodation spaces to ensure that the maximum noise level limits in these spaces are not exceeded.

3.3.3 Operating in the port condition

Measurements are to be taken in machinery spaces with the machinery operating in the port condition.

3.3.4 Environmental conditions

1 In cases where the depth of water is less than 5 times the depth or if there are large reflective surfaces near the ship, these conditions should be noted in the noise test report.

2 Meteorological conditions such as wind and rain as well as sea state are to be such that they do not influence the measurements. Wind force 4 and 1 m wave height is not to be exceeded. If this cannot be achieved, the actual conditions are to be reported.

3 Are to be taken to ensure that external sources of sound do not affect the noise levels on the vessels at the measure position. If necessary, the measured values can be corrected for noise in a steady state consistent with the total energy principle.

3.3.5 Measurement procedures

1 During noise level measurements, only seafarers necessary for the operation of the ship and persons taking the measurements are to be present in the space concerned.

2 Sound pressure levels result are to be taken as decibels using the weight-A filter (dB(A)) and/or weight-C (dB(C)) and, if necessary, the octa ranges between 31.5 and 8.000 Hz.

3 The noise level measurements are to be taken over a time period until stable readings are found or at least 15 seconds.

4 Measured indicators are only taken the nearest decibel. If the first decibel of the measured index is greater than or equal to 5 dB, the measured index is to take the nearest integer higher.

3.3.6 The exposure time of the noise

The level of noise exposure of the crew was determined based on ISO 9612: 2009 or TCVN 9799: 2013.

3.3.7 Correction

The sound level equipment is to be calibrated both before and after measurement.

3.4 Points of measurement

3.4.1 Points of measurement

1 Points of measurement are to be selected in accordance with (1) to (5):

(1) Unless otherwise specified, a microphone is to be measured at a height of 1.2 m to 1.6 m from the deck.

(2) The distance between two measurement points is to be at least 2 m.

(3) In large spaces not containing machinery, measurements are to be taken at intervals not greater than 10 *m* throughout the space including positions of maximum noise level.

(4) Measurement of the bulkhead of the space room is to be at least 0.5 m.

(5) To be measured at locations where people work, including information stations

3.4.2 Duty stations

Noise levels are to be measured at all work positions. Additional measurements are to be in room containing duty stations if there are differences in noise levels that may occur near the duty stations.

3.4.3 Air intake and exhaust

When measuring noise levels, the microphone is, where possible, not to be placed within a 30° angle away from the direction of the gas stream and not less than a distance of 1 *m* from the edge of the intake or exhaust opening of engines, ventilation, air conditioning and cooler systems, and as far as possible from reflecting surfaces.

3.5 Measurement in machinery spaces

1 Measurements are to be taken at the principal working and control stations of the seafarers in the machinery spaces and in the adjacent control rooms, if any. Special attention being paid to telephone locations and to positions where voice communication and audible signals are important.

2 Measurements are not normally to be taken closer than 1 *m* from operating machinery, or from decks, bulkheads or other large surfaces, or from air inlets. Where this is not

possible, measurement is to be taken at a position midway between the machinery and adjacent reflecting surface.

3 Measurement is to be made at a height of between 1.2 m to 1.6 m above the deck, platform or walkway in the following locations:

(1) The following equipment, etc. at a distance of 1 m from, and at intervals not greater than 3 m around:

(a) Main turbines or engines at each level;

(b) Main gearing;

(c) Turbo blowers;

(d) Purifiers;

(e) Electrical alternators and generators;

(f) Boiler firing platforms;

(g) Forced and/or induced draught fans;

(h) Compressors.

(2) Local control stations and the machinery control rooms;

(3) All other locations which would normally be visited during routine inspection, adjustment and maintenance;

(4) Workshops within the machinery space.

4 Where the measured sound pressure level in dB(A) at the intervals specified -3(1) above does not vary significantly, it will not be necessary to record each position. However, full measurement at representative positions and at the positions of maximum sound pressure level is to be made and recorded, subject to at least four measurements being recorded at each level.

