

Part II Actions and Material Strength Requirements Section

Chapter 1 General

[Ministerial Ordinance] (Requirements for the Setting of Environmental and Other Conditions)

Article 6

In designing, constructing, and maintaining the facilities subject to the Technical Standards, required items for setting the environmental conditions, usage conditions, and other conditions for the facilities shall be provided by the Public Notice.

[Public Notice] (Setting of Environmental and Other Conditions)

Article 5

The items to be specified in Article 6 of the Ministerial Ordinance for the setting of the conditions surrounding the facilities shall be provided in the subsequent Article through Article 20.

1 General

- (1) This Part (**Part II**) explains the content of the principles of action occurrence; modeling of actions (loading) and resistance applied to the performance verification method and others described in the **Part III**; and the concept of the design condition setting as characteristic values in the performance verification targeting at main actions and materials and others to be considered in the design, construction, or maintenance of facilities subject to the Technical Standards.

2 Fundamental Items

- (1) In designing, constructing, or maintaining the facilities subject to the Technical Standards, the environmental conditions, usage conditions, and other conditions for the facilities concerned (hereinafter the “conditions such as natural conditions”) need to be properly set the design, construction, or maintenance according to the performance required for the facilities concerned, as well as the conditions in which the facilities are subjected to.

Conditions such as natural conditions include following factors: winds, tides, waves, tsunamis, movement of sea water, estuary hydraulics, littoral drift, ground conditions, earth pressure, water pressure, ground settlement, ground motions, soil liquefaction, principal dimensions of design ships, environmental actions, self weights, surcharges, and material strength, etc.

- (2) The setting of conditions such as natural conditions has significant effects on the performance, economic efficiency, etc., of the facilities; hence, it should be carried out carefully.
- (3) Conditions such as natural conditions generally need to be properly set on the basis of the results of sufficiently conducted preliminary surveys and tests (including the utilization of past similar cases, various databases, and others) to ensure the required quality in setting objective conditions. It is desirable to organize the method to reflect the results of surveys, tests, and others in past design and construction activities to plan effective examinations and tests.

3 Other Items

- (1) **Reference (Part II), Chapter 1 Observation, Examination and Test** may be used as a reference. This describes the technical information (how quality and data should be managed, notes on the examination plan, methods to examine and test, utilization of numerical analysis methods, etc.) on how to properly and effectively conduct examinations, tests, and others at setting conditions such as natural conditions.
- (2) **Reference (Part II), Chapter 2 Examinations and Tests after Large Earthquakes and Tsunamis** describes helpful technical information concerning various examinations and tests to expedite recovery design after large-scale disasters, such as the 2011 Great East Japan Earthquake.