

Local loads transformation

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Online version: <https://nextgen.sant-ambrogio.it/KB736575>

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Starting from version 2018.2, a new function is available that allows to consider the forces and moments due to the localized loads applied to nozzles and supports in the calculation of the base loads acting on the supports and in the actions between the sections of the columns calculated during the structural analysis.

This function can be enabled individually for each component for which verification according to WRC is enabled. Among the WRC properties there is now a new option that also allows to define for which **load combination** to perform the transport of the localized loads.

Once enabled, the program will perform the calculation according to Annex 2 of AD 2000-Merkblatt S 3/0 09.2016. It should be noted that this verification considers the signs of the forces and moments always considering the most conservative case, as foreseen by the indicated method.

Long Welding Neck flange "NOZZLE N1"

General Design conditions Geometry Position Welds Bolts Gasket Standard flange **WRC** External loads Weight Report

Verify WRC bulletin Verify as per WRC 297/1987

Check loads at flange connection point

Loads set Loads set 1

Enable load set?

Temperature 100 °C

Internal pressure 16.5 MPa

Consider these local loads for the vessel support calculation in the following load combinations: Operating

Loads position Shell mean diameter

Signs convention As stated in bulletins

Run additional calculation with inverted axial forces signs

Maximum local membrane stress based on Allowable