Automatic and Remote Control of Machinery

Object of Amendment

Rules for the Survey and Construction of Steel Ships Part D
Rules for Automatic and Remote Control Systems
Rules for the Survey and Construction of Inland Waterway Ships
Guidance for the Survey and Construction of Steel Ships Part D
Guidance for the Survey and Construction of Inland Waterway Ships

Reason for Amendment

Although remote control devices are required for periodically unattended machinery spaces, they may also be provided for manned machinery spaces. IACS Unified Requirements (UR) M47 and M43 each specify safety requirements for main propulsion machinery remote control devices installed on navigation bridges: UR M43 specifies requirements for M0-ships (ships with unmanned machinery spaces), whereas UR M47 specifies requirements for non-M0-ships (ships with manned machinery spaces). IACS recently reviewed these UR to determine whether any of their requirements could be consolidated. As a result of its review, IACS decided to incorporate UR M47 into UR M43 and adopted UR M43(Rev.1) in February 2024 to amend relevant requirements so that they apply to remote control devices of main propulsion machinery installed on navigation bridges regardless of whether a ship is a M0-ship.

In addition to the above, the application of some requirements in the NK Rules related to the automatic and remote control of control systems, safety systems and alarm systems was unclear with respect to machinery type and machinery characteristics. The Society decided, therefore, to take advantage of the opportunity provided by the adoption of UR M43(Rev.1), and review general requirements related to the automatic and remote control of such systems.

Accordingly, relevant requirements are amended in accordance with UR M43(Rev.1) and the Society's internal review of its requirements for control and other systems related to the automatic and remote control of machinery.

Outline of Amendment

The main details of this amendment are as follows:

(1) Amends requirements for the remote control devices of main propulsion machinery in accordance with M43(Rev.1) to specify they apply to even non-M0-ships.
(2) Amends the following requirements related to automatic and remote control.
    (a) Clarifies that override capability for overspeed protective devices for emergency generator engines is not required even for engines smaller than 220 *kW*.
    (b) Clarifies that low-temperature alarms for fuel using the burners for boilers and thermal oil installations are only required when fuel temperature (viscosity) control is carried out.
    (c) Clarifies requirements for lubrication oil low-pressures only apply when lubrication pumps are installed.
    (d) Deletes requirements related to the installation of alarm devices (lubrication oil low-pressure, etc.) necessary for remote control from navigation bridges for non-M0-ships.

Effective Date and Application

(1) Amendment (1) above
This amendment applies to ships for which the date of contract for construction is on or after 1 January 2025.
(Notwithstanding the above, this amendment may be applied in advance of the effective date upon shipowner request.)

(2) Amendment (2) above
Effective date of this draft amendment is the date of establishment.

ID: DD24-07

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part D MACHINERY INSTALLATIONS** **Chapter 18 AUTOMATIC AND REMOTE CONTROL** **18.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **18.3.3 Bridge Control Devices*** Bridge control devices are to comply with the following **(1)** through **(6)** as well as requirements in **18.3.2**. ((1) to (4) are omitted.) (5) Operations following any setting of the bridge control device including reversing from the maximum ahead service speed in case of emergency are to take place in an automatic sequence and with time intervals acceptable to the machinery. (6) For steam turbines, a slow-turning device is to be provided which operates automatically or manually to prevent any risk of rotor distortion due to propulsion turbines being stopped for long periods of time. Discontinuation of this automatic turning from the bridge must be possible.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part D MACHINERY INSTALLATIONS** **Chapter 18 AUTOMATIC AND REMOTE CONTROL** **18.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **18.3.3 Bridge Control Devices*** Bridge control devices are to comply with the following **(1)** through **(4)** as well as requirements in **18.3.2**. ((1) to (4) are omitted.) (Newly added) (Newly added)	UR M43(Rev.1) M43.3 UR M43(Rev.1) M43.5 and Note

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 January 2025.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction is before the effective date.

