HYDRO enhancements

Please look in general enhancement for non-program specific enhancements

Version 2.9-150 (11/12/2023)

Version 2.9-148

Version 2.9-146

Version 2.9-145

- The compressor pressure check was using the wrong value for consumer out let pressure
- The simulation report section on consumer inlet purity was using an incorrect reference value

Version 2.9-144

- An issue relating to the flowsheet treeview has been resolved

Version 2.9-142

- New Development environment libraries
- Restructure on-line help

Version 2.9-136

- The network lines on the flowsheet can now be given different attributes to represent different levels of a given property (I.e. Purity, flowrate, pressure) to aide users identifying stream of interest.
- The cost terms (Operating and Capital) for the hydrogen purifer were not being converted from interal units to user units correctly. This has been resolved.

Version 2.9-134

- The multiple contaminant functionality has be withdrawn due to unstable behaviour of the simulator/optimiser

Version 2.9-133 (14/8/2018)

Version 2.9-132

- Hydrogen network design options editor has been revamped to clarify key settings
- The design constraints editor has been re-worked to clarify the differentiation between difference outlet types. (i.e. consumer High and Low pressure outlets)

Version 2.9-126

- An issue relation to the hydrogen consumer editor displaying the incorrect net source and sink has been resolved

- An issue relating to incorrect flowrate limits in the automated design has been resolved
- Hydrogen producer can now be categorised into either "utility" or "process". Units specified as "process" are assumed to have a fixed flowrate.
- Hydrogen consumers have additional options on how the net sink and sources are specified.
- Hydrogen consumer can now generate sensitivity plot of variation in both recycle and makeup flowrate
- Hydrogen purifiers can now generate sensitivity plot of variation in flowrate and purity

Version 2.9-125

- An issue relation to the constraints editor has been resolved

Version 2.9-100
- An issue relation to the child input sheet on the component editor has been resolved

Version 2.9

- Issues with units conversion reading older .RFO files has been resolved

Version 1.5

This is a new package developed for the analysis and design of hydrogen systems in petroleum refineries. Issues addressed by **HYDRO** include:

- Minimisation of hydrogen demand through maximum re-use
- Minimisation of hydrogen losses
- Optimum selection between multiple sources of hydrogen
- Trade off between hydrogen supply purity and flowrate · Analysis of purification options · Automatic design of hydrogen distribution networks · Analysis of cost trade-offs
- Due to the increasing functionality of the program the main toolbar has been made user configurable.