GOVERNMENT OF PAKISTAN
MINISTRY OF MARITIME AFFAIRS
(PORTS & SHIPPING WING)
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No. 3(3)/2021-CNS Karachi, 19th November, 2026.

MERCHANT SHIPPING NOTICE

Circular No. 005/2026

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Notice to All Pakistani Flag Shipowners, Ship Managers and Operators, Recognized Organizations authorized by the Government of Pakistan, Pakistan National Shipping Corporation and other concerned shipping companies, Karachi Port Trust, Port Qasim Authority, Gwadar Port Authority and other relevant port / terminal operators, Surveyors, Karachi Ship yard Engineering Works, Maritime Training Institutes in Public and Private sector.

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Subject: MANDATORY CARRIAGE OF ELECTRONIC INCLINOMETERS ON CERTAIN CONTAINERSHIPS AND BULK CARRIERS – IMPLEMENTATION OF SOLAS CHAPTER V, REGULATION 19.2.12, EFFECTIVE FROM 01 JANUARY 2026

1. Introduction and purpose

1.1. The International Maritime Organization (IMO), recognizing the importance of monitoring ship rolling motion for the safety of navigation, prevention of cargo damage, and prevention of accidents at sea, has adopted amendments to SOLAS Chapter V through Resolution MSC.532(107).

1.2. These amendments introduce a mandatory requirement for the installation and carriage of electronic inclinometers, or other equivalent means, on certain newly constructed containerships and bulk carriers of 3,000 gross tonnage and upwards.

1.3. The amendments entered into force internationally on 01 January 2026. Accordingly, this Directorate General hereby issues this Circular to inform Pakistani shipowners, operators, ship managers, Recognized Organizations (ROs), shipbuilders and Masters regarding the implementation and compliance requirements.

2. Statutory requirements under SOLAS

2.1. In accordance with SOLAS Chapter V, Regulation 19.2.12, as introduced by Resolution MSC.532(107), the following requirement shall apply:

"Containerships and bulk carriers of 3,000 gross tonnage and upwards constructed on or after 1 January 2026 shall be fitted with an electronic inclinometer, or other means, to determine, display and record the ship's roll motion."

2.2. The above requirement is mandatory for ships falling within the specified categories and shall be complied with by the applicable Pakistani-flag vessels.

2.3. SOLAS Regulation V/18 has also been amended to include the reference to IMO Resolution MSC.363(92), which establishes the applicable performance standards for electronic inclinometers.

3. Applicability

3.1. This requirement shall apply to:

a. Containerships of 3,000 GT and upwards constructed on or after 01 January 2026.
b. Bulk carriers of 3,000 GT and upwards constructed on or after 01 January 2026.

3.2. For the purpose of determining applicability:

a. A Bulk Carrier shall have the meaning assigned under SOLAS Chapter XII, Regulation 1.1.
b. A Containership shall mean a ship which is intended primarily to carry containers, in accordance with the new definition introduced under SOLAS Chapter V, Regulation 2.
c. The term container shall be understood in accordance with Article II of the International Convention for Safe Containers (CSC), 1972.

3.3. The applicable construction date shall be determined in accordance with the relevant SOLAS definition of a ship being constructed, including the keel-laying or similar-stage criteria.

4. Ships excluded from the requirement

4.1. This mandatory carriage requirement shall not apply to existing containerships and bulk carriers constructed before 01 January 2026 solely by virtue of this amendment.

4.2. General cargo ships occasionally carrying dry bulk cargoes, which are not classified as bulk carriers under SOLAS Chapter XII, Regulation 1.1, shall not be covered by this particular requirement.

4.3. General cargo ships carrying containers on deck, but not primarily intended to carry containers, shall also not be covered by this specific carriage requirement.

4.4. Nothing in this Circular shall prevent the voluntary installation of electronic inclinometers on other vessels. Where such equipment is installed for the purposes covered by MSC.363(92), it should comply with the applicable performance standards.

These exclusions are consistent with the IMO amendment and published implementation guidance.

5. Performance standards and technical requirements

5.1. All electronic inclinometers installed to meet this mandatory requirement shall comply with the IMO Performance Standards adopted through Resolution MSC.363(92).

5.2. The equipment shall be capable of reliably determining and providing the following information:

a. Actual heel angle of the vessel to port and starboard.
b. Roll amplitude of the vessel.
c. Roll period of the vessel.
d. Continuous presentation of the relevant information on a bridge display.
e. Provision of a standardized digital interface transmitting instantaneous heel-angle information to the Voyage Data Recorder (VDR).

5.3. In accordance with MSC.363(92), the equipment shall meet the following principal performance requirements:

Parameter	**Required performance**
Heel-angle measurement range	±90 degrees
Roll-period measurement range	Minimum 4–40 seconds
Angle measurement accuracy	5% of reading or ±1°, whichever is greater
Time measurement accuracy	5% of reading or ±1 second, whichever is greater
Roll-period display resolution	Minimum 1 second
Roll-amplitude display resolution	Minimum 1 degree
Actual heel-angle display	Analogue indication between ±45°
VDR digital interface	Minimum 5 Hz update rate

5.4. The system shall incorporate internal monitoring arrangements to indicate whether all components are operational and whether the information being provided is valid.

5.5. The system shall provide digital interfaces in accordance with the relevant IEC 61162 standards, including the required information exchange with the VDR.

5.6. The sensor installation position shall be recorded and made available for configuration of the VDR.

5.7. The equipment shall be powered from the ship's main source of electrical energy. It shall also be possible to operate the electronic inclinometer from the ship's emergency source of electrical energy.

5.8. The installation and operational arrangements shall comply with the manufacturer's instructions and applicable IMO performance standards.

The technical specifications above are taken from the actual text of MSC.363(92).

