PV Elite for CodeCalc Users Webinar Questions & Answers.

Please note the recorded version of this webinar can be accessed at our Insider Blog in the Webinar-Archives category: http://coade.typepad.com/coadeinsider/

Contents:

CodeCalc related questions:

Q: We have over 1600 CodeCalc Input data sets for the pressure vessels we have on site. Can we keep CodeCalc active to read a work with old input data sets?

A: CodeCalc will always be a part of PV Elite, so you will always be able to read your old data using CodeCalc.

Q: Can PV Elite read CodeCalc Input data sets

A: PV Elite does not read CodeCalc input files (*.cci). There are many data items that PV Elite does not address (like rectangular vessels) that CodeCalc does. The opposite is also true.

Q: Can PV Elite do component design same as CodeCalc?

A: There is quite a bit of analysis overlap as you would expect between CodeCalc and PV Elite. In some cases, the entire vessel must be evaluated, especially for new designs (wind, seismic, piping loads etc). However, individual components can be evaluated using PV Elite as well as CodeCalc. This is handy for re-rate situations.

Q: How long will CodeCalc be available?

A: CodeCalc will stay a part of PV Elite and will not be going away all together. We will continue to develop and support CodeCalc.

Q: So if I update will I be able to perform rectangular vessel calculations?

A: Within the CodeCalc program, you can design rectangular vessels.

Q: If I have PVElite can I have another junior engineer on another system use CodeCalc or must they be run on the same system?

A: The software can be installed on his machine but the hardware key is needed to run.

Q: If I read a CodeCalc data set with PV Elite do I ruin it if I go back and try to use an old version of CodeCalc?

A: CodeCalc will only read CodeCalc input files and they are only upwardly compatible. So CC 2208 will not read a CC 2010 input file. This is a great reason to have a local backup drive. This is true of all of our products.

Questions on PV Elite

Q: Megyesy recommends tapered saddle supports, increasing in width as the saddle approaches the vessel wall (for horizontal tanks). Is this possible in PVElite?

A: In PV Elite 2010 we have added an over-riding dimension at the base, but I didn't have time to modify the saddle graphic. But the calculation will use the value if entered in.

Q: When will speed nozzle details driven by PVElite be available?

A: We didn't understand the question. Adding nozzles in PV Elite is quick.

Q: I mean when you lift a vessel from horizontal to vertical can you check for stiffening of the skirt?

A: Yes the stresses in the skirt are checked during the lift (rigging analysis). But, the temporary stiffening beam attached in the skirt to prevent ovalization is not analyzed at this time.

Q: Where is MDMT report?

A: The results are shown in the MDMT summary report and in some other reports.

Q: Can you change the size of the typeface for us old guys?

A: You can lower your windows resolution to say 1024x768, and then the text would be bigger.

Q: Can you do check the design skirts for tipping up ?

A: yes, the bolts are checked for uplifting condition.

Q: Can you add area for platforms and ladders?

A: You can manually enter your own weights and areas if you wish, but these values are normally computed by PV Elite.

Q: Can you print a picture of the vessel?

A: The vessel 3D picture can be exported to an HTML format. It can also be printed to a printer.

Q: Can you do toriconical cones?

A: Yes, you can specify a knuckle and flare for a cone.

Q: Can you set A1/a2 =0 for the nozzle reinforcement.

A: Yes, both these options are available and even the option to ignore area in the cover weld.

Q: Do you always have to start modeling at skirt?

A: In creating a vertical vessel, you do not have to start with the skirt. You can start with the bottom head and build up from there. At a later point, you can always insert the skirt after you have started building the rest of the vessel.

Q: Do you do half pipe jackets per Div 2?

A: We have Appendix EE from ASME Div. 1 for analysis of half-pipe jackets, which is nearly identical to what's in the new Div. 2. This is only active if you are using Division 1. This may be possible in a future version.

Q: Over half of our pressure vessels on site are built before 1998 can we still use old allowable stresses?

A: Yes, there is an option to use the pre 98 allowables. You can custom material properties and use them in the design.

Q: Can we choose a code year (edition/addenda) for the calculations? Are allowable stresses for older codes available?

A: We have a database year selection available in tools->configuration. So you can easily obtain allowables for earlier code years.

Q: How long back do you have PVElite databases?

A: Back to 1998.

Q: So when you use an older code edition/addenda in the current version of PV Elite are only the older allowable being used not the older equations and to access older code equations you need to run an older version?

A: If you need to run the older code addenda including the code rules, install the older version of PV Elite on your computer. The installation disc for PV Elite includes the installs for the older versions of the program. So, this option is available.

Q: When we use allowables for, let say, 1962 edition, will hydrotest pressure be calculated as it was in 1962 or the new rules will be used?

A: If the design margin was 4:1 in 62, the answer would be yes. There is also a user defined hydrotest pressure, so you can override our calculated value with your own.

Q: Will still be FFS capabilities in PV Elite?

A: FFS will still be a part of the CodeCalc program. Since you get CodeCalc with PV Elite, you will not lose this function. You will just use CodeCalc as you have in the past.

Q: Will there be PV Elite training in the beginning of the year for CodeCalc users?

A: Yes, we have seminars 2 or 3 times a year here in Houston and more around the world. Check the COADE website www.coade.com for information on these seminars.

Q: How does PV Elite calculate nozzles that falls out of WRC107? Does it use FEM?

A: PV Elite does not have FEA built in, but will give warning when the d/D ratios etc are exceeded.

