

Changes - StimPlan 2.62/3.02 - December, 1997

StimPlan

- Added ability for StimPlan file to contain multiple pump schedules. Also, as net pressure data is imported using “File” “Load Measured Data” command OR “Transferred” from Analysis Module, the net pressure data is tied to a selected pump schedule. When that pump schedule is the selected for 3-D simulation, the appropriate net pressure data is automatically overlaid on all plots.
WARNING – Late in the development process, a “weakness” was discovered in how this capability is implemented. StimPlan data can still be saved in two types of disk files: a) FRK files contain all the 3-D model input data such as stresses, modulus, etc., but a FRK file only contains ONE pump schedule, that being the “active” schedule at the time the FRK file was saved, and b) STP files which contain all the FRK data, plus all defined pump schedules, and also any data used in the Analysis Module. HOWEVER, the defined fluid rheology data is saved in both FRK & STP files, and this creates a potential problem. Assume you define a pump schedule which uses a 100 cp fluid defined as “Fluid Type 1”, and a 200 cp fluid defined as “Fluid Type 2”, and this is saved in MYFILE-1.FRK. Now assume we define a second pump schedule, and as part of this definition, we alter the definition of “Fluid Type 1” to be a 1,000 cp fluid, and this is saved as MYFILE-2.STP. If we later open the MYFILE-1.FRK file, our redefined “Fluid Type 1” is returned to its 100 cp values ! This weakness will be addressed in a future release. Until then, ***Please Be Careful*** how you use, save, open etc., the FRK files !
- Major modifications to input dialogs including a “tabs” type display, more natural spreadsheet type cursor movement for much of the data input, and easier keyboard navigation. The Layered Stress Dialog was also significantly altered to allow easier data input.
- Added extensive additional hypertext help system (Netscape Navigator OR Internet Explorer MSUT be available on computer to access this), and also added “Tips” to highlight new features.
- Added ability to directly transfer results from StimPlan to our spreadsheet or word processor (Netscape Navigator OR Internet Explorer MSUT be available on computer to use this feature)
- Cut/Paste graphic quality significantly improved for all plots.
- Rheology input to allow user defined “Time At Temperature” steps for rheology data; input also modified to allow input at user defines shear rate conditions.
- Fix minor bug in 3-D Simulator that could cause simply “shifting” the entire stress profile Up/down to slightly change net pressure results. This occurred due to some code intended only for foam fluids being active, even if foam was not used, resulting in a slightly different automatic time step generation, causing a small change in results (where for an incompressible fluid there should have been NO change).

Analysis Module (Version 3.02 only)

- Added “Real Time” option for importing data during actual operations. This option allows continuous background data import while leaving all analysis and simulator functions fully available. Use of the analysis and 3-D Simulator package is IDENTICAL for “Real Time” or “Post-Analysis” operations.
- Added “Quick Delete” feature to Data Plot to make removing single bad data points easy.
- Added feature where mouse cursor changes appearance when pointed at a line, data point, etc. (anything that can be “grabbed” and moved) to make plot analysis easier.
- Ability when “Transfer Net Pressure” is used to tie that net pressure data to a particular pump schedule. When that pump schedule is identified as the “active” schedule and simulated with the 3-D model, the associated net pressure is automatically overlaid on the simulator results.
- Fix minor bug in “Frac Job Test Type”. With previous version, the input actual data was changed to a schedule with “Constant PPG” steps, and the average PPG (and pump rate) between selected time points was automatically calculated. In the “Schedule Dialog”, however, this was sometimes marked as a “Fluid Volume Ramp” type schedule. Since the “ramps” went, for example, from 2.4 PPG to 2.4 PPG, this really had no effect on the calculations, however, the transferred pump schedule is now ALWAYS correctly marked as a “Constant PPG” type schedule.