6. Approval, installation and commissioning

6.1. Shipowners and shipbuilders shall ensure that the electronic inclinometer selected for installation is suitable for marine applications and complies with MSC.363(92).

6.2. Equipment shall be subject to the applicable approval requirements under SOLAS Chapter V, Regulation 18, and the Administration's requirements.

6.3. Installation shall be undertaken in an appropriate location on board, ensuring reliable measurement of the vessel's actual rolling motion.

6.4. The system shall be properly integrated with the bridge display and the VDR through the required digital interface.

6.5. The Recognized Organization responsible for the vessel's statutory surveys shall verify the installation, operational condition, power supply, sensor position, interface arrangements and commissioning test records.

7. Statutory surveys and certification

7.1. The Administration or the Recognized Organization authorized by the Government of Pakistan shall verify compliance during the applicable newbuilding approval, commissioning and statutory survey process.

7.2. The shipowner shall provide the following documents, as applicable:

a. Equipment type-approval documentation.
b. Manufacturer's technical specifications and operating manual.
c. Installation drawings and sensor location particulars.
d. Digital interface and VDR integration details.
e. Commissioning and operational test reports.

7.3. In accordance with the amended SOLAS Appendix (Certificates), the electronic inclinometer shall be reflected in the relevant Record of Equipment for Cargo Ship Safety (Form E), under Section 3 – Details of Navigational Systems and Equipment.

7.4. The amended Cargo Ship Safety Equipment Certificate shall also recognize "Containership" as a ship-type category, where applicable.

7.5. Recognized Organizations shall ensure that the applicable amended certificate forms are used and that statutory records accurately reflect the vessel's equipment and ship type.

8. Responsibilities of shipowners and operators

8.1. All Pakistani shipowners and operators intending to construct or register new containerships and bulk carriers of 3,000 GT and upwards shall ensure compliance with SOLAS Regulation V/19.2.12.

8.2. Shipowners shall incorporate the electronic inclinometer or an Administration-accepted equivalent arrangement into the vessel's design and equipment specifications before completion of construction.

8.3. The equipment shall be maintained in proper operational condition throughout the vessel's service.

8.4. Any malfunction or failure of the system shall be reported to the company and the concerned Recognized Organization, and appropriate corrective action shall be taken.

9. Responsibilities of Masters

9.1. The Master shall ensure that the electronic inclinometer is operational and that the displayed information is available to the bridge team.

9.2. The Master and navigating officers should utilize the information provided by the equipment as an additional aid when assessing the vessel's rolling behaviour, particularly during adverse weather and sea conditions.

9.3. The information obtained from the inclinometer shall not replace approved stability calculations, the vessel's stability booklet, loading computer information or the professional judgement of the Master.

9.4. Any defects affecting the operation of the equipment shall be entered in the appropriate shipboard records and reported in accordance with the vessel's Safety Management System.

10. Responsibilities of Recognized Organizations

10.1. All Recognized Organizations authorized by the Government of Pakistan shall circulate these requirements to their respective surveyors, plan-approval departments and shipowners.

10.2. ROs shall ensure that the applicability of this requirement is determined with reference to the vessel's type, gross tonnage and construction date.

10.3. ROs shall verify compliance with MSC.363(92), including the equipment's performance, installation, display, power supply and VDR interface.

10.4. Any proposed alternative means under SOLAS V/19.2.12 shall be referred to DG (P&S) for consideration and acceptance by the Administration, supported by appropriate technical documentation demonstrating that the statutory functions of determining, displaying and recording the vessel's roll motion are fulfilled.

10.5. No alternative arrangement shall be considered accepted merely because it is available on board or has been approved for another purpose.

11. Implementation and enforcement

11.1. This Circular shall be applicable with immediate effect for the implementation of the international SOLAS amendments which entered into force on 01 January 2026.

11.2. All concerned Pakistani shipowners, operators, shipbuilders and Recognized Organizations shall ensure that applicable vessels comply with the above requirements.

11.3. During statutory surveys and inspections, the concerned surveyors shall verify compliance with the relevant requirements and record any deficiencies in accordance with applicable statutory procedures.

11.4. Any matter requiring clarification regarding applicability, technical compliance or acceptance of alternative arrangements shall be referred to the Chief Nautical Surveyor, Directorate General Ports & Shipping Wing, Karachi.

12. General instructions

12.1. All concerned are advised to take immediate notice of the above requirements and ensure that the necessary arrangements are incorporated into the construction, equipment selection, installation and statutory certification processes of applicable vessels.

12.2. This Circular shall be circulated to all Pakistani shipowners, PNSC, Recognized Organizations, classification societies, shipbuilders, relevant port authorities and concerned surveyors for information, guidance and strict compliance.

13. Entry into force

13.1. This Circular is issued in pursuance of the applicable amendments to SOLAS Chapter V and shall be read in conjunction with the International Convention for the Safety of Life at Sea, 1974, as amended, and the relevant IMO Resolutions.

This Circular is issued with the Approval of the Competent Authority.



Capt. Rafaqat Hussain
Chief Nautical Surveyor
Directorate General Ports & Shipping Wing Karachi
Ministry of Maritime Affairs

Distribution:

1. The Director General, Ports & Shipping Wing, Karachi.

2. The Principal Officer, Mercantile Marine Department, Karachi.
3. The Chief Engineering & Ship Surveyor, (CESS)
4. Recognized Organizations authorized by the Administration.
5. The Chairman, Karachi Port Trust
6. Chairman Port Qasim Authority
7. Chairman Gwadar Port Authority.
8. The Chairman, Pakistan National Shipping Corporation (PNSC), Karachi.
9. Karachi Shipyard & Engineering Works
10. All Public and Private Maritime Training Institutes.