



NAUTICUS HULL STATUS LIST

NOVEMBER 2011 RELEASE

LATEST UPDATE: 13 JANUARY 2012

DET NORSKE VERITAS

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0. Introduction

This document presents a list of known errors, limitations and other important information related to the current version of Nauticus Hull.

Pending issues are listed in Chapter 2. Important corrections and improvements that have been solved or included in the present or older versions are listed from Chapter 3 and onwards. Note that these lists only include the items regarded to be the most severe or important for the users to be aware of when using the program.

For a more detailed overview, including enhancements and new features, reference is made to the release documentation for each specific version. The release documents describe new features, program updates and error corrections. The release documents are available at our [Customer Portal](#).

The IM number is a log number in our management tool for program improvements and enhancements, and is intended for internal use only.

1. Downloads

The latest version and patches can be downloaded from our [Customer Portal](#).

Also some older releases of Nauticus Hull, and corresponding release documents, are available on the portal.

2. Pending issues in the November 2011 Release

This is the list of the most important issues and information related to the latest release. Note that the list continues on next page.

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from * = All
		General information	
12. Jan. 11		Jobs older than September 2006 no longer available	14.*
12. Jan. 11		FPSO Initial Design and 2D/3D-modeller no longer available	14.*
11. Jan. 12		Error message when opening a spreadsheet : "Executable file not found"	14.*
		Section Scantlings	
11. Jan. 12		Run-time error '430' in BowImpact2008Jan.xls	*
24. Jan. 11	1799	Shear efficiency can only be set to either 0% or 100%.	*
12. Jan. 11	1759	Cross Section Analyses – 'Recalc' will delete all results	
		Message that shear force / bending moment curves are not available	12.*
08 Mar. 10		Double-click on a Segment does not open the Panel dialogue	*
	1240	Wrong frame spacing if vessel is lengthened	10.*
06 Jul. 09		Merged compartments caused by cut-outs in transverse bulkheads	10.*
	1342	" Hogging ships " – sign on bending moment curve	
21 Apr. 09	1122	Printing only a selected range of pages in DNV format in a Report	10.*
		DNV Rules	
6. Jun. 11	1811	Waterline in Damaged Condition	
01. Feb. 11	1805	Corrosion addition for Offshore Vessels ULS check	
12. Jan. 11	1789	Minimum Thickness spreadsheet : "Container carrier" is not implemented	
16 Aug. 10	1728	Error in side shell plating in quay contact region in Section Scantlings	
	1046	Fatigue calculation on Bulk carriers	10.*
06 May. 10	1103	Barge Rules Pt5 Ch.7 Sec.14 are not included in Section Scantlings	*
19 Apr. 10	1697	Bending moments and shear forces specified by users for Offshore ULS check or PULS buckling check might be wrong.	
19 Jan. 10	1592	Fatigue calculation for Class Notation <i>Ore Carrier</i> does not work	10.*
21 Jan. 10	1542	Relative deflections and Double hull bending stresses are not saved	10.*
		CSR Bulk	
11. Jan. 12	1876	Wrong fatigue damage calculations on outer shell structure	*
28. Dec. 11		Transverse Bulkheads Rule Check does not work correctly	*
01 Oct. 10		Bilge plate requirements Ch 6, Sec 1, [2,3] not considered	
23 Aug. 10	1731	Buckling requirements can't be seen in "Rule status" in Section Scantlings	
03 Jun. 10	1715	Message "The side frame is not in the cargo hold area"	10.*
06 Jul. 09		Specific requirements for ships less than 150 metres are not included.	
06 Jul. 09	1082	Buckling strength of plates with varying curvature	
06 Jul. 09	1529	Some main frame requirements , Ch 6, [3.3], are not considered	
03 Apr. 09	1135	Wrong bracket height for Section Modulus calculation	11.2
		CSR Tank	
24. Jan. 11	1798	Bulb profiles smaller than HP200x9 are not considered in the rules	*

12. Jan. 11	1686	Cross Section Analyses of many positions at the same time	
09 Apr. 10	1690	Wrong sloshing pressure calculation in Connection Area spreadsheet	
09 Apr. 10	1611	Wrong corrosion addition gives wrong net thickness in peak tanks	
03 Apr. 09	1473	Section Scantlings: Min. Deck pressure not included in Engine room area	
26 Feb. 09	1453	Graphic presentation of Fatigue results is wrong	11.*
		<u>3D-Beam</u>	
12. Jan. 11	1375	Error message "the exception Floating-point division by zero....."	
11. Jan. 12	1875	Program closes when opening a model or selecting beams	14.*

General

. **Jobs older than September 2006 no longer available**

In the Nauticus Hull January 2011 release access to old hull jobs, created on program versions older than September 2006, i.e. files of type .BxPkg, is no longer available. The reason for this is that Nauticus Hull January 2011 is ready for Windows 7, and the technology used in versions older than September 2006 is not feasible for porting.