3. Notwithstanding the provision of preceding **2.**, the amendments to the Rules may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amended	Original	Remarks
18.5 Automatic and Remote Control of Electric Generating Sets **18.5.2 Emergency Source of Electric Power** Automatic or remote control devices for reciprocating internal combustion engines driving emergency generators are to comply with the following requirements: (1) Alarm devices, to be activated in the event of any of the abnormal conditions given in **Table D18.2**, are to be provided. (2) Devices referred to in **(1)** are to provide alarms at both local and navigation bridge. Visual alarms at navigation bridge may be of group indication. (3) Each reciprocating internal combustion engine with a maximum continuous output of 220 *kW* or over is to be provided with an overspeed protective device specified in **2.4.1-4**. (4) When devices, other than overspeed protective devices, are provided to shutdown reciprocating internal combustion engines, means are to be provided to override those devices automatically during navigation. (5) The silencing of the audible alarms from navigation bridge is not to cause the silencing of the audible alarms at local positions.	**18.5 Automatic and Remote Control of Electric Generating Sets** **18.5.2 Emergency Source of Electric Power** Automatic or remote control devices for reciprocating internal combustion engines driving emergency generators are to comply with the following requirements: (1) Alarm devices, to be activated in the event of any of the abnormal conditions given in **Table D18.2**, are to be provided. (2) Devices referred to in **(1)** are to provide alarms at both local and navigation bridge. Visual alarms at navigation bridge may be of group indication. (3) Each reciprocating internal combustion engine with a maximum continuous output of 220 *kW* or over is to be provided with an overspeed protective device specified in **2.4.1-4**. (4) When devices, other than those referred to in **(3)**, are provided to shutdown reciprocating internal combustion engines, means are to be provided to override those devices automatically during navigation. (5) The silencing of the audible alarms from navigation bridge is not to cause the silencing of the audible alarms at local positions.	Clarification (Consistent with UR M63)
18.6 Automatic and Remote Control of Auxiliary Machinery **18.6.3 Thermal Oil Installations** Thermal oil installations arranged to be automatically	**18.6 Automatic and Remote Control of Auxiliary Machinery** **18.6.3 Thermal Oil Installations** Thermal oil installations arranged to be automatically	

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
controlled are to comply with the following: (1) Control devices Control devices are to comply with **18.4.2-1** and **-2**, also with **9.12.2-1** and **-2**. (2) Safety devices Safety devices are to comply with **9.12.1** and **9.12.2-5**. (3) Alarm devices Thermal oil installations are to be provided with alarm devices which operate in the following cases: (a) When the safety devices required in **(2)** have operated. (b) When the temperature of the fuel at the inlet of burner has fallen <u>in cases where heated fuel is used.</u>	controlled are to comply with the following: (1) Control devices Control devices are to comply with **18.4.2-1** and **-2**, also with **9.12.2-1** and **-2**. (2) Safety devices Safety devices are to comply with **9.12.1** and **9.12.2-5**. (3) Alarm devices Thermal oil installations are to be provided with alarm devices which operate in the following cases: (a) When the safety devices required in **(2)** have operated. (b) When the temperature of the fuel at the inlet of burner has fallen.	Clarification (Added in consideration of the use of fuel oil)
EFFECTIVE DATE AND APPLICATION **1.** The effective date of this draft amendment is [the date of establishment].		

