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Nr. 2 vom 6. Februar 2017

Hello,

This is the second InfoMail of INTES with new and interesting information about our CAE software PERMAS, our events and services.

We have prepared the following content:

1. Change of date: **PERMAS Technology Day now on June 20th, 2017**
2. PERMAS Workshops in the first half of 2017.
3. PERMAS uses production processes in optimizing sheet metal parts.
4. One-stop FSI analysis for liquid sloshing in an earthquake.
5. New software PCGen to model fluid tanks for PERMAS.
6. INTES will attend other events.

Best regards

The INTES Team



1. Change of date: PERMAS Technology Day now on June 20th, 2017

Alternating with the PERMAS User Meeting, the Technology Day could be established, which every two years presents relevant topics of PERMAS and VisPER applications.

[... more](#)



2. Upcoming PERMAS Workshops (in German)

English workshops are available on request.

In March 2017:

6 - 8 March : Basics

9 March : Contact analysis – Advanced applications

13 March : VisPER (free-of-charge)

14 March : Topology optimization

15 - 16 March : Parameter optimization

17 March : Reliability analysis

20 - 21 March : nonlinear static analysis

22 March : Heat transfer

27 March : Quality assurance in FE analysis

28 March : Substructure technique

In April 2017:

3 - 4 April : Dynamics

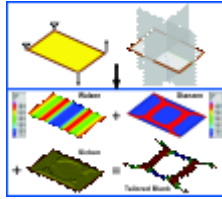
5 April : Fluid/Structure Acoustics

24 - 25 April : Engine analysis

[Website](#), [Program](#), [Calendar](#), [Registration](#)

3. PERMAS uses production processes in optimizing sheet metal parts

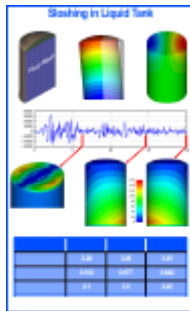
In the development of sheet metal parts various production processes like rolling (to get thickness variations), blanking (to cut out the final sheet), and beading (to generate beads for higher stiffness) are very important. In order to optimize sheet metal parts for weight and stiffness, these production processes have to be represented by suitable model modifications. The integration of this optimization in Finite Element (FE) analysis facilitates the direct identification of the necessary production steps.



[...more](#)

4. One-stop FSI analysis for liquid sloshing in an earthquake

Liquid storage tanks with critical content (like oil) in an earthquake have to withstand the structural loads and, in addition, the maximum filling level has to be restricted to avoid spill-over of the liquid. ... Because the large liquid mass implies high loading of the tank structure due to rapid movements in an earthquake, the simulation is best done using fluid-structure interaction (FSI) analysis, or more precisely, fluid-structure coupled (FSC) analysis. In this way, the stresses in the structure and the wave height at the free liquid surface can be determined in one single simulation.

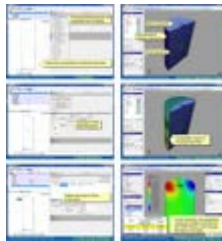


[...more](#)

5. New software PCGen to model fluid tanks for PERMAS

Fluid tanks are applied in a wide range from space flight in launchers and satellites to storage tanks in refineries and power plants. Such tanks are usually almost rotationally symmetric, i.e. they have a few deviations like longitudinal ribs or bolted flanges. ...

For a highly efficient modeling of fluid tanks, PCGen (PERMAS Component Generator) has been developed as extension to VisPER (Visual PERMAS), which combines the modeling of geometry, structure, fluid, and meshing in one single tool.



[...more](#)

6. INTES will attend other events

In April:

5- 6 April : Automotive CAE Grand Challenge

In May :

2 – 4 May : EuroBrake

10 – 11 May : FEMFAT User Meeting

In June:

11 – 14 June : NAFEMS World Congress

[Overview on other events](#)