. **FPSO Initial Design and 2D/3D-modeller no longer available**

Windows Vista and Windows 7 as well as Microsoft Office 2007 and 2010 (32 bits version) are fully supported from January 2011. Some program modules are removed from Nauticus Hull in order to achieve this:

- Old program packages (.BxPkg jobs) can no longer be opened.
- *FPSO Initial design* is removed
- 3D-Modeller is replaced by *GeniE*.
- 2D-Modeller is removed.

. **Error message when opening a spreadsheet: "Executable file not found"**

When trying to open Excel the following error is returned:

"Executable file not found. C:\Program Files\Microsoft Office\OFFICE11\EXCEL.EXE".

This error is given when the user has an 64-bits version of Office. *Only 32-bits Office 2010 is supported by Nauticus Hull.*

Hence the users must install the 32-bits version of Office. Note that when this has been installed, a "repair" of the Hull installation is also required. (A repair can be started from Control Panel-"Add or remove programs" or Control Panel-"Uninstall or change a program").

Section Scantlings

- . **Run-time error '430' in BowImpact2008Jan.xls**
In spreadsheet BowImpact2008Jan.xls, sheet Stiffener: the Stiffener Type Id should be an integer (Profile type numerical ID). If it is not, then the error message "Run-time error '430'" will be returned when pressing the 'Calculate' button

- . **Shear efficiency can only be set to either 0% or 100%.**
IM 1799:
Using others than 0% or 100% might result in an error message "Error in shear flow calculation".

- . **Cross Section Analyses – 'Recalc' will delete all results**
IM 1759:
When using the option Recalc in the Cross Section Analysis tool (in the Results tab), then only results for the current position will be recalculated. Results for all other positions will be lost. These results must be calculated once more if needed.

- . **Message that shear force / bending moment curves are not available**
When opening Section Scantlings messages like "The shear force curve in the condition is not available. Open 'Hull Girder Loads' in Brix Explorer and update the curve" or correspondingly "The Bending moment curve....." are given.

This message is not correct, and to eliminate it just select the tool 'Hull Girder Loads', then just leave the tool and answer "Yes" when asked if you want to save.

- . **Double-click on a Segment does not open the Panel dialogue**
A panel can be selected by double-click on one of the segments in the panel. This will not work if the mouse pointer option "Snap To" is active. Hence, un-tick this option when working in Section Scantlings.

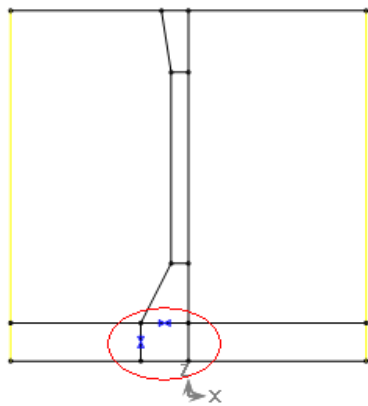
- . **Wrong frame spacing if vessel is lengthened**
IM 1240:
When entering the frame table for a lengthened ship, then wrong frame positions are calculated for the lengthened frames and forwards. Half the previous frame spacing is generated between the cut position and the first frame in the inserted part. The same length is also applied between the last inserted frame and the fore part of the vessel.

- . **Merged compartments caused by cut-outs in transverse bulkheads**
In general cut-outs will automatically merge adjoining compartments. Cut-outs in transverse bulkheads should merge compartments in longitudinal structures and compartments in transverse stool tanks.

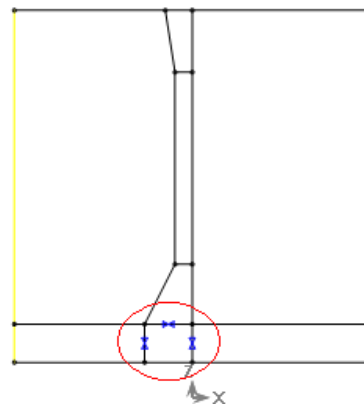
However, if non-watertight bulkheads because of cut-outs, i.e. the compartment aft of the bulkhead and compartment forward of the bulkhead should be merged, then this will not work. Such compartments must be joined manually.