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
RULES FOR AUTOMATIC AND REMOTE CONTROL SYSTEMS **Chapter 3 CENTRALIZED MONITORING AND CONTROL SYSTEMS FOR MACHINERY** **3.3 Additional Requirements for Safety Measures** **3.3.2 Main Propulsion Machinery or Controllable Pitch Propellers** -1. (Omitted) -2. Main propulsion machinery in ships in which steam turbines are used as main propulsion machinery (excluding electric propulsion ships) ((1) to (3) are omitted.) (Deleted) (4) Alarm devices Steam turbines used as main propulsion machinery are to be provided with alarm devices which activate in the event of any of those abnormal conditions given in **Table 3.2**.	**RULES FOR AUTOMATIC AND REMOTE CONTROL SYSTEMS** **Chapter 3 CENTRALIZED MONITORING AND CONTROL SYSTEMS FOR MACHINERY** **3.3 Additional Requirements for Safety Measures** **3.3.2 Main Propulsion Machinery or Controllable Pitch Propellers** -1. (Omitted) -2. Main propulsion machinery in ships in which steam turbines are used as main propulsion machinery (excluding electric propulsion ships) ((1) to (3) are omitted.) (4) Spinning devices Automatic spinning devices or other suitable measures are to be employed to prevent any risk of rotor distortion due to propulsion turbines being stopped for long periods of time. (5) Alarm devices Steam turbines used as main propulsion machinery are to be provided with alarm devices which activate in the event of any of those abnormal conditions given in **Table 3.2**.	Transfer to 18.3.3(6), Part D

Amended	Original	Remarks
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 1 January 2025. **2.** Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction is before the effective date. **3.** Notwithstanding the provision of preceding **2.**, the amendments to the Rules may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner. * "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29. IACS PR No.29 (Rev.0, July 2009) **1.** The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding. **2.** The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder. For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided: (1) such alterations do not affect matters related to classification, or (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval. The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed. **3.** If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply. **4.** If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder. Note: This Procedural Requirement applies from 1 July 2009.		
3.3.7 Other Machinery **1** Air compressors Air compressors <u>equipped with lubrication pumps</u> are to be arranged so as to automatically stop in the event of pressure drops of lubricating oil. <u>(This requirement, however, does not apply to oilless and oil splash lubricating systems)</u>	**3.3.7 Other Machinery** **1** Air compressors Air compressors are to be arranged so as to automatically stop in the event of pressure drops of lubricating oil.	Clarification (Specify the exclusion of "Oil less" and "oil splash lubricating systems" due to no L.O. pressure.)

Amended	Remarks

Table 3.3 Boilers

Monitored Variables		Alarms	Remarks
Temperature	F.O. to burners	L	applied to in case where heated fuel is used or F.O. heater outlets for aux. boilers
	Gas air heaters or economizer outlets	H	applied to main boilers
	Superheater steam outlets	H	
Pressure	Steam drums or superheater outlets	L	in cases where superheaters are fitted, superheater outlets are required
	Forced drafts	L	or stoppage of driving units
	F.O. to burners (atomizing press)	L	applied to water tube boilers with max. working pressures exceeding 1*MPa* not used for only heating and general use
	Atomizing mediums	L	
Others	Water levels	H L	
	Stoppage of air preheater driving units	○	applied to main boilers
	Feed water pressures at feed water pump outlets	L	applied to water tube boilers with max. working pressures exceeding 1*MPa*
	Salinity in feed water pump inlets	H	applied to ships provided with steam turbine driving generators

Clarification
(Added in consideration of the use of fuel oil)

Table 3.5 Thermal Oil Installations

Monitored Variables		Alarms	Remarks
F.O.	Pressure, burner inlets	L	
	Temperature burner inlets	L	applied to in case where heated fuel is used
Thermal oil	Temperatures	H	
	Flows or pressure differences between outlets and inlets of heaters	L	
	Levels in expansion tanks	L	
Others	Flame failure	○	

Clarification
(Added in consideration of the use of fuel oil)

