

TRIFLEX® Version 3.3.1 Enhancements & Modifications
February 25, 2010
Page 1

Enhancements

1. ***Output Results and Code Compliance Printing*** – This version of TRIFLEX® incorporates a spreadsheet printing capability initiated by using the Print Reports item from the Utilities Menu. This will allow the user to direct the Input Spreadsheet, the Results Spreadsheet, the Code Compliance Specification Spreadsheet, and the Code Compliance Spreadsheet for a selected case to an installed printer.
2. ***Column Heading File Designation*** – An item has been added to the setup drop down menu which will allow the user to designate which file, in which location, he wishes to use as the column header input file. Since this file is read and indexed prior to entry into TRIFLEX®, the designation will take effect upon the next restart of TRIFLEX®.
3. ***Absolute Coordinate Precision*** – The precision with which absolute coordinate data is entered and displayed in TRIFLEX® has been enhanced.
4. ***Structural Steel Dialog and Data Entry*** – The Structural Steel Dialog has been modified such that it is easier to enter and edit data for the User-Specified structural shapes: square, round, and rectangular bar, as well as round and rectangular tubing. A button has been added beneath the type designation drop-down menu which becomes active if a user-specified type is selected. Depressing this button will bring up the dialog with which the user can modify the size. If English units are in effect, the size specification dialogs now accept fractional inch values as well as decimal inches. Further, if a user-specified shape is selected for a component then the shape and size of that structural member is carried through as the default values for the next component if it is also a structural member.

TRIFLEX® Version 3.3.1 Enhancements & Modifications

February 25, 2010

Page 2

Modifications

1. ***User-Specified Materials*** – User-Specified materials used in European Piping Codes could not properly resolve the ratio of elasticity moduli, resulting in a failure when trying to execute the code compliance report. This has been resolved.
2. ***Code Specific Materials*** – A modification of the pipe properties dialog no longer allows the selection of materials for a piping code other than either Generic materials, including User Defined and User Specified categories, or those materials from the data base associated with that piping code. While existing jobs with mixed materials are still capable of being run, we suggest that these jobs be set up with proper material designations in order to assure compliance with the piping code requirements.
3. ***Non-Linear Restraint Iterations*** – The algorithm which handled iterations for non-linear restraints, specifically frictional restraints, has been modified such that it no longer can produce an iteration with negative stiffnesses. Previously when these negative values became dominant they could lead to the dreaded non-positive definite matrix error, even though the piping system was fully restrained.
4. ***Material Incompatibility*** – Since Version 3.3.0 Material Compatibility is enforced, that is the only materials that can be specified in a piping system are from the generic data base, which includes user-defined materials, and the data base pertaining to the piping code in question. Should an old data file be encountered, which contains an incompatible material, TRIFLEX® now issues a warning message, urging the user to correct the fault, rather than a Microsoft message pertaining to invalid parameters or possibly a program crash.
5. ***Structural Member Property Calculation*** – If non-English units were selected, TRIFLEX® would erroneously calculate structural member areal properties of round, square, and rectangular bar, and as if the numerical dimensions were in the input unit system selected. However, a 1x1 square bar means a 1 *inch* by 1 *inch* square bar, per AISC standards, hence the dimensions of it are 25.4 mm by 25.4 mm when SI units are used for input, NOT 1 mm by 1 mm. This oversight has been corrected.
6. ***Reducer Stress Intensification Factor*** – The stress intensification factor for reducers has been corrected for the B31.8 and B31.5 piping codes. Previously the SIF for B31.8 was set by the program to be 1.0 instead of the correct value of 2.0, and for B31.5 it was set at 2.0 instead of the correct value of 1.0.
7. ***B31.8 Offshore Piping Code*** – The ASME B31.8 Gas Transmission and Distribution Piping Systems piping code in TRIFLEX® has been updated in TRIFLEX® to include the optional thick wall calculation of hoop stress allowed by the 2007 version of the code.