3.6 Measurements in Navigation Spaces

Measurements are to be taken on both navigating bridge wings but are to only be taken when the navigating bridge wing to be measured is on the lee side of the ship.

3.7 Measurements in Accommodation Spaces

1 One measurement is to be taken in the middle of the space. The microphone is to be moved slowly horizontally and/or vertically over a distance of 1m. Additional measurements are to be performed at other points if appreciable differences, i.e. greater than 10 dB(A), in the level of sound inside the room occur.

2 The number of measurement cabins is to be not less than 40% of total number of cabins. Cabins which are obviously affected by noise, i.e. cabins adjacent to machinery or casings, are to be considered in any case.

3 For ships with a large number of crew cabins, such as passenger/cruise ships, it will be acceptable to reduce the number of measurement positions. The selection of cabins to be tested is to be representative for the group of cabins being tested by selecting those cabins in closer proximity to noise sources.

4 On open deck, measurements are to be taken in any areas provided for the purpose of recreation.

3.8 Measurements in Normally Unoccupied Spaces

1 Measurements are to be taken in all locations with unusually high noise levels where seafarers may be exposed, even for relatively short periods, and at intermittently used machinery locations.

2 Noise levels need not be measured for normally unoccupied spaces, holds, deck areas and other spaces which are remote from sources of noise. In cargo holds, at least three microphone positions in parts of holds where personnel are likely to carry out work are to be used.

CHAPTER 4 MAXIMUM ACCEPTABLE SOUND PRESSURE LEVELS

4.1 General

The results of calculations for maximum acceptable noise level limits are shown below in Table 4.1. In large spaces with multiple locations, the results of each position are to be compared to the limit.

Table 4.1 Noise level limits (unit: dB(A))

Designation of rooms and spaces	Tonnage cross of ship	
	1600 ≤ GT < 10.000	GT ≥ 10.000
Work spaces		
Machinery spaces	110	110
Machinery control rooms	75	75
Workshops other than those forming part of machinery spaces	85	85
Non-specified work spaces (other work areas)	85	85
Navigation spaces		
Navigating bridge and chartrooms	65	65
Look-out posts (incl. navigating bridge wings and windows)	70	70
Radio room (with radio equipment operating but not producing audio signals)	60	60
Rader rooms	65	65
Accommodation spaces		
Cabin and hospitals	60	55
Messrooms	65	60
Recreation rooms	65	60
Open recreation areas (external recreation areas)	75	75
Offices	65	60
Service spaces		
Galleys, without food processing equipment	75	75

Serveries and pantries	75	75
Normally unoccupied spaces		
Spaces mention at 3.8	90	90

Note: If the maximum noise levels in Table 4.1 are exceeded when machinery is operating, stay is to be limited to very short

4.2 Noise survey report

A noise survey report is to be made for each ship. (See Appendix) The measuring points are to be marked on a general arrangement plan, or on accommodation drawings and are be identified. The noise survey report is always to be carried on board and be accessible to the crew.

CHAPTER 5 AIRBORNE SOUND INSULATION PROPERTIES BETWEEN ACCOMMODATION SPACES

5.1 Airborne sound insulation properties

1 The airborne sound insulation properties for bulkheads and decks within the accommodation area are to satisfy the reduction index (R_w) specified in (1) to (4), in according to Part 1 of ISO 717-1: 1996 as amended (1: 2006) or TCVN 7192-1: 2002.

(1) Cabin to cabin: R_W = 35

(2) Mess rooms, recreation rooms, public spaces and entertainment areas to cabins and hospitals: R_W = 45

(3) Corridor to cabin: R_W = 30

(4) Cabin to cabin with communicating door: R_W = 30

5.2 Test of airborne sound insulation properties

Airborne sound insulation properties for materials are to be determined by laboratory tests in accordance with ISO 10140-2:2010 and recognized by VR.