Merge of a stool tank and the adjoining compartment will however work properly, see figure:

This is supported:



This is not supported:



- **“Hogging ships” – sign on bending moment curve**

IM 1342:

For “hogging” ships, the allowable still water bending moment is in the area between the maximum and the minimum hogging moment curve. Before the Brix Explorer was introduced in Nauticus Hull, the “minimum hogging” curve could be specified by entering negative values as input for the sagging moment curve.

However, in the Explorer, sagging moments are to be given as negative values, hogging moments as positive values.

In Section Scantlings, the moments given in Brix Explorer will always be positive values. Hence it is no longer possible to specify the “minimum” hogging moment curve by entering negative values for the sagging moment curve.

Remedial action in Section Scantlings, for “hogging ships”:

In the “Design bending moments and shear forces” dialog, enter a negative value for the sagging moment. The negative sagging moment will then be considered as the “minimum hogging” moment in the calculations.

Note that the “Design bending moments and shear forces” dialog is only available in the “Rule Check Analysis” tool, and the analysis in this case therefore has to be performed in this tool.

- **Printing only a selected range of pages in DNV format in a Report**

IM 1122:

When specifying only a range of pages to be printed, then *all* pages *after* the specified range are also printed.

DNV Rules**. Waterline in Damaged Condition**

IM 1811:

Manual input of "Waterline in Damaged Condition" does not work. Default value will be used regardless user value.

. Corrosion addition for Offshore Vessels ULS check

IM 1805:

The ULS check shall not take corrosion addition into account, i.e. it shall be based on Gross thickness. In the present version of the ULS / Puls check the Corrosion addition is taken into account, and Net scantlings are hence used in the calculations.

Workaround:

In the print report dialogue, tick "Re-analysis using measured thickness" for the ULS check. Note that this will only be correct for the ULS check part, as the ordinary DNV Rule check part should use net thickness as before. The procedure should hence be:

1. Run the ordinary DNV Rules check, which is based on Net scantlings.
2. Run the ULS check, tick "Re-analysis using measured thickness" in the print report dialogue.

. Minimum Thickness spreadsheet: "Container carrier" is not implemented

IM 1789:

"Container carrier" notation as special case is not implemented in the spreadsheet.

In Section Scantlings this is handled correctly.

. Error in side shell plating in quay contact region in Section Scantlings

IM 1728:

Calculation of side shell plating in quay contact region in Section Scantlings is not correct, and the results for this area presented in the report is hence wrong.

. Fatigue calculation on Bulk carriers

IM 1046:

Loads from bulk cargos are not included in the fatigue calculations.

. Barge Rules Pt5 Ch.7 Sec.14 are not included in Section Scantlings

IM 1103:

The Barge Rules in Pt.5 Ch.7 Sec.14 are not included in Section Scantlings.

The program applies the requirements for ships with $L < 100$ m, i.e. Pt.3 Ch.2. See the "DNV Rule reference" page in the report

. Bending moments and shear forces specified by users for Offshore ULS check or PULS buckling check might be wrong.

IM 1697:

If own moment or shear force curves have been described for Offshore ULS check, then please check the Report to verify that correct values have been used in the ULS check and/or PULS buckling checks. Still water shear forces and wave bending moments have in some cases used incorrect values.

NOTE.

This problem is only related to cases where the users have specified *own* curve values. Using standard Rule curves will not cause such problems

- **Fatigue calculation for Class Notation *Ore Carrier* does not work**

IM 1592:

Fatigue calculations for Class Notation *Ore Carrier* are not implemented for Rule versions older than October 2008.

However when running a Section Scantlings report including fatigue assessment according to CN 30.7, then the following message is given "Fatigue: Insufficient input or the specified stiffener/stiffener location is not included in rules".

This error message might be wrong and misleading, the reason might be that Class Notation *Ore Carrier* is ticked in Edit Ship Data and the Rule version is older than October 2008.