EFFECTIVE DATE AND APPLICATION

1. The effective date of this draft amendment is [the date of establishment].

Amended	Original	Remarks
Chapter 4 MONITORING AND CONTROL SYSTEMS FOR PERIODICALLY UNATTENDED MACHINERY SPACES **4.2 Monitoring and Control Systems for Periodically Unattended Machinery Spaces** **4.2.2 Bridge Control Devices or Centralized Monitoring and Control Systems for Machinery Installed in Bridge** **1** Bridge control devices specified in **18.3.3, Part D of the Rules for the Survey and Construction of Steel Ships** or centralized monitoring and control systems for machinery are to be provided on bridges. However, the manual slow-turning devices specified in **18.3.3(6), Part D of the Rules for the Survey and Construction of Steel Ships** are not permitted.	**Chapter 4 MONITORING AND CONTROL SYSTEMS FOR PERIODICALLY UNATTENDED MACHINERY SPACES** **4.2 Monitoring and Control Systems for Periodically Unattended Machinery Spaces** **4.2.2 Bridge Control Devices or Centralized Monitoring and Control Systems for Machinery Installed in Bridge** **1** Bridge control devices specified in **18.3.3, Part D of the Rules for the Survey and Construction of Steel Ships** or centralized monitoring and control systems for machinery are to be provided on bridges.	UR M43(Rev.1) M43.5

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 January 2025.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction is before the effective date.

3. Notwithstanding the provision of preceding **2.**, the amendments to the Rules may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder. For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided: (1) such alterations do not affect matters related to classification, or (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval. The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed. **3.** If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply. **4.** If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder. Note: This Procedural Requirement applies from 1 July 2009.		

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS **Part 7 MACHINERY INSTALLATIONS** **Chapter 14 AUTOMATIC AND REMOTE CONTROL** **14.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **14.3.3 Bridge Control Devices*** Bridge control devices are to comply with the following **(1)** through **(6)** as well as requirements in **14.3.2**. ((1) to (4) are omitted.) (5) Operations following any setting of the bridge control device including reversing from the maximum ahead service speed in case of emergency are to take place in an automatic sequence and with time intervals acceptable to the machinery. (6) For steam turbines, a slow-turning device is to be provided which operates automatically or manually to prevent any risk of rotor distortion due to propulsion turbines being stopped for long periods of time. Discontinuation of this automatic turning from the bridge must be possible.	**RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS** **Part 7 MACHINERY INSTALLATIONS** **Chapter 14 AUTOMATIC AND REMOTE CONTROL** **14.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **14.3.3 Bridge Control Devices*** Bridge control devices are to comply with the following **(1)** through **(4)** as well as requirements in **14.3.2**. ((1) to (4) are omitted.) (Newly added) (Newly added)	Same as 18.3.3(5), Part D Same as 18.3.3(6), Part D

Amended	Original	Remarks

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 January 2025.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction is before the effective date.

3. Notwithstanding the provision of preceding **2.**, the amendments to the Rules may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
14.6 Automatic and Remote Control of Auxiliary Machinery **14.6.3 Thermal Oil Installations** Thermal oil installations arranged to be automatically controlled are to comply with the following: (1) Control devices Control devices are to comply with **14.4.2-1** and **-2**, also with **7.3.2-1** and **-2**. (2) Safety devices Safety devices are to comply with **7.3.1** and **7.3.2-5**. (3) Alarm devices Thermal oil installations are to be provided with alarm devices which operate in the following cases: (a) When the safety devices required in **(2)** have operated. (b) When the temperature of the fuel at the inlet of burner has fallen <u>in cases where heated fuel is used.</u>	**14.6 Automatic and Remote Control of Auxiliary Machinery** **14.6.3 Thermal Oil Installations** Thermal oil installations arranged to be automatically controlled are to comply with the following: (1) Control devices Control devices are to comply with **14.4.2-1** and **-2**, also with **7.3.2-1** and **-2**. (2) Safety devices Safety devices are to comply with **7.3.1** and **7.3.2-5**. (3) Alarm devices Thermal oil installations are to be provided with alarm devices which operate in the following cases: (a) When the safety devices required in **(2)** have operated. (b) When the temperature of the fuel at the inlet of burner has fallen.	Same as 18.6.3(3)(b), Part D
EFFECTIVE DATE AND APPLICATION **1.** The effective date of this draft amendment is [the date of establishment].		

