Press release

gPROMS FormulatedProducts 2.2 – new version boasts usability enhancements and new bioprocessing libraries

LONDON, 15 September 2021 --- Siemens Process Systems Engineering (SPSE), recently released gPROMS FormulatedProducts 2.2, the mechanistic modelling environment for integrated digital design of robust formulated products and their manufacturing processes, and related digital process operation.

gPROMS FormulatedProducts 2.2 brings a host of usability enhancements in addition to a substantial number of additions and enhancements to existing libraries, examples, and documentation.

Dialogs for gPROMS activities, such as simulation, model validation, and optimisation, have been simplified to show only the most relevant process parameters and attributes. Commonly controlled and measured variables, key trajectories, and estimated parameters are now highlighted for each unit operation when configuring these entities and exploring results. Further improvements have been made to gPROMS FormulatedProducts' Global System Analysis capabilities, including the addition of contour plots, highlighting features and the ability to include one step re-simulate for a specific realization.

Version 2.2 also introduces key library enhancements and new models in active ingredient manufacture, formulation manufacture and product performance. New models include a basic stirred tank reactor, addition of LLE thermodynamics, moisture content controller, solid density sensor, and a spray dryer with internal fluid bed. Enhancements in this release include increased flowsheeting support for the Morphological MSMPR crystallizer, modifications to the continuous direct compression models, and improvements to wet granulators.

After the launch of gPROMS FormulatedProducts' bioprocessing capability earlier in 2021, version 2.2 expands and builds on the model libraries for this evolving sector with new and enhanced models available for bioreactor control systems, product quality attributes, tangential flow filtration, disc stack centrifugation, radial flow chromatography, and whole bioprocess modelling.

SPSE continues to lead innovation in advanced process modelling capabilities for the pharmaceuticals, food & beverage, consumer goods and specialty chemicals sectors through the support of industrial and academic partners, funded development projects such as NextGen DDaMM, D-DAP, DIDCOM-FP, and the Systems-based Pharmaceutics Alliance.

About Siemens Process Systems Engineering

Siemens Process Systems Engineering (SPSE) is the world's foremost provider of Advanced Process Modelling software and services to the process industries. Companies apply advanced process models within digital design and digital operations initiatives to explore the process decision space rapidly and effectively. This helps them to reduce uncertainty and make better, faster and safer formulation, process and product design and operating decisions based on deep scientific and process knowledge.

SPSE provides gPROMS family products built on its gPROMS® advanced modelling platform. These include the gPROMS FormulatedProducts modelling suite, which provides mechanistic models for active ingredient

manufacture, formulation and product performance as well as specific capabilities for optimising solids and crystallization process design and operation. SPSE is committed to defining, developing and driving the adoption of next-generation process modelling software and workflows, and works in close collaboration with its major customers and selected R&D organisations to achieve this.

SPSE's global customer base of Fortune 500 process industry companies and some 200 universities is served by operations in the UK, USA, UAE, Japan and Korea, and agencies in China and Taiwan.

About gPROMS FormulatedProducts

Built on SPSE's gPROMS® advanced process modelling platform, the gPROMS FormulatedProducts modelling suite for optimising the formulation and manufacture of formulated products using mechanistic process and material models of unit operations – such as crystallization, spray drying and granulation – combined with in-vitro/vivo product performance models.

Use of SPSE's technology and services results in faster innovation, more rapid formulation screening, improved process and product designs, enhanced operations, reduced risk, more effective R&D and experimental campaigns and better capture and transfer of corporate knowledge across the organisation. Since 2013, the company has been pioneering the emerging science of Systems-based Pharmaceutics with Bayer, Lilly, GSK, Pfizer, Roche and Sanofi. SPSE was also the leader of the £20.4m AMSCI funded digital design ADDoPT project.