CHAPTER 6 HEARING PROTECTORS AND WARNING

6.1 General

Hearing protector devices in accordance with 6.2 are to be provided on ships have spaces with a nominal noise level greater than 85 dB (A) for all crew members, which are to be in those spaces, to use.

6.2 Requirements for hearing protectors

Hearing protectors should be able to reduce the sound pressure level to 85 dB (A) or less. The selection of hearing protectors should be in accordance with the HML method described in ISO 4869-2: 1994 or TCVN 9800-2: 2013. Noise cancellation technology may be used if the headset is functional equivalent to the hearing protection in the off state.

6.3 Warning notices

Where the noise level in machinery spaces or other spaces is greater than 85 dB(A), entrances to such spaces are to carry a warning notice comprising symbol and supplementary sign in the working language of the ship (See Table 6.1 and Fig. 6.1). If only a small part of the spaces has such noise levels, each location and device is to be clearly visible at eye level, visible from each direction.

Table 6.1 Examples of warning notices

Signs at the entrance to noisy rooms	
80-85 dB(A)	High-noise level - Use hearing protectors
85-110 dB(A)	Dangerous noise - Use of hearing protectors mandatory
110-115 dB(A)	Caution: Dangerous noise - Use of hearing protectors mandatory - Short stay only
> 115 dB(A)	Caution: Excessively high-noise level - Use of hearing protectors mandatory - No stay longer than 10 minutes

Fig. 6.1 Examples of warning notices

III REGULATIONS ON MANAGEMENT

1.1 General

Ships falling under the application of 1.1.1-1 Section I of the Regulation are to have approved design, inspected and verified by VR for the compliance with the requirements of this Regulation.

1.2 Annual surveys

At annual surveys as specified in 1.1.3-1(1) Part 1B Section II of QCVN 21: 2010/BGTVT, it is to be confirmed that the noise test report is carried onboard and hearing protectors are in good condition.

1.3 Documents issued to ships

The documents issued by VR are to include:

(1) Approved design documents, including plans and data specified in 1.1 Section II of the Regulation;

(2) Noise survey report.

1.4 Procedure for certification

Procedure for design approval and inspection, certification of ship's compliance with this Regulation is to be in accordance with Articles 9a, 9c of Decision No. 51/2005/QĐ-BGTVT, supplemented by Paragragh 4 Article 1 of Circular No. 32/2011/TT-BGTVT of Ministry of Transport of Vietnam dated 19 April 2011.

IV RESPONSIBILITIES OF ORGANIZATIONS AND INDIVIDUALS

1.1 Responsibilities of shipowners, designers, yards of ship building, conversion and modification

1.1.1 To fully comply with the relevant provisions of this Regulation.

1.1.2 Subject to the technical inspection and supervision of VR in accordance with the requirements of this Regulation.

1.2 Responsibilities of Vietnam Register

1.2.1 Design approval, technical supervision

To assign surveyors having competence and of sufficient standard to carry out the design approval and technical supervision 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, designers, yards of building, converting and repairing ships, 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 this Regulation annually.

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 approval, survey, technical supervision in compliance with this Regulation. 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 noise level onboard the ship, the requirements of this Regulation are to prevail over those of others.

1.3 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.

1.4 In case the documents referred to in this Regulation are amended, supplemented or replaced, the latter is to prevail over the former.

1.5 In case that the compliance with any of requirements of this Regulation is impracticable, or in case of necessity, the decision is to be made by the Ministry of Transport on a case by case basis.