- **Relative deflections and Double hull bending stresses are not saved**

IM 1542:

Relative deflections and Double hull bending stresses according to CN 30.7 are entered in the Section Scantlings modelling tool menu Fatigue – Fatigue loads (simplified). These are saved and handled correctly as long as the Section Scantlings session is open. However if Section Scantlings is closed and reopened later on then Relative deflections and Double hull bending stresses are gone and will not be included in further analyses.

Workaround:

1. Open Section Scantlings at relevant position in *Cross Section Analysis* and save the cross section as a .pw - file to the CrossSections folder
2. Go to *Rule Check Analyses* and import this .pw - file
3. Open the .pw - file and set correct x-position/frame number
4. Add Relative Displacements and/or Double Bottom Stresses
5. If it is an Offshore unit: tick "Re-analysis using measured thickness" in the report print dialogue
6. Run the fatigue-check with the 2 standard loading conditions
7. Update Scantlings if necessary, save updates in the .pw - file
8. If more positions, duplicate the model and repeat from 3.
9. Return to *Cross Sections* to implement updates in Scantlings. This can be done by importing the .pw - file from above

Note that new features introduced in *Cross Section Analyses in the November 2011 – release*, e.g. *fatigue damage in past*, *user defined load conditions* and *tank fillings*, are not available in *Rule Check Analyses*.

CSR Bulk

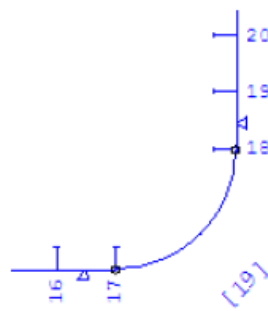
- **Wrong fatigue damage calculations on outer shell structure**

IM 1876:

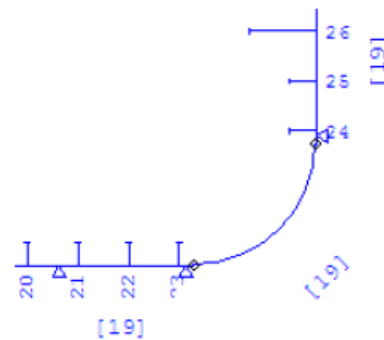
The fatigue life calculation on longitudinals is wrong, and results are not reliable.

Note: The error is only related to the outer hull structure.

- Transverse Bulkheads Rule Check does not work correctly**
 Currently there is some uncertainty with regard to the correctness of the results obtained in rule checks of transverse bulkheads. We therefore recommend that this tool is not used until results are validated.
- Bilge plate requirements Ch 6, Sec 1, [2,3] not considered**
 In the transition zone between the flat bottom and the curved bilge, the bilge plate requirements are not specifically considered in the Rules. Thus the calculated requirements are limited to cases where the curved bilge area is modelled with a longitudinal stiffener at the transition point between the flat bottom and the curved bilge.
 The same limitation applies to the transition zone between the curved bilge and the flat ship side.
 See following figure:



Supported configuration:
Stiffener at transition point.



Not supported configuration:
Stiffener not at transition point

- Buckling requirements can't be seen in "Rule status" in Section Scantlings**
 IM 1731:
 When checking the status for one plate by selecting "Rule status", then buckling requirements are not shown. These requirements are only presented in the report. It is therefore important to run the report and not rely on the conclusion in "Rule status".
- Message "The side frame is not in the cargo hold area"**
 IM 1715:
 Minimum requirements for frames in the cargo hold area might in some cases *not* be calculated. An incorrect error message "The side frame is not in the cargo hold area. The minimum requirement..... is not calculated" will appear in the Section Scantlings report.
 Workaround:
 The error is related to wrong setting of the Compartment type. The workaround is to change the compartment type to something else, and then change it back to the correct again.
- Specific requirements for ships less than 150 metres are not included.**

- **Buckling strength of plates with varying curvature**

IM 1082:

Plates with a varying curvature (or having both flat and curved parts) are not covered by the rules and should be specially considered.

- **Some main frame requirements, Ch 6, [3.3], are not considered**

IM 1529:

The span used when calculating [3.2.3] for main frames is the span specified in Ch 3, Sec 6, Fig 19 - not the span specified in Ch 3, Sec 6, [4.2].

The shear area requirement according to [3.3.1] is not calculated.

The aspect ratio h_{LB}/t_{LB} requirement for the lower bracket according to [3.3.3] is not calculated.

