What's new in CAEPIPE V12.10?

(Release date: December 18, 2023)

New Piping Codes

Following new piping codes are added.

- RCC-M (2018) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands
- RCC-M (2020) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands
- RCC-M (2022) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands

Refer to Piping Code Compliance section of CAEPIPE Code Compliance Manual for details.

UPDATED CODES: Refer to Piping Code Compliance section of CAEPIPE Code Compliance Manual for details.

- ASME B31.3 (2022)
- ASME B31.5 (2022)

MATERIAL LIBRARIES: Material libraries for the following codes are added. Refer to Piping Code Compliance section of CAEPIPE Code Compliance Manual for details.

- ASME B31.3 (2022)
- ASME B31.5 (2022)

Enhancements

- For Process Piping ASME B31.3, the feature 'Show/Hide Operating Stress for NDE' is modified to 'Show/Hide Operating Stress for Impact Test Exemption' calculated in accordance with Para. 323.2.2 (b)(3) of ASME B31.3 (2022) code.

- CAEPIPE will now use the current cursor position as the centre point of zoom when a model is zoomed dynamically using mouse scroll button.

- In Rotation mode (Turn), Ctrl + Mouse Left Button Down and Drag in Horizonal or Vertical direction will now Rotate the model in the direction of rotation (cursor movement).

- CAEPIPE User's Manual, Technical Reference Manual, Code Compliance Manual and Verification Manual have been enhanced and updated to be in line with software version 12.10. These Manuals can be downloaded from the link www.sstusa.com/caepipe-docs.php.

Bug Fixes

- Editing the existing Flange at a node was not showing the Bolt Circle Diameter input in the Flange Dialog.

- Merging of models that contain Revision Record was running into infinite loop.

- For Piping Code = None, a few options that are NOT required for None code were shown randomly in the dialog launched through Layout Window > Options > Analysis > Code.

CAEPIPE Code Compliance Checks

Table given below lists the Piping Codes that are built into CAEPIPE Version 12.10 for Code Compliance checks with their piping type and analysis type covered.

Sl. No.	Piping Code and Description	Metallic / Nonmetallic Piping	Above Ground	Buried Piping
1	ASME B31.1 (2022) - Power Piping	Metallic	Yes	---
2	ASME B31.1 (1967) - Power Piping	Metallic	Yes	---
3	ASME B31.1 (1973) - Power Piping	Metallic	Yes	---
4	ASME B31.1 (1977) - Power Piping	Metallic	Yes	---
5	ASME B31.1 (1980) - Power Piping	Metallic	Yes	---
6	ASME B31.3 (2022) - Process Piping	Metallic	Yes	---
7	ASME B31.4 (2022) - Pipeline Transportation Systems for Liquids and Slurries	Metallic	Yes	Yes
8	ASME B31.5 (2022) - Refrigeration Piping and Heat Transfer Components	Metallic	Yes	---
9	ASME B31.8 (2022) - Gas Transmission and Distribution Piping Systems	Metallic	Yes	Yes
10	ASME B31.9 (2020) - Building Services Piping	Metallic	Yes	---
11	ASME B31.12 IP (2019) - Hydrogen Piping	Metallic	Yes	---
12	ASME B31.12 PL (2019) - Hydrogen Pipelines	Metallic	Yes	Yes
13	ASME NM.1 (2020) - Thermoplastic Piping Systems	Nonmetallic	Yes	---
14	ASME NM.2 (2020) - Glass-Fiber-Reinforced Thermosetting-Resin Piping Systems (GRP/FRP)	Nonmetallic	Yes	---
15	ASME Class 2 (1980) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
16	ASME Class 2 (1986) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
17	ASME Class 2 (1992) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
18	ASME Class 2 (2015) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
19	ASME Class 2 (2017) ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
20	ASME Class 2 (2021) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---

CAEPIPE

Pipe Stress Analysis Software - CAEPIPE

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

V12.10

Sl. No.	Piping Code and Description	Metallic / Nonmetallic Piping	Above Ground	Buried Piping
21	ASME Class 3 (2017) - ASME Section III, Subsection ND - Class 3	Metallic	Yes	---
22	ASME Class 3 (2021) - ASME Section III, Subsection ND - Class 3	Metallic	Yes	---
23	ISO 14692-3 (2017) - Petroleum and Natural Gas Industries - Glass Reinforced Plastics (GRP/FRP) Piping	Nonmetallic	Yes	Yes
24	EN 13480 (2020) - Metallic industrial piping	Metallic	Yes	Yes
25	EN 13941 (2019) - District heating pipes	Metallic	No	Yes
26	BS 806 (1986) - Construction of Ferrous Piping Installations for and in Connection with Land Boilers (British)	Metallic	Yes	---
27	IGEM (2012) - Institution of Gas Engineers and Managers (IGEM) IGE/TD/12 Edition 2 (UK)	Metallic	Yes	---
28	Norwegian (1983) - Process design	Metallic	Yes	---
29	Norwegian (1990) - Process design	Metallic	Yes	---
30	RCC-M (1985) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
31	RCC-M (2018) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
32	RCC-M (2020) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
33	RCC-M (2022) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
34	CODETI (2013) - CODE DE CONSTRUCTION DES TUYAUTERIES INDUSTRIELLES (French)	Metallic	Yes	---
35	Stoomwezen (1989) - Dutch Power piping code	Metallic	Yes	---
36	Swedish (1978) – Swedish piping code	Metallic	Yes	---
37	Z183 (1990) - Oil Pipeline Systems (Canadian)	Metallic	Yes	---
38	Z184 (1992) - Gas Pipeline Systems (Canadian)	Metallic	Yes	---
39	Z662 (2019) - Oil & Gas Pipeline Systems (Canadian)	Metallic	Yes	Yes
40	NONE (for AWWA M11 applications, and for applications in aircraft, aerospace & defence industries)	Metallic	Yes	Yes

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