

Subject :

Navigation bridge visibility

NKTECHNICAL INFORMATION

No. : 254

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To: Ship owners and Shipbuilders concerned

Requirements to navigation bridge visibility specified in Reg.22 of chapter V of the 1994 Amendments to 1974 SOLAS should be applied for those ships the keels of which are laid or which are at a similar stage of construction on or after 1 July 1998. The Society is currently developing Part 'W' of the Rules to correspond with this regulation. The items to be considered at the design stage of new ships are detailed in the attached table.

In line with the coming into effect of Part W, for those new buildings laid down on or after 1 July 1998, drawings mentioned below will be required to submit us for approval in addition to the other documents currently necessary.

(1) **General arrangement of the bridge including the following information**

- Conning position, Additional conning position (if necessary), Main steering position, Windows, doors, etc.
- Detail of window construction.
- Positions of clear view screens, wipers, etc.

(2) **Drawings showing the horizontal and vertical fields of vision from a conning position**

- Of all navigational conditions (in full load condition / in light ballast condition etc.), the condition with the greatest restriction of vision is to be presumed.
- Blind sectors caused by cargo, cargo gear and other obstructions outside the wheel house and the positions of obstacles are to be indicated.
- The view of the sea surface (distance) from the conning position forward on either side (port & starboard) and the eye position are to be stated.

Additionally, it is necessary to clearly state the vessel's conning position and additional conning position(s) in the general arrangement plan which is required to be permanently displayed on board. In cases where pre-examination for navigational visibility is necessary, please send the above mentioned drawings to the Society's Hull Department in head office, Tokyo.

Please feel free to contact the Hull Department if you have inquiry :
NK Hull Department : Fax no.:+81 3 5226 2017 or Tel: +81 3 5226 2019.

ClassNK

NIPPON KAIJI KYOKAI
4-7, KIOI-CHO, CHIYODA-KU,
TOKYO 102-8567, JAPAN.

TELEX: J22975 CLASSNK
2324280 CLASNKJ
CABLE: CLASSNK TOKYO

SOLAS Reg. V/22 (a)	Regulation	Interpretation of ClassNK
(i) The view of the sea surface	The view of the sea surface from the conning position shall not be obscured by more than two <u>ship lengths</u> , or 500m, whichever is the less, forward of the bow to 10° on either side under all conditions of draught, trim and deck cargo.	① Of all possible navigational conditions (such as departure / arrival ballast, light ballast, full container load, full lumber load, etc.), it is necessary to give consideration to the condition with the greatest restriction of vision except under special conditions such as when docking. ② In principle, the length of the ship for freeboard as defined in the Society's Rules (Lf) is used as 'ship length' in this respect. ③ When restrictions are required, it is anticipated that load height of cargo will be limited for container and lumber carriers and that the ballast condition will be restricted in the case of tankers and bulk carriers.
(ii) Blind sectors	No blind sector caused by cargo, cargo gear or other obstructions outside of the wheel house forward of the beam which obstructs the view of sea surface as seen from the conning position, shall exceed 10°. The total arc of blind sectors shall not exceed 20°. The clear sectors between blind sectors shall be at least 5°. However, in the view described in paragraph (a)(i), each individual blind sector shall not exceed 5°.	The provision states that the blind sectors forward of the bow to 10° on either side shall not exceed 5°. However, in cases where the view is obstructed by deck cranes, etc. and the blind sectors exceed 5°, it may be acceptable, in conformity with ISO 8468, to provide two additional conning positions on both sides within 5m of the conning position to cover the blind sectors and provide a clear view ahead.
(iii) The horizontal field of vision	The horizontal field of vision from the conning position shall extend over an arc of not less than 225° abaft the beam on either side of the ship.	Continuous provision of windows on the side walls of wheel houses is not required. It is acceptable in cases where the windows are provided with more than 22.5° abaft the beam on side and no influence is given on watching.
(vii) Windows	The height of the lower edge of the navigation bridge front windows above the bridge deck shall be kept as low as possible. In no case shall the lower edge present an obstruction to the forward view as described in this regulation.	1000mm above the deck is the standard lower edge height.
(viii) Windows	The upper edge of the navigation bridge front windows shall allow a forward view of the horizon, for a person whose height of eye is 1800mm above the bridge deck at the conning position, when the ship is pitching in heavy seas. The administration, if satisfied that a 1800mm height of eye is unreasonable and impractical may allow a reduction in height of eye but not less than 1600mm.	① 2000mm above the deck is the standard. ② In cases where the eye level ('height of eye') needs to be reduced to 1600mm, this may be alleviated, ③ however, it is necessary for the owner to obtain approval from the flag administration for each individual ship.
(ix) Windows	Framing between navigation bridge windows shall be kept to a minimum and shall not be installed immediately forward of any workstation.	The frames of the windows are preferably to be not more than 150mm in width. It is not necessary to regard the framing as a blind sector.