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part D MACHINERY INSTALLATIONS** **D18 AUTOMATIC AND REMOTE CONTROL** **D18.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **D18.3.2 Remote Control Devices for Main Propulsion Machinery or Controllable Pitch Propellers** **1** The wording "alarm devices necessary for the control" specified in **18.3.2-1(6), Part D of the Rules** means the following **(1) and (2)**. In addition, visible alarm devices are to be capable of not only distinguishing machinery and equipment affected but also and the kind of abnormal condition. However, in cases where such distinction can be readily made by other instruments in engine rooms, this requirement may be dispensed with. Furthermore, in cases where it is possible to remotely control main engines from more than one position, alarm devices only need to be installed in one normally attended position. (1) Alarm systems activating in the following cases: (a) Pressure drops of lubricating oil (b) Pressure drops of cooling water, or temperature rises of cooling water or the stopping of cooling water pumps (c) Pressure drops of hydraulic oil or compressed air,	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part D MACHINERY INSTALLATIONS** **D18 AUTOMATIC AND REMOTE CONTROL** **D18.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **D18.3.2 Remote Control Devices for Main Propulsion Machinery or Controllable Pitch Propellers** **1** The wording "alarm devices necessary for the control" specified in **18.3.2-1(6), Part D of the Rules** means the following **(1) to (3)**: (1) Alarm systems activating in the following cases: (a) Pressure drops of lubricating oil (b) Pressure drops of cooling water, or temperature rises of cooling water or the stopping of cooling water pumps (c) Pressure drops of hydraulic oil or compressed air,	Clarification (The exclusion rules are arranged to be easy to understand.)

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
or failures of the electric power for remote controls (d) Activation of emergency stopping devices (2) Alarm devices activating in the following cases in addition to those specified in **(1)**, in the case of ships which have propulsion motors as their main propulsion machinery: (a) Electric insulation resistance drops in power supply circuits (b) Abnormal stopping of the cooling fans of semiconductor converters (c) Pressure drops of cooling water, temperature rises or the stopping of the cooling water pumps of semiconductor converters (d) Activation of the semiconductor protection devices of semiconductor converters	or failures of the electric power for remote controls (d) Activation of emergency stopping devices (2) Alarm devices activating in the following cases in addition to those specified in **(1)**, in the case of ships which have propulsion motors as their main propulsion machinery: (a) Electric insulation resistance drops in power supply circuits (b) Abnormal stopping of the cooling fans of semiconductor converters (c) Pressure drops of cooling water, temperature rises or the stopping of the cooling water pumps of semiconductor converters (d) Activation of the semiconductor protection devices of semiconductor converters	
(Deleted)	(3) Visual alarms capable of distinguishing the machinery and equipment and the kinds of abnormal conditions specified in **(1)** and **(2)** above However, in the case of ships capable of remote control from bridges and other places, the requirements may be dispensed with for visual alarms on bridges. Furthermore, in cases where such distinction can be readily made by other instruments in engine rooms, the requirements may be also dispensed with.	
EFFECTIVE DATE AND APPLICATION **1.** The effective date of this draft amendment is [the date of establishment].		

