IVR GUIDELINE FOR QUALITY NEW BUILDING HULLS

INTRODUCTION

The period before the crisis of 2008 was marked by an explosion of new build inland navigation barges. The hulls have been built in large numbers in low labour cost countries. This did not always lead to acceptably qualified constructions. The demand was higher than the supply. Consequently, the owner had no much right of say regarding the finishing.

The ship's broker, who sells the hull, could always hide himself behind a certification issued by a classification society. The exact extent of inspection in order to justify such kind of certification, has not always been clear. Practice has shown that for inspections carried out in the low labour cost countries, this certification did not per definition guarantee a good quality. There are cases known of materials that did not meet with the required specifications, bad alignments of construction parts, welding below the minimum standard, …

This led to a lot of discussions and dissatisfaction amongst sellers and buyers.

The crisis in 2008 suddenly caused a drastic drop in the number of new-building orders. This period of rest allows to think about what went wrong with the new-building of hulls during the previous years.

This leads to the conclusion that – in order to guarantee the safety of the new build vessels -there is a need for a good quality standard, to be respected by all parties involved. For this reason and in favour of its members, theTechnical Committee of IVR has been working on such a standard. On basis of the rich experience of its committee members a practical guideline has been elaborated. Barge owners are recommended to refer to this IVR guideline in the new-building contract. Disputes can be avoided by the use of this standard. This standard allows to support the barge owner in making good agreements on forehand

IVR HULL NEW BUILDING GUIDELINES

Drawings:

- Drawings as well as strength calculations to be approved by either a classification society recognized by IACS or by a consultancy recognized by the authorities.

Plate, profile and piping materials:

- Material certificates of steel mill to be submitted; retracebility to be checked at random by owner's representative;
- 4 samples of plate, of profile and of piping to be chosen at random by owner's representative, - mechanical and chemical properties to be tested and compared with mill material certificates.

Construction:

- alignment and straightness of structure components and straightness of plating to comply with IACS guideline No. 47 "Shipbuilding and Repair Quality Standard" (Rev. 5, Oct. 2010);
- construction to comply with rules ROSR1995 or directive 2006/87/EC.

Postbus 23210 – 3001 KE Rotterdam Vasteland 12E – 3011 BL Rotterdam
Telefoon: +31 10 411 60 70 **T**elefax: +31 10 412 90 91 **E**mail: info@ivr.nl **W**ebsite: www.ivr.nl

Welding:

- Welding material to be "type-test approved" by classification societies;
- Dry storage of welding material to be checked by owner's representative;
- Welder certificates to be submitted in function of different welding positions and to be verified at random by owner's representative;
- 100% of welding to be visually inspected by owner's representative and to be found in compliance with guideline No. 47 "Shipbuilding and Repair Quality Standard" (Rev. 5, Oct. 2010);
- X-rays to be made and inspected by an authorized external company as follows:
    * per butt weld:
        - bottom plating: 2 x-rays
        - hull plating: 1 x-ray for sheer plate at each side
        - bilge strake: 1 x-ray at each side
        - hatch coaming: 1 x-ray at each side for dry cargo vessels only
        - double bottom plating: 1 x-ray for dry cargo vessels and 2 x-rays for tankers
        - double hull: 1 x-ray for each side for tankers and dry cargo vessels
    * longitudinal welds:
        - 10 x-rays to be chosen at random for longitudinal welding seams of bottom plating
        - 16 x-rays for longitudinal welding seams of double bottom and double hull plating for tankers and dry cargo vessels

    Per one unsatisfactory x-ray result, 2 extra x-rays may be required.
    If these extra x-rays are unsatisfactory as well, it may be required by owner's representative that the full butt welds or longitudinal welds have to be tested for 100% of their length by ultrasonic tests.

Tank testing:

- all ballast, fuel, drinking water, lub. oil, sewage, dirty oil tanks and all watertight void spaces to be tested with air pressure of 0,1 bar before painting of welds;
- cargo tanks to be tested at random with water, the pressure in compliance with ADN;
- above mentioned tests to be carried out in the presence of the owner's representative if requested.

Piping:

- all piping installed to be hydraulic tested at 1,5 x working pressure before painting;
- above mentioned tests to be carried out in the presence of the owner's representative if requested.

Painting:

- preparation of surfaces and application of paint to be approved by inspector of a renown paint supplier who has to issue a certificate of compliance with paint supplier's guarantee requirements.

IVR with this guideline aims to contribute to a safer and better quality of inland hulls.