APPENDIX

Noise Survey Report (Sample)

Noise survey report is to include the following contents:

CỤC ĐĂNG KIỂM VIỆT NAM
VIETNAM REGISTER

BÁO CÁO KIỂM TRA TIẾNG ỒN

NOISE SURVEY REPORT

Cấp theo các quy định của Quy chuẩn kỹ thuật quốc gia: QCVN 80: 2014/BGTVT

Issued under the provisions of the National Technical Regulation: QCVN 80: 2014/BGTVT

1 Các thông số cơ bản của tàu

Ship Particulars

1.1 Tên tàu

Name of ship

1.2 Cảng đăng ký

Port of registry

1.3 Tên và địa chỉ của chủ tàu, đại lý hoặc công ty khai thác tàu

Name and address of shipowner, managing owner or agent

1.4 Tên và địa chỉ của nhà máy đóng tàu

Name and address of shipbuilder

1.5 Nơi đóng

Place of build

1.6 Số IMO

IMO number

1.7 Tổng dung tích

Gross tonnage

1.8 Loại tàu

Type of ship

1.9 Các kích thước chính của tàu: Chiều dài, chiều rộng, chiều cao mạn, chiều chìm lớn nhất (đường nước tải trọng mùa hè)

Ship's dimensions - length, breadth, depth, maximum draught (summer load line)

1.10 Lượng chiếm nước ở chiều chìm lớn nhất

Displacement at maximum draught

1.11 Ngày đặt ky

Date of keel laying

1.12 Ngày bàn giao tàu

Date of delivery

2 Các thông số cơ bản của máy tàu

Machinery Particulars

2.1 Máy chính

Propulsion machinery

1 Cơ sở chế tạo, loại, số lượng máy

Manufacturer, type, and number of units

2 Công suất liên tục lớn nhất (kW)

Maximum cont. rating - power (kW)

3 Vòng quay trục ở chế độ khai thác thông thường theo thiết kế (vòng/phút)

Normal designed service shaft speed (rpm)

4 Công suất ở chế độ khai thác thông thường (kW)

Normal service rating - power (kW)

2.2 Các động cơ đi-ê-den phụ

Auxiliary diesel engines

1 Cơ sở chế tạo, loại

Manufacturer, and type

2 Công suất định mức và số lượng

Output (kW), and number of units

2.3 Hộp giảm tốc chính

Main reduction gear

2.4 Loại chân vịt (bước cố định, biến bước, Voith-Schneider)

Type of propeller (fixed propeller, controllable pitch propeller, Voith-Schneider propeller)

1 Số chân vịt và số cánh

Number of propellers and number of blades

2 Vòng quay trục chân vịt thiết kế (vòng/phút)

Designed propeller shaft speed (rpm)

2.5 Các nội dung khác (trong trường hợp cấu hình hệ đẩy tàu và năng lượng đặc biệt)

Other (in the case of special propulsion and power configurations)

2.6 Thông gió buồng máy

Engine room ventilation

1 Cơ sở chế tạo, kiểu và số lượng

Manufacturer, type and number of units

2 Đường kính quạt (m), vòng quay (vòng/phút) và vòng quay có thể thay đổi (Có/không)

Fan diameter (m), fan speed (rpm) and variable speed (Yes/No)

3 Lưu lượng (m^3/h) và tổng áp suất (Pa)

Airflow capacity (m^3/h) and total pressure (Pa)

3 Người đo và thiết bị đo

Measuring Instrumentation and Personnel

3.1 Cơ sở chế tạo thiết bị đo, kiểu và số seri của thiết bị đo mức âm, micro, thiết bị lọc, đầu chắn gió, thiết bị hiệu chuẩn và thiết bị khác

Instrumentation maker, type and serial No. of sound level meter, microphone, filter, windscreen, calibrator and other equipment

3.2 Hiệu chuẩn thiết bị đo mức âm (ngày bắt đầu/kết thúc hiệu chuẩn)- tại đợt kiểm tra bởi cơ quan có thẩm quyền.

Calibration of sound level meter (date calibration started/finished)- at survey by competent authority

