

## Advance Design 2012 / SP2

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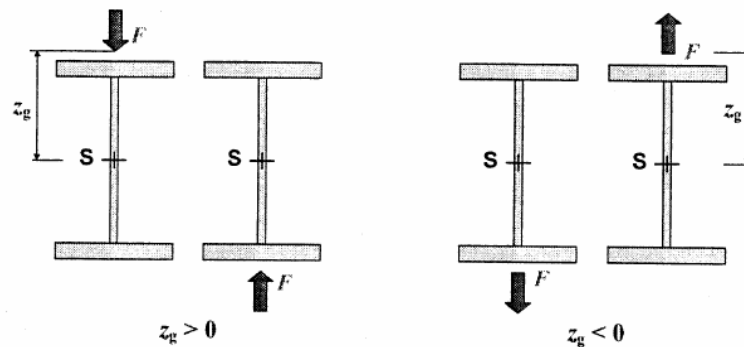
This second service pack for ADVANCE Design 2012 offers more than 46 improvements and corrections.

The service pack should be installed on Advance Design 2012 SP1 version.

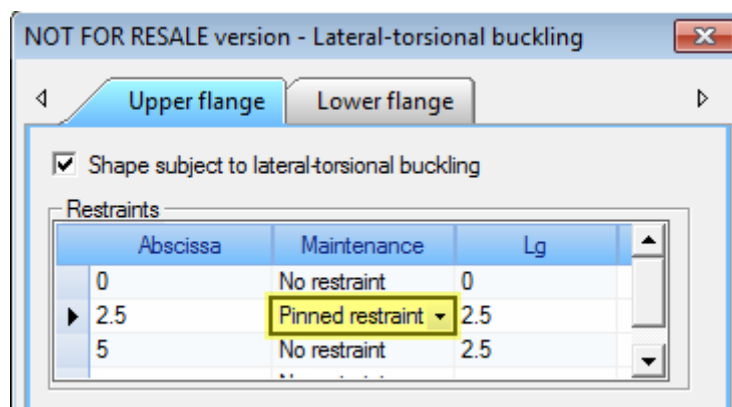
The most significant improvements of this service pack are:

### Eurocode 3

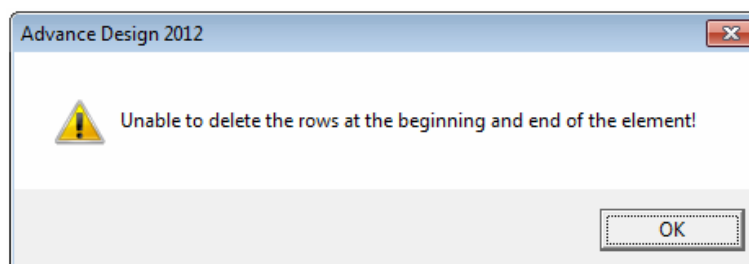
- [13163] Correction of a problem regarding the lateral torsional buckling parameter  $z_g$  (load application point). This parameter is now given a positive sign when it tends to increase lateral torsional buckling, and a negative sign when it tends to reduce it.



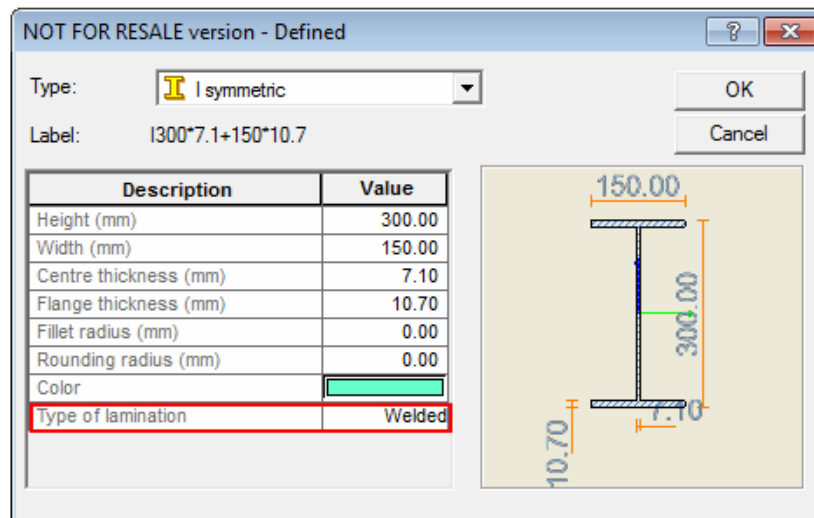
- [13166] The possibility to define an intermediate restraint and to set it as “No restraint” made no sense and therefore, it has been removed.



- [13167] In the lateral restraints table, deleting the rows corresponding to the beginning or the end of an element would lead to infinite lateral torsional results. Therefore, this possibility has been removed.



- [13184] The “welded” or “laminated” section property was not always saved when closing the model.



- [13185] The torsion verification was not allowed for I shapes. Advance Design now returns the message “Torsion not checked for this type of section”.
- [131903] Section class is now given for top flange (left and right), for web, and for bottom flange (left and right).

	Class	Characteristics
Bottom flange 1	Class 1	-
Bottom flange 2	Class 1	-
Web	Class 3	-
Top flange 1	Class 1	-
Top flange 2	Class 1	-
Cross section	Class 3	Elastic

- [13193] In the assumptions table, Advance Design displayed “Ka-Kb method” even though user had chosen “ $\eta_1$ -  $\eta_2$  method”.

### Steel calculation assumptions

The steel shapes analysis assumptions are:

- Dimensioning performed according to EC3 (French NA).
- The calculation was performed in combined bending.
- The shapes optimisation was performed to obtain a work ratio of elements lower than 100%.
- The maximum number of iterations by each optimisation step is of 8.
- The calculation was performed by elements.
- The sorting of shape sheets is made with the of work ratio criterion.
- The buckling lengths are calculated by  $\eta_1$ -  $\eta_2$  method.

- [13188] When section class has been imposed by user, this information is now displayed in the report.

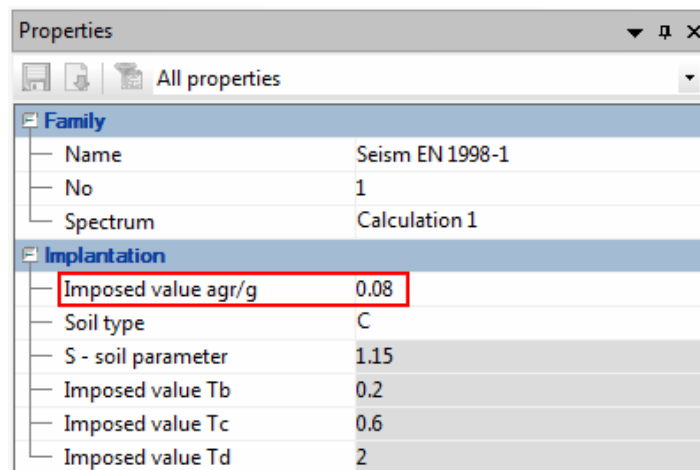
<b>2) Section classification</b>	
Class	Cross section : Class 3 (imposed by the user)

## CM66

- [13082] After a CM66 calculation, shape sheets could no longer be edited through the report generator.

## Eurocode 8

- [13218] When set on General Eurocode 8 (with no national appendix specified), the agr/g field was missing.




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### Note:

The reference number in brackets [xxxx] is the GRAITEC Helpdesk reference.