- **Wrong bracket height for Section Modulus calculation**

IM 1135:

For the requirements of h_{LB}/t_{LB} ratio in Ch6Sec2[3.3.3] Section Scantlings is currently using wrong definition of h_{LB} . Currently h_{LB} is measured perpendicular to bracket flange. According to KC ID 563 h_{LB} is to be measured perpendicular to the projection of the lower bracket slope.

CSR Tank

- **Bulb profiles smaller than HP200x9 are not considered in the rules**

IM 1798.

For small longitudinals the End Connection specification might generate a negative span length. This is because these are not included in the Rule specifications, ref. Table C.1.2. The smallest dimension included in this table is HP 200x9.

- **Cross Section Analyses of many positions at the same time**

IM 1686

The Cross Section Analysis consumes much memory, and if too many positions are being checked simultaneously, then the program might give an error message of type Exception with a test like Exception of type "System.OutOfMemoryException" or "Object reference not set to an instance of an object".

The workaround is then to split in several executions. However then the maximum / minimum between the different runs in different reports will then not be calculated automatically. The critical positions must in case be found by manually comparing the extreme results from each report.

- **Wrong sloshing pressure calculation in Connection Area spreadsheet**

IM 1690:

Sloshing pressure is erroneously included in $(S+D) / AC2$ and thereby checked with wrong allowable stress. This can have influence on upper deck longitudinals where sloshing is the dominant load. This can

have influence on upper deck longitudinals and some longitudinals on longitudinal bulkhead where sloshing is the dominant load.

- . **Wrong corrosion addition gives wrong net thickness in peak tanks**
IM 1611:
In some situations the program will use wrong corrosion addition in peak tanks.

- . **Section Scantlings: Min. Deck pressure not included in Engine room area**
IM 1473:
Ref: Sec 7/2.2.4 Static deck pressure for distributed loading.
and Sec7/3.5.5 Dynamic deck pressure for distributed loading.

- . **Graphic presentation of Fatigue results is wrong**
IM 1453:
Legend and colour-coding for Graphics presentation of Fatigue results is wrong.

3D-Beam

- . **Error message “the exception Floating-point division by zero.....”**
IM 1375:
This error might be related to outdated information in registry. A solution can therefore be a clean-up in the registry:
 - Go to Start-Run Commands and enter **regedit**.
 - Then search for the key
HKEY_CURRENT_USER\Software\DNV\Applications\NAUTICUS\3D Beam
 - Delete this key.

- . **Program closes when opening a model or selecting beams**
IM 1875:
In some rare cases 3D-Beam will close down when
 1. opening a small model after having closed itor
 2. selecting beams

This is a work-around that might solve the problem:

If it is not possible to open the model (case 1. above):

 - Open a model that works ok
 - Run an analysis on the ok model. (If the model is already analyzed and the analysis button [=] is not selectable, then first make an insignificant change and thereby reactivate it)
 - Open the model that fails (in the current analysis)

In both cases 1 and 2 above:

 - Add a dummy beam to the model. This might for example be connected to a fixed (ground) node in one end and free in the other end. Thereby it has no influence on the analyses results
 - Attach a profile to the dummy beam.

3. Corrected in the November 2011 Release

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from * = All
		<u>DNV Rules</u>	
6. Jun. 11	1816	Stress components for BowImpact2008Jan.xls	
		<u>CSR Bulk</u>	
19. Aug. 11	1838	Error in CSR-Bulk_Ch9_Sc4_SuperstructuresAndDeckhouses.xls	
13 Jul. 10	1724	Errors in CSR-Bulk_Ch6_Sc2_WebStiffeners.xls for web stiffeners of PSM	
		<u>3D-Beam</u>	
9. Sept. 11	1821	Solid View does not work in Windows 7	14.*
9. Sept. 11	1847	Not able to open existing model on Windows 7	14.*

DNV Rules

- **Stress components for [BowImpact2008Jan.xls](#)**

IM 1816:

Each panel is to be checked for a stress component both perpendicular and parallel to the stiffening direction of the panel. This is done by using two separate calculation points for each panel. This is currently not included.

CSR Bulk

- **Error in [CSR-Bulk_Ch9_Sc4_SuperstructuresAndDeckhouses.xls](#)**

IM 1838:

The following error have been found:

1. pa_min for 4th tier and above should be 12.5, not 2.5. Ref Ch4 Sec5 Table 9
2. p for exposed wheel house tops should be 12.5, not 2.5. Ref Ch4 Sec5 [3.2.1]
3. pa_min for 90<L
4. The girder calculation uses wrong spacing.

