CAEPIPE

Pipe Stress Analysis Software - CAEPIPE

DETAILS | **DOWNLOADS** | **LINKS**

Pipe Stress professionals' software of choice to perform pipe stress analysis calculations
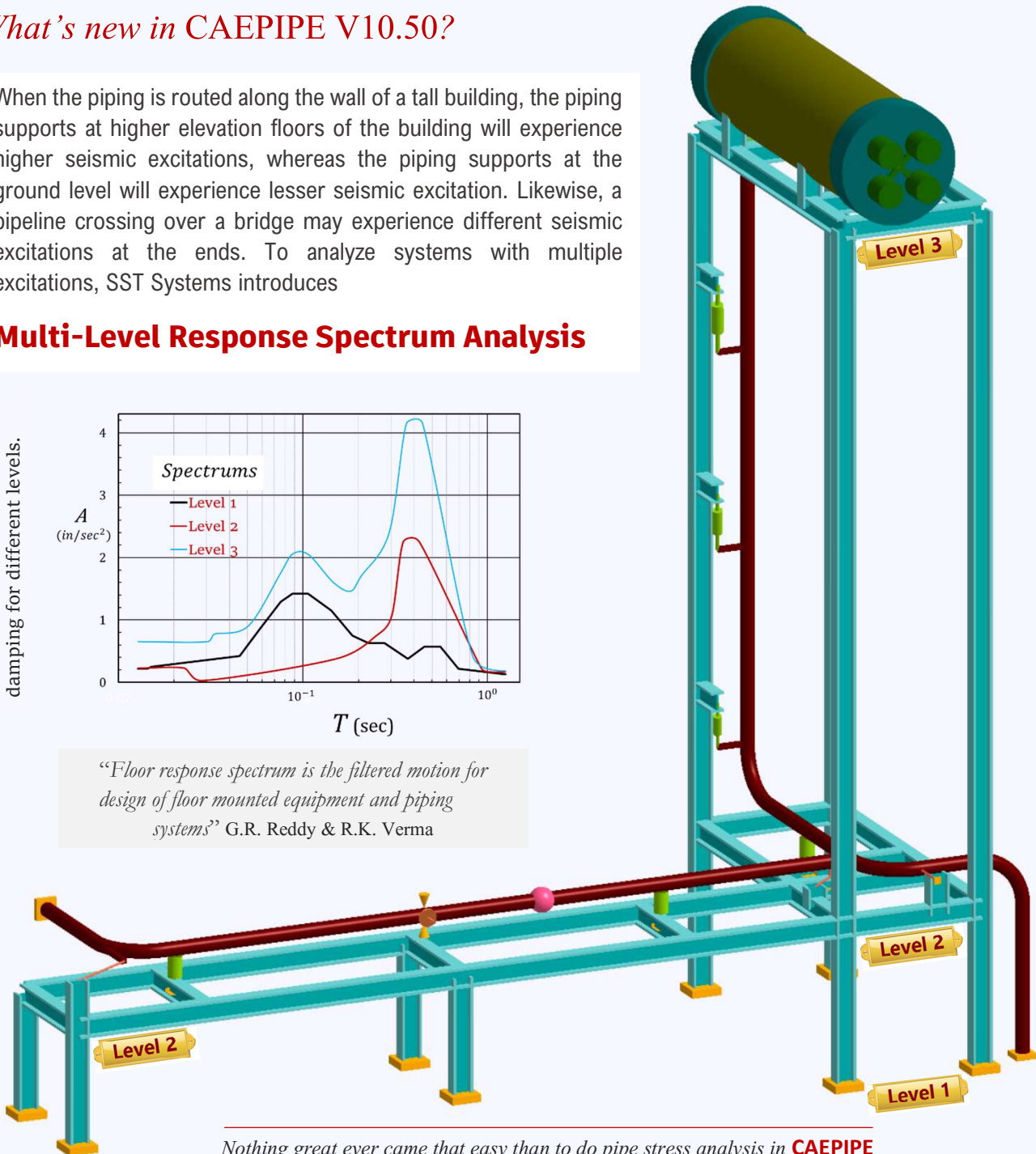
V10.50

What's new in CAEPIPE V10.50?

When the piping is routed along the wall of a tall building, the piping supports at higher elevation floors of the building will experience higher seismic excitations, whereas the piping supports at the ground level will experience lesser seismic excitation. Likewise, a pipeline crossing over a bridge may experience different seismic excitations at the ends. To analyze systems with multiple excitations, SST Systems introduces

Multi-Level Response Spectrum Analysis

Floor response spectra's at 5% damping for different levels.