3.3 Người và công ty thực hiện đo

Identification of persons/organizations carrying out measurements

4 Các trạng thái trong quá trình đo

Conditions During Measurement

4.1 Ngày đo, thời gian bắt đầu và thời gian kết thúc đo

Date of measurement, start time, and completion time

4.2 Vị trí của tàu trong quá trình đo

Ship's position during measurement

4.3 Trạng thái tải của tàu

Loading condition of the ship

4.4 Các trạng thái trong quá trình đo

Conditions during measurement

1 Chiều chìm mũi

Draught forward

2 Chiều chìm đuôi

Draught aft

3 Độ sâu của nước bên dưới ky tàu

Depth of water under keel

4.5 Trạng thái thời tiết

Weather conditions

1 Cấp gió

Wind force

2 Trạng thái biển

Sea state

4.6 Tốc độ tàu

Ship speed

4.7 Vòng quay thực tế của trục chân vịt (vòng/phút)

Actual propeller shaft speed (rpm)

4.8 Bước của chân vịt

Propeller pitch

4.9 Vòng quay của máy chính (vòng/phút)

Propulsion machinery speed (rpm)

4.10 Công suất máy chính (kW)

Propulsion machinery power (kW)

4.11 Số lượng máy chính hoạt động

Number of propulsion machinery units operating

4.12 Số lượng các động cơ đi-ê-den phụ hoạt động

Number of diesel auxiliary engines operating

4.13 Số lượng các máy phát điện tua bin hoạt động

Number of turbo generators operating

4.14 Chế độ tốc độ thông gió buồng máy (cao/thấp/thay đổi)

Engine room ventilation speed mode (high/low/variable)

4.15 Chế độ tải của động cơ (% công suất liên tục lớn nhất)

Engine load (%MCR)

4.16 Các thiết bị phụ khác hoạt động (thiết bị thông gió, sưởi, điều hòa không khí đang hoạt động)

Other auxiliary equipment operating (ventilation, heating and air conditioning equipment in operation)

5 Các thông số đo

Measuring Data

1 Các giới hạn về tiếng ồn (dB(A))

Noise limits dB(A)

Các mức áp suất âm đo được L_{Aeq} (dB(A)), L_{Ceq} (dB(C)) và L_{Cpeak} (dB(C))

Measured sound pressure levels L_{Aeq} dB(A), L_{Ceq} dB(C) and L_{Cpeak} dB(C)

Lưu ý: Chỉ phải đo mức áp suất âm L_{Ceq} và L_{Cpeak} trong trường hợp vượt quá 85dB(A) và yêu cầu có thiết bị bảo vệ thính giác

Note: *Measurement of sound pressure level L_{Ceq} and L_{Cpeak} is to be done only in the case of exceeding 85dB(A) and hearing protectors are required.*

2 Các không gian làm việc

Work spaces

(1) Buồng máy

Machinery spaces

(2) Buồng điều khiển máy

Machinery control rooms

(3) Xưởng

Workshops

(4) Các buồng làm việc không nêu tên khác

Non-specified workspaces

3 Lầu lái

Navigation spaces

(1) Lầu lái và buồng hải đồ

Navigating bridge and chartrooms

(2) Các vị trí trực canh, bao gồm cả cánh gà và cửa sổ lầu lái

Look-out posts, including navigating bridge wings and windows

(3) Buồng vô tuyến điện

Radio rooms

(4) Buồng ra đa

Radar rooms

4 Các buồng sinh hoạt

Accommodation spaces

(1) Ca bin và buồng y tế

Cabins and hospitals

(2) Phòng ăn

Messrooms

(3) Phòng vui chơi giải trí

Recreation rooms

(4) Các khu vực giải trí hở

Open recreation areas

(5) Các văn phòng

Offices

5 Các buồng phục vụ

Service spaces

(1) Bếp không có thiết bị chế biến thức ăn hoạt động

Galleys, without food processing equipment operating

(2) Buồng để thức ăn

Serveries and pantries

6 Các buồng thông thường không có người

Normally unoccupied spaces

6 Các biện pháp giảm tiếng ồn chính (nêu các biện pháp được sử dụng)

Main Noise Abatement Measures (list measures taken)

7 Các lưu ý (nêu các miễn giảm so với Bộ luật)

Remarks (list any exceptions to the Code)

Tên, địa chỉ, vị trí, ngày và chữ ký của người đo

Name, address, place, date and signature of person taking measurements