Amended	Original	Remarks
D18.3.3 Bridge Control Devices (-1 to -3 are omitted.) **4** In applying **18.3.3(5), Part D of the Rules**, it is acceptable to confirm main engines are good condition when carrying out the astern tests specified in **2.3.1-1(2), Part B of the Rules.**	**D18.3.3 Bridge Control Devices** (-1 to -3 are omitted.) (Newly added)	UR M43 (Rev.1) M43.3 Describe specific survey requirements.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 January 2025.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction is before the effective date.
3. Notwithstanding the provision of preceding **2.**, the amendments to the Guidance may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner.
   * "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amended-Original Requirements Comparison Table (Automatic and Remote Control of Machinery)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS **Part 7 MACHINERY INSTALLATIONS** **Chapter 14 AUTOMATIC AND REMOTE CONTROL** **14.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **14.3.2 Remote Control Devices for Main Propulsion Machinery or Controllable Pitch Propellers** **1** The wording "alarm devices necessary for the control" specified in **14.3.2-1(6), Part 7 of the Rules** means the following (1) and (2). In addition, visible alarm devices are to be capable of not only distinguishing machinery and equipment affected but also and the kind of abnormal condition. However, in cases where such distinction can be readily made by other instruments in engine rooms, this requirement may be dispensed with. Furthermore, in cases where it is possible to remotely control main engines from more than one position, alarm devices only need to be installed in one normally attended position. (1) Alarm systems activating in the following cases: (a) Pressure drops of lubricating oil (b) Pressure drops of cooling water, or temperature	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS** **Part 7 MACHINERY INSTALLATIONS** **Chapter 14 AUTOMATIC AND REMOTE CONTROL** **14.3 Automatic and Remote Control of Main Propulsion Machinery or Controllable Pitch Propellers** **14.3.2 Remote Control Devices for Main Propulsion Machinery or Controllable Pitch Propellers** **1** The wording "alarm devices necessary for the control" specified in **14.3.2-1(6), Part 7 of the Rules** means the following (1) to (3): (1) Alarm systems activating in the following cases: (a) Pressure drops of lubricating oil (b) Pressure drops of cooling water, or temperature	Clarification (The exclusion rules are arranged to be easy to understand.)

Amended	Original	Remarks
rises of cooling water or the stopping of cooling water pumps (c) Pressure drops of hydraulic oil or compressed air, or failures of the electric power for remote controls (d) Activation of emergency stopping devices (2) Alarm devices activating in the following cases in addition to those specified in **(1)**, in the case of ships which have propulsion motors as their main propulsion machinery: (a) Electric insulation resistance drops in power supply circuits (b) Abnormal stopping of the cooling fans of semiconductor converters (c) Pressure drops of cooling water, temperature rises or the stopping of the cooling water pumps of semiconductor converters (d) Activation of the semiconductor protection devices of semiconductor converters	rises of cooling water or the stopping of cooling water pumps (c) Pressure drops of hydraulic oil or compressed air, or failures of the electric power for remote controls (d) Activation of emergency stopping devices (2) Alarm devices activating in the following cases in addition to those specified in **(1)**, in the case of ships which have propulsion motors as their main propulsion machinery: (a) Electric insulation resistance drops in power supply circuits (b) Abnormal stopping of the cooling fans of semiconductor converters (c) Pressure drops of cooling water, temperature rises or the stopping of the cooling water pumps of semiconductor converters (d) Activation of the semiconductor protection devices of semiconductor converters	
(Deleted)	(3) Visual alarms capable of distinguishing the machinery and equipment and the kinds of abnormal conditions specified in **(1)** and **(2)** above However, in the case of ships capable of remote control from bridges and other places, the requirements may be dispensed with for visual alarms on bridges. Furthermore, in cases where such distinction can be readily made by other instruments in engine rooms, the requirements may be also dispensed with.	
EFFECTIVE DATE AND APPLICATION **1.** The effective date of this draft amendment is [the date of establishment].		

Amended	Original	Remarks
14.3.3 Bridge Control Devices (-1 to -3 are omitted.) **4** In applying **14.3.3(5), Part 7 of the Rules**, it is acceptable to confirm main engines are good condition when carrying out the astern tests specified in **2.3.1-1.(1), Part 2 of the Rules.**	**14.3.3 Bridge Control Devices** (-1 to -3 are omitted.) (Newly added)	Same as D18.3.3-4 of the Guidance

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 January 2025.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction is before the effective date.
3. Notwithstanding the provision of preceding **2.**, the amendments to the Guidance may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner.
   * "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.