Spectrums
— Level 1
— Level 2
— Level 3

A (in/sec^2)

T (sec)
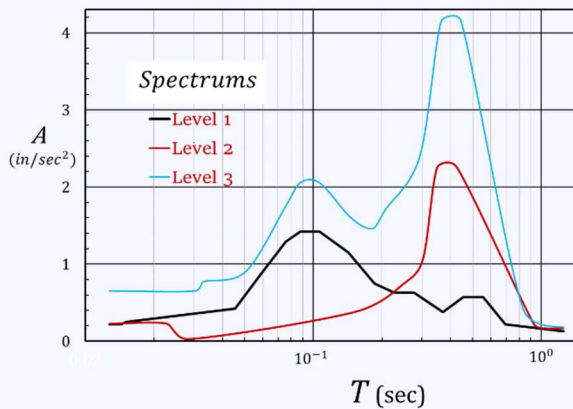
"Floor response spectrum is the filtered motion for design of floor mounted equipment and piping systems" G.R. Reddy & R.K. Verma

Level 3

Level 2

Level 2

Level 1

Nothing great ever came that easy than to do pipe stress analysis in **CAEPIPE**

SST SYSTEMS, INC.
The **FASTEST** Solutions for Piping Design and Analysis

CAEPIPE™

V10.50

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Yesanhe Pipeline Bridge, China

Suspension cable carrying natural gas pipeline with both
ends experiencing different seismic excitations requires a
Multi-Level Response Spectrum Analysis.

Code Updates

Canadian Piping code CSA Z662 is updated to CSA Z662 (2019). Refer to Piping Code Compliance
Section titled CSA Z662 (2019) in CAEPIPE Code Compliance Manual for details.

Flange Equivalent Pressure calculation inside CAEPIPE (Flange Report in CAEPIPE Results) is now performed in
accordance with Eq. 6.6.1-2 of EN 13480-3 (2020), when the Piping Code selected for Analysis is EN 13480 / BS
806 / IGEM / Norwegian / RCC-M / CODETI / Stoomwezen / Swedish. For all other Piping Codes, Flange Equivalent
Pressure is calculated in accordance with NC-3658.1 of ASME Section III Class 2 (2017). Refer to the section
titled "Flange" in CAEPIPE Technical Reference Manual for details.

Enhancements

- Seismic Displacements at Anchors and Nozzles can be input for all Piping Codes. When input,
  CAEPIPE solves it as a separate internal load case, the results of which are then added <u>absolutely</u>
  to static seismic and response spectrum load case results.

- Option to select Facing Sketch 1(c) or 1(d) as per ASME Section VIII Division 1 - Appendix 2 is now
  included in Flange Qualification module. This module can be launched through Main Frame > New > Flange
  Qualification or Main Frame > Open > Flange Qualification files (*.flg).

- "Check bends" command available through Layout Window > Misc is updated to issue a warning message when the Bend Angle < 5 deg for Bends, Mitres and Jbends.

- "Copy" command available through "Layout Window > Edit" can now remember elements copied for multiple paste by turning ON the option "Remember for multiple paste". Refer to the section titled "Copy" in CAEPIPE User's Manual for details.

- "Paste" command available through "Layout Window > Edit" can now paste a group of elements including their data in the middle of a layout. Refer to the section titled "Paste" in CAEPIPE User's Manual for details.

- CAEPIPE User's Manual, Technical Reference Manual, Code Compliance Manual and Verification Manual are updated in line with software version 10.50. Verification and Validation of Multi-level Response Spectrum Analysis by CAEPIPE have been performed against the USNRC Benchmark problems. Manuals can be downloaded from the link www.sstusa.com/caepipe-docs.php.

- New feature is added to define and import Limit Stop, Snubber and Skewed Restraint in local axis direction via MBF. Refer Appendix A in CAEPIPE User's Manual for details.

- New feature is added to find and replace Level Tag for Supports through Layout window > Edit > Find and Replace.

- New feature is added to change or assign Level Tag for Supports through Layout window > Edit > Change.

- New feature is added to import Spectrum(s) and Spectrum Level(s) while merging model with Spectrum(s) defined.

- MBF format is updated to be compatible with CAEPIPE Version 10.50. See Appendix A of CAEPIPE User's Manual for details.

Bug Fixes

- For piping code = Z662 (2015), longitudinal stress (PD/4t) was getting added to Combined stress for buried piping.

- Spectrum values were not exported properly to CSV file through Spectrum List > File > Export.

- Wind code was exported as "NONE" instead of "0" when Wind profile is exported to MBF file. Hence, while importing the MBF file back, CAEPIPE was issuing an error message.

CAEPIPE Demo: Download an evaluation version of CAEPIPE from the link https://www.sstusa.com/piping-software-download.php.

Earlier versions' Release Notes are available at
http://www.sstusa.com/caepipe-enhancements.php

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