

## Inland Navigation Vessels

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*A new edition of "Inland Navigation Vessels (I-2)" has been published.*

On 1 November 2011 an updated set of Rules for Inland Navigation Vessels came into force. The new issue contains rules for:

- 1) Classification and Surveys
- 2) Hull Design and Construction
- 3) Machinery, Systems and Electricity
- 4) Additional Requirements for Notations

One of the major issues in this update is the compliance with the latest "European Agreement concerning the international carriage of Dangerous Goods by Inland Waterways (ADN)" regulations. Additionally, GL amended several rules as summarised below:

- 1) Rules for Classification and Surveys

Section 1 "Classification" - Some terms such as "GL's contractual partner", considering requirements deriving from international and national regulations have been specified more precisely.

Section 2 "Class Designation" - Several new type notations for inland navigation vessels have been added.

- 2) Hull Design and Construction

Section 2 "Materials and Structure Design Principles" - The calculation method for proofing the buckling strength has been harmonised with the latest buckling strength requirements valid for seagoing ships. The scantling requirements for brackets and the effective breadth calculation for plating attached to stiffeners and girders have been developed further.

Section 3 "Design Load Principles" - Design loads for watertight bulkheads and ballast tanks have been amended.

Section 5 "Hull Scantlings" - Additional provisions for bilge plate thickness reduction to the fore and aft ship have been incorporated. A reduction factor for connected bottom and inner bottom longitudinal frames has been introduced.

According to the EU Directive regarding technical requirements for inland waterway vessels, fuel tanks are to be separated from passenger areas and accommodation and arranged abaft the collision bulkhead.

Section 6 "Other Structures" - Design loads for tween decks and scantling requirements for deck girders in the fore and aft part of the ship have been amended.

Requirements for "small hatches" with a length and width of not more than 1,2m have been implemented and the general requirements for windows and side scuttles were reviewed and have been partly renewed.

A link to the GL Guideline for Elastomeric Adhesives and Adhesive Joints is included, which covers windows where the glass pane is glued to the steel structure.

Specific conditions requiring the approval of windows have been determined.

Section 7 "Hull Outfitting" - The requirements for bulwarks and guard rails have been adjusted, e.g. the guard rails shall be built in accordance with EN 711.

Alternative glass design is possible, but only based on individual examination.

### 3) Machinery, Systems and Electricity

The rules have been updated to comply with the regulations of the "Directive 2006/87/EC" and the "ADN"; further on, several items have been revised reflecting the latest technical developments. There have been amendments to the items mentioned below:

#### Section 1 "Machinery and Systems"

- Tank-filling and suction system
- Compressed-air system
- Thermal-oil system
- Air, sounding and overflow pipes
- Automatic Pressure-water-spraying system (Sprinkler system)
- Shafting, Propellers

#### Section 2 "Electrical Installations"

- Machinery control and monitoring systems
- Data communication links
- Fire detection and alarm system (new section)
- Requirements for electronic equipment and EMC
- Shore connection

### 4) Additional Requirements for Notations

Section 3 "Transport of Dangerous Goods" - A new sub-section "Alternative Constructions" has been added corresponding to provisions of ADN regarding the alternative design of cargo tanks. By applying the alternative design methodology, it becomes possible to increase the cargo tank capacity, compared with applying the standard ADN requirements. Analogously, it is possible to reduce the required distances between shell plating and cargo tank boundary.

Further amendments in this section concern:

- Classification of dangerous goods
- Equipment and systems for tankers
- Vessels for the carriage of liquefied gases under pressure
- Vessels for the carriage of dry dangerous goods
- Electrical explosion protection
- Tank level monitoring and alarm systems

Finally all sections of each rule set were subject to editorial revision and corrections.

The new rules are available as a printed edition but are also published on the GL website at <http://www.gl-group.com/infoServices/rules/pdfs/english/glrp-e.pdf>.

### Contact

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