Q: When the nozzles are hillside. Does it use WRC 107?

A: WRC 297/107 is only applicable for radial nozzles.

Q: For ASME Sect. VIII Div 1, is it possible to add manways or hand hole access ports?

A: Yes, you can add manways and access openings.

Q: Can the program distinguish between inserting a "top" elliptical head and a "bottom" elliptical head as far as the orientation?

A: Yes, note the orientation of the element in the status region at the bottom of the program's frame (Up for example). In PV Elite you typically build a vertical vessel by starting from the bottom to going up to the top. You can also insert elements in an existing model.

Q: Can you use clad material or for instance carbon steel with stainless overlay?

A: You can specify lining and insulation for shells and heads.

Q: Does PV Elite have the facilities to calculate vessel's lifting stresses?

A: yes, PV Elite already had the facility to check vessel stresses while lifting. In the 2010 version lifting lugs can be added to the vessel as well.

Q: Can you have a toriconical head attached to a skirt?

A: Yes you can specify the knuckle/flare for the conical bottom head.

Q: Do you have fatigue analysis per ASME DIV 2? Also does PV Elite cover water jacket shells other than half pipes and also nozzles connected to internal coils?

A: Yes, PV Elite performs pressure cycle fatigue analysis per Div. 2. PV Elite does not cover App. 9 types of jackets at this time. However, you can analyze the inner core and the jacket in separate files in PV Elite. CodeCalc covers Appendix 9 Jacketed vessels.

Q: Comparing with other vessel design software like Compress, what is the advantage (or difference) of using PV Elite?

A: We feel that PV Elite has a number of advantages over other software including analysis capability, international standards, flexible units and many others.

PV Elite - CAD related questions

Q: What is the interface to AutoCad?

A: PV Elite files can be directly imported in to our PV Fabricator software to produce the vessel 3D model and also to generate 2D fabrication drawings.

Q: How long did it take to create the fabrication drawing for the tower once the PV analysis is complete?

A: This depends upon the complexity of the drawing. Using PV Fabricator compared to vanilla AutoCAD you should see a 25 - 50% time improvement to develop a drawing.

Q: Would you show me an example of a shell and tube exported as PV Fab?

A: For more information using PV Fabricator with Heat Exchangers, please email for more detailed response, sales@coade.com.

Q: Will PV Elite (heat exchanger design module) be able to generate fabrication drawings and BOM's . Is GA to scale?

A: You can export the PV Elite file to PV Fabricator for this purpose. The GA drawing is based on a scale model of the vessel.

Q: Is it possible to import/export from PDS equipment model?

A: No, at this time PV Elite does not have an interface to PDS. You can Import the PV Elite model in to AutoCAD environment using COADE's CADWorx suite which can be saved in the dwg format. Then, you can import the AutoCAD file (*.dwg) in to other CAD software. But, you will lose the intelligence in the model and also lose the integration with PV Elite. This import/export function to PDS may be added in the future.

Sales questions:

Q: Is API 579 extra cost?

A: No it does not entail any extra cost.

Q: How much will PV Fabricator cost?

A: For the latest pricing please visit www.coade.com or contact COADE sales at sales@coade.com.

Heat exchanger related questions

Q: How to model tubesheet?

A: There is a tubesheet button on the detail toolbar that you have to press. Then you get all of the dialogs in which to fill in the tubesheet information.

Q: Can you insert an expansion joint?

A: Yes you can insert and analyze both thin (bellows) and thick (flanged and flued) expansion joints.

Q: Does PVElite have the option of selecting a TEMA class for their heat exchanger design module?

A: Yes, we have the TEMA design Code in PV Elite.

Q: Can we design a tube layout in PVElite?

A: Yes, it has tube layout program

Q: Has the tubesheet interface improved at all in this release?

A: This is a broad question, but we are always working to make the software flexible and easy to use.

Q: In CodeCalc you can create a tubesheet and partially simulate the mating channel; is there a similar function in PV Elite or must we define a vessel element to mate with the tubesheet.

A: The baseline orientation must match one of the UHX configurations, otherwise you will get an error and the tubesheet analysis will not proceed. Typically you need to model the elements that directly attached to the tubesheet.

Q: For TEMA HX design, baffle THK, Pas plate THK not currently in software. Will they be added?

A: It is on our development list.

Q: Can you model a vertical shell and tube exchanger and is the weight of the tube bundle considered?

A: Yes, you can model a vertical exchanger and the weight is considered in the support calculations.

Q: Can we model all components of a heat exchanger including channels or a floating head?

A: Yes, the main components of the heat exchangers are all modeled. Some of the smaller items like pass partition plate or baffles are not available at this time.

Q: Is new update will import data from thermal program like HTRI, ASPEN B-Jac for running Heat exchanger module?

A: There is an import from HTRI software (via a dbo file). At this time we do not import from ASPEN software.

General questions:

Q: We've been using PV Elite for several years now, including 1 week of training at our office by Ray. Does this webinar qualify for continuing education credits?

A: No, this webinar does not qualify for the continuing education credit.

Q: Is there a recording of this webinar?

A: Yes. You can view the recorded webinar at our Insider blog in the Webinar-Archives Category. Direct link to the webinar archive:
http://coade.typepad.com/coadeinsider/2009/11/webinar-pvelite-for-codecalc-users.html

Q: Next year? Will be notify?

A: For all our future webinars, please visit the Events page on our website:
www.coade.com or our Blog at: http://coade.typepad.com/coadeinsider/.