- **Errors in [CSR-Bulk_Ch6_Sc2_WebStiffeners.xls](#) for web stiffeners of PSM**

IM 1724:

- The section modulus for web stiffeners is not calculated correctly.
- Both external and internal pressure should be included.

3D-Beam

- **Solid View does not work in Windows 7**

IM 1821:

Works ok in the xy-, xz- and yz-planes, but same error appear when trying to rotate out of plane or selecting Iso View.

- **Not able to open existing model on Windows 7**

IM 1847:

In some rare cases it is impossible to open a small model after having closed it. If the model only consists of some beams along a straight line, then it might be caused by numerical problems.

This is a work-around that has then solved the problem:

- Open a problem free model.
- Run an analysis. (If the model is already analyzed, then make an insignificant change to reactivate the analysis button)
- Open the problem model
- To enable problem-free opening of the model the next time, add a dummy beam, i.e. a beam that has no influence on the analyses results. This might for example be a beam connected to a fixed (ground) node. However it must have a profile.

4. Corrected in the January 2011 Release, Patch 2

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from * = All
		<u>DNV Rules</u>	
6. Jun. 11	1824	Stress checks fail for "Supp. members" in BowImpact2008Jan.xls	
		<u>CSR Tank</u>	
14. Jun. 11	1831	Error in Hull Girder Ultimate Bending Capacity using Single Step Method	
19. Aug. 11	1836	Error in PULS AV and PulsExcel when opened from Genie	12.*

DNV Rules

- **Stress checks fail for "Supp. members" in BowImpact2008Jan.xls**

IM 1824:

Even if "Critical shear stress" and "Critical compressive buckling stress" on the "Supp. members" sheet are greater than the calculated values for "Shear stress" and "Normal stress", the output of the Shear stress check and the Normal stress check is always "Failed".

CSR Tank

- **Error in Hull Girder Ultimate Bending Capacity using Single Step Method**

IM 1831

According to CSR Tanker Rules, Pt.8 Ch.1 App.A 2.1.1.1 the effective net area A_{eff} shall be reduced after buckling of the stiffened deck panel:

A_{eff} effective net area after buckling of the stiffened deck panel. The effective area is the proportion of stiffened deck panel that is effectively able to be stressed to yield:

$$= \frac{\sigma_U}{\sigma_{yd}} A_{\text{net}50} \quad \text{m}^2$$

Note

The effective area of deck girders is to be taken as the net area of the girders using a thickness of $t_{\text{net}50}$.

$A_{\text{net}50}$ net area of the stiffened deck panel, in m^2

σ_U buckling capacity of stiffened deck panel, in N/mm^2 . To be calculated for each stiffened panel using:

- the advanced buckling analysis method, see Section 10/4 and Appendix D
- the net thickness $t_{\text{net}50}$

σ_{yd} specified minimum yield stress of the material, in N/mm^2 , that is used to determine the hull girder section modulus. In the case of the stiffener and plate having different specified minimum yield stress, σ_{yd} , is to be taken as the lesser of the two.

This reduction is not implemented, and a too large effective area is hence used in this calculation.

• **Error in PULS AV and PulsExcel when opened from Genie**

IM 1836

PULS AV and PulsExcel failed when they were opened from Genie.

5. Corrected in the January 2011 Release, Patch 1

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from * = All
		<u>DNV Rules</u>	
10 Mar. 11	1801	Reduced sloshing pressure on webframes and girder panels	2005
24. Jan. 11	1800	Wrong results for PULS Buckling check and ULS Moment Capacity check	*
10 Mar. 11	1797	Wrong Hull Girder strength requirements outside Midship area	14.0

DNV Rules

- **Reduced sloshing pressure on webframes and girder panels**

IM 1801:

Minimum sloshing pressure was 20 kN/m², but has now been reduced to 12 kN/m² on webframes and girder panels in double bottom and double side ballast tanks.

Ref. rules for ships, July 2010, Pt.3 Ch.1 Sec. 4 C304.

- **Wrong results for PULS Buckling check and ULS Moment Capacity check**

IM 1800:

The lateral pressure is applied on the wrong side. This will affect the buckling capacity calculated by PULS, and thereby the Usage Factors (UF) will be wrong.

