NSR 2019.0 Release Notes

LR Naval Ship Rules

Lloyd's
Register

Contents

1.   Introduction

Dear NSR users,

We are proud to announce the latest version of the NSR software. This version includes:

- Relevant Rule amendments to ensure your design is compliant with the latest requirements.

- Resolution of issues and feedback from regular users of the software.

- Addition of shear flow calculation to allow direct shear stress and shear buckling assessments to be completed for global strength.

- Update of extreme strength assessment to allow assessment of ultimate hull girder collapse for shear failure.

The software provides a convenient and quick method of determining compliance with LR Rules.

Rule requirements can be interrogated to identify design features which are driving scantlings and weight.

The software is flexible to enable a section or the entire ship to be modelled.

Software files can be shared with LR to speed up design appraisal and assessment.

As ever, we welcome your feedback and feature requests at es.support@lr.org to help to improve the NSR software.

NSR Software Team
Lloyd's Register
September 2020

2.   New features

– Added shear flow calculation to allow direct shear stress and shear buckling assessments to be completed for global strength.

– Updated the extreme strength assessment to allow the assessment of the ultimate hull girder collapse for shear failure.

– Extended the implementation of the shear stress and shear buckling assessments for global strength using the rule recommendation

– Added support for corrugated stiffener profiles

– Added copy and paste support to tables for still water global loads, panel intermediate points, and stiffener groups.

– Implemented support for the modelling of horizontal strakes on bulkheads

– Added option to complete a spline definition using the left mouse button click while holding down the Ctrl key.

– Added support for user interface interactions while running calculations

– Implemented relevant rule updates

3. Major bug fixes

- Fixed issue preventing the operation of the hull importer

- Removed spurious pillar bulkhead calculations

- Fixed display of the angle between stiffeners and spline panels

- Fixed transverse section modulus calculations for ultimate strength

- Fixed calculation errors in the rule recommendation based shear stress and shear buckling assessment.

- Fixed mismatch between the values shown for extreme vertical wave forces and still water shear forces in the 'Hull_Shear_Strength' and 'Extreme Strength Assessment' nodes.

- Fixed the evaluation of the structural design buckling factor for shear stress to recognize the side shell

- Added exposed deck and bilge to panel types to be considered when assessing hull shear strength using rule recommendation for ships having hull configuration Type A

- Fixed the rule shear force that is used when calculating the design shear stress when using the rule recommendation method

- Fixed the calculation of the deflection ration (f_delta) for the side shell

- Fixed software installation for standard (non-administrative) user accounts

- Fixed the calculation of delta_i in shear strength calculations

- Fixed the calculation of frame spacing in the calculation of the required web thickness

- Removed the required secondary stiffener spacing from bottom floors

- Fixed the calculation of μ for the shear stress distribution factor

- Fixed the damaged/design still water shear force calculations

- Fixed of floor web thickness calculation for single bottom structure and intermediate result references

- Fixed Position FWD of AP and x/LRule for Still Water Global Loads when user select "Frame Number" for "X Type"

- Fixed the delta calculation for shear stress

- Fixed division by zero (#DIV0) error with height under consideration being above the lower deck for hull type B and C

- Removed attached plating and section modulus from profiles definition

- Fixed ultimate strength calculations

- Fixed the calculation of x/LRule when getting bending moment/shear force values for a transverse section

- Fixed graphics to prevent display of non-existent transverse structures

- Added the stress factor correction for longitudinal structures and stiffeners based on NSR rule Jan 2019 Part 6 chapter 5 table 5.3.2 note 8

- Removed time-bomb requiring a software license to run on LR machine after September 1, 2020.

4. Known limitations

- The shear flow view currently does not have zoom or pan capability.

5. How to register a NSR licences

5.1 Installing NSR

You will need to have Windows Power User or higher administrative rights to install the software and register a licence. If you uncertain about the user rights that you have on your computer, please confirm it with the IT Department in your organisation.

5.2 Entering User Information for a new licence

You will be prompted to activate NSR the first time it starts. Please enter the user information in the NSR Licensing Dialog. This information and the hardware signatures on your machine will be used to generate a licence request file automatically. You can email this file to the NSR support team by clicking on the **Email Request** button. Alternatively, you can choose to save the request file by clicking on the **Save Request** button and send the file to es.support@lr.org later.

Note: The Comment area in the Licence Dialog is very useful for you to provide extra information. For example, if the licence is authorised by one of the LR local offices, you may provide the name of your contact here to reduce the processing time. By default, a 3 months usage period will be granted. If the software is paid for, you will receive a perpetual licence.

5.3 Activating a licence

The NSR support team will generate a licence file after receiving a licence request. Upon receiving the licence file, you should restart NSR and go to File > Registration in the main menu to bring back the Licensing Dialog. The licence file can be imported by clicking on the Activate Licence button. If the registration is successful, you will see a message showing the number of remaining days for time-limited licences. If a perpetual licence is activated successfully you will see a message with no time limit.

5.4 Checking the status of a licence

If you wish to check your licence status, please go to File > Registration in the main menu. The Licensing Dialog will now display information for registered licences.