2023-06-16



Replaces: RN 68-2:2023-01-23

Page

# Welded constructions

# Housings for type yacht premium

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#### Changes

2023-06-16: The following changed in comparison to RN 68-2:2023-01-23:

editorially revised

Responsible division:	Editor	Approval:	Technical reference:	Page:
РК	M. Förste	see doc. workflow	C. Eschert; M. Eulert	1/6

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## 1 Scope

This factory standard applies along with RN 68-1 to welded housings for gearboxes of the yacht premium type. It contains additional requirements for the condition of all external surfaces (visible surfaces, including welding) and is intended to ensure that the housings meet both the functional and the advanced visual requirements of the yacht premium type.

## 2 References

The following documents, cited in part or in whole, shall apply for the use of this standard. In the case of dated references, only the referenced edition applies; in the case of undated references, the latest edition of the referenced document (including all amendments) applies. The applicable version of the standards listed below shall apply to all contents not covered by this factory standard.

EN 1792	Welding - Multilingual list of terms for welding and related processes
EN ISO 5817	Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) - Quality levels for imperfections
EN ISO 17637	Non-destructive testing of welds - Visual testing of fusion-welded joints
EN ISO 12944-4	Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 4: Types of surface and surface preparation
RN 68-1	Welded constructions; Steel housings
RN 79	Colour Coatings

### 3 Terms and definitions

For the application of this document, the terminology of EN 1792 applies.

### **4** Requirements

#### 4.1 General surface requirements

The described characteristic values are valid for visual testing of approx. 1 m distance without any tools (except usual glasses).

Please contact REINTJES to implement appropriate remedial actions, if any requirements could not be fulfilled.

- a) no tool indentations or impact marks
- b) no noticeable tarnish, grooves, unevenness or machining marks
- c) smooth, homogeneous surface;
   permissible: isolated incompletions with H ≤ 0,5 mm and L ≤ 1,0 mm (max. 2 / area with app. Ø 150 mm, H: maximum depth or height perpendicular to the surface, L: maximum length)
- d) surface treatment for visible surfaces:
  preparation level Sa 2 ½ acc. to EN ISO 12944-4
  degree of roughness comparable "middle (G)" or "middle (S)" acc. ISO 8503-1
- e) primed according to RN 79
- f) flame cuts (bunt-out surfaces) are to be worked up to yacht premium (see pictures 7 and 9)

- g) labels of sub suppliers (e.g. rolling mill) have to be removed respectively are only allowed in not visible areas. Allowed are traceability markings (see picture 8)
- h) a necessary regrinding with a 'fine' grinding wheel, e.g. a notched washer, has to be done large-scale to generate homogeneous transitions

### 4.2 Welding

- a) maximum permissible values for imperfections according to EN ISO 5817, quality level B
- b) no slag residues, blowholes, notches, cracks or porosities
- c) no visually disturbing flash points, ignition points or welding spatter
- d) smooth transition between weld metal and base metal, without undercutting for fillet and butt welds to be machined evenly
- e) consistently shaped surface of the weld seam
- f) consistent weld seam width over the entire weld seam length
- g) complete filling of the prepared weld joint for butt welds
- h) visual examination of the finished weld according to EN ISO 17637



# Appendix A (informative) Examples of finalized welded connections

#### Table 1 Welded connections meeting the requirements





Picture 2

Aligned surfaces, smooth transitions



Even welds



Picture 3

Accurately aligned markings



Picture 4

Ribbing and hub evenly connected