- **Wrong Hull Girder strength requirements outside Midship area**

IM 1797:

For Sections *not* defined as Midship Sections, there was a large deviation in Hull Girder Strength.

This error was introduced in the February 2010-release, Patch 1. By mistake the f1 factors for the Midship area were not calculated but left unassigned, i.e. the default value of 1.0 was applied.

The f1 values have been corrected to be according to sigmaf stress values defined in the Material dialogue.

6. Corrected in the January 2011 Release

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from * = All
		<u>Section Scantlings</u>	
19 Apr. 10	1696	Wrong wave hogging moments in PULS buckling check	
01 Jul. 09	1543	Wrong compartment data for joined compartments	10.*
		<u>CSR Bulk</u>	
23 Aug. 10	1732	Wrong Corrosion addition for lower stool tanks in Transverse Bulkheads	
		<u>CSR Tank</u>	
19 Apr. 10	1700 1701	Bending moments and shear forces specified by users might be wrong	

Section Scantlings

- **Wrong wave hogging moments in PULS buckling check**

IM 1696:

Wrong wave hogging moments in PULS buckling check and ULS Moment capacity check using PULS. The wave sagging moment is used both as sagging moment *and also hogging moment*.

Workaround:

- 1) Open the moment specification menu *Moment/Stresses for ULS check* or *Moment/Stresses for buckling check with PULS*
- 2) Remove/clear the wave hogging bending moment
- 3) Close the input window
- 4) Reopen the menu to check that the correct value now has been filled in.

- **Wrong compartment data for joined compartments**

IM 1543:

In Compartments and Loads – tab Compartmentation, there is a possibility to join compartments. When this option is used, then the compartment data for the new, joined compartment is wrong. Hence, all compartment data for joined compartments must be checked and corrected manually.

CSR Bulk**. Wrong Corrosion addition for lower stool tanks in Transverse Bulkheads**

IM 1732:

In the Rules, there are extra requirements "within 3m below the top of tank". This is only applicable to ballast tanks with weather deck as the tank top. By a mistake the corrosion additions for lower stool ballast tanks are calculated using the same requirements.

CSR Tank**. Bending moments and shear forces specified by users might be wrong**

IM 1700 / 1701:

If own moment or shear force curves have been described, then please check the Report to verify that correct values have been used. Still water shear forces and wave bending moments have in some cases used incorrect values.

NOTE:

This problem is only related to cases where the users have specified *own* curve values. Using standard Rule curves will not cause such problems

7. Corrected in the February 2010 Release, Patch 2

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from version
		<u>CSR Tank</u>	
	1737	Error affecting pressure calculations for Local Support Members	12.0
		<u>CSR Bulk</u>	
	1707	Modifications and error corrections in CSR-Bulk_AllowableHoldLoading.xls	

CSR Tank

- Error affecting pressure calculations for Local Support Members**

IM 1737:

An error results in incorrect pressures calculated in CSR-Tank_PressureLocSupMemb.xls for:

- Ballast tanks
- Tanks with Liquid content

Void spaces and cargo tanks are not affected.

Workaround:

Pressures calculated by Section Scantlings are not affected by this error and if a scantlings model is defined for the considered position, then this may be used to calculate correct pressures: Run the actual position in the "Cross Section Analyses" task, and find pressures listed in the Result View Tab, in the grid under Detailed results.

CSR Bulk

- Modifications and error corrections in CSR-Bulk_AllowableHoldLoading.xls**

IM 1707:

- Full corrosion thickness used instead of only half.
- For net sectional area (Af) calculation, both starboard and port sides are now considered.
- New columns added for calculation of floors or girders with openings.

8. Corrected in the February 2010 Release, Patch 1

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from version
		<u>Section Scantlings</u>	
10 Jun. 10	1716	Wrong requirements to Longitudinal Stiffeners and Transversely stiffened Plates for DNV 1A1 Rules	12.0

Section Scantlings

- **Wrong requirements to Longitudinal Stiffeners and Transversely stiffened Plates for DNV 1A1 Rules**

IM 1716:

In the February 2010 release, a very serious error was introduced concerning the stress factor f_2 .

As a result, the calculated local requirements for longitudinal stiffeners and transversely stiffened plates will become too small.

The error is related to DNV 1A1 Rules only, and only to large vessels with Length 100 metres and above (i.e. Pt. 3, Ch. 1)

No spreadsheets are affected, only Section Scantlings Rule check.

Description:

The error will occur if no still water bending moment is given as input in the "Hull girder loads" page in Brix Explorer.

In that case the stress factor f_2 will become too small. Hence the allowable stresses for longitudinal stiffeners and transversely stiffened plates will be too large, and the local requirements will become too small.

Workaround:

User-defined curves must be generated for Stillwater moment distribution. If there are no such curves, then use the workaround described below to generate user-defined moment curves that are exactly the same as the Rules-defined curves.

The work-around is:

1. Open Hull Girder Loads – Bending moments – Stillwater – Seagoing Sagging – ‘View curve values ...’
2. Push the ‘Update’ button, ‘Yes’ and ‘OK’
3. Do the same also for the Seagoing Hogging curve.

Verification:

You may check whether the stress factor at bottom, f_{2b} , is correct as follows:

$$f_{2b} = 5.7(M_s + M_w) / Z_b, \text{ where}$$

M_s = design still water bending moment (kNm)

M_w = design wave bending moment (kNm)

The larger of the sagging and hogging moments are to be applied.

Z_b = section modulus at bottom, as built (cm³)

Refer to DNV Rules for ships, Pt.3 Ch.1 Sec.6 A 201.

9. Corrected in the February 2010 Release

Click on **Subject** to find a more detailed description of each issue below the table.

Entry Date	IM case no.	Subject	Applies from version
		<u>Section Scantlings</u>	
21 Jan. 10	1594	Data for ULS check (offshore vessels) is not saved	10.*
06 Jul. 09		Layout of transverse bulkheads with stool-tanks	10.*
27 Aug. 09	1556	Wrong Hull Girder Loads if one curve has both positive and negative parts	
		<u>DNV Rules</u>	
8 Dec. 09	1579	Outdated spreadsheet N_SingleSkin for High Speed Light Craft	
		<u>CSR Bulk</u>	
22 Apr. 09	1483	Wrong Design Bending Moments for Harbour condition	
		<u>CSR Tank</u>	
08 Mar. 10	1666	Report generation fails for Rules later than Jan2008	

* = All

Section Scantlings

- **Data for ULS check (offshore vessels) is not saved**

IM 1594:

Data given via Forces/Moments/Stresses – Moments/Stresses for Ultimate Limit State (ULS) check.... is saved and handled correctly as long as the Section Scantlings session is ongoing. However if Section Scantlings is closed and reopened later on then this data is gone and not included in further analyses.

- Workarounds:
- 1 In the *Cross Section Analyses* tool:
If the model is saved as a pw-file, then the data will be kept.
Before closing the Section Scantlings modelling tool, do File – Save As ... and save as a file of type pw. Next time the modelling tool is opened, open the correct pw-file (use File – Open) and continue working on that one.
 - 2 Work on the pw-file directly in the *Rule Check Analyses* tool.

- **Layout of transverse bulkheads with stool-tanks**

When the program generates stool-tank compartments, it is assumed that the layout of the transverse bulkhead is constant from the centre line to the side. If not, a warning will be given, e.g. if the inner bottom height varies in transverse direction.

- **Wrong Hull Girder Loads if one curve has both positive and negative parts**

IM 1556:

If one Hull Girder Moments or Hull Girder Shear Force curve has both positive and negative parts, then using this curve will give wrong moments or shear forces.'

Workaround: Use two different curves, one positive all the way for Rule checking at positions with positive values, and correspondingly one with negative values all the way for positions with negative values.

DNV Rules

- **Outdated spreadsheet N_SingleSkin for High Speed Light Craft**

IM 1579:

Please, note that the spreadsheet N_SingleSkin is not the latest version.

The latest version will be distributed with the next release.

Please contact DNV Software <http://www.dnv.com/services/software/support/index.asp> should you need the latest version earlier.

CSR Bulk

- **Wrong Design Bending Moments for Harbour condition**

IM 1483:

The linear interpolation in the aft and fore areas does not work correctly. Hence the Design Bending Moments for Harbour condition are only correct in the Midship area where they are constant.

CSR Tank

- **Report generation fails for Rules later than Jan2008**

IM 1666:

Generating a report from the Result View for CSR Tank fails if the Rule edition is set to July 2008 or later. The results can be displayed ok, only the generation of the Word document fails.

Reports generated from within Section Scantlings are ok. Hence, the work-around is to generate the reports from within Section Scantlings.