Press release

IMMEDIATE RELEASE

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PSE, ChemTech announce alliance coupling AI, advanced process models

Combination of AI and first-principles models provides real-time 'look-ahead' decision support for process operators

LONDON, 27 February 2019 --- Process Systems Enterprise (PSE), the Advanced Process Modelling company, and Chemical Technologies (ChemTech), provider of Artificial Intelligence (AI) based tools for operations decision support, today announced a development and marketing partnership that will bring new 'look-ahead' operator advisory tools to operations rooms of large-scale petrochemicals plants.

Under the agreement, PSE and ChemTech will combine PSE's gPROMS advanced process modelling environment with ChemTech's OptimEase AI and data analytics system. OptimEase combines AI techniques with real-time plant data and first-principles models to predict and optimise near-future plant operation. This is particularly important in situations involving major unplanned disturbances such as changes in feed composition.

PSE and ChemTech will provide joint services to process industries customers, including construction of combined mechanistic/AI process models and their implementation on the plant.

Costas Pantelides, Managing Director of PSE, says "the combination of first-principles models with AI technology that can predict near-future plant inputs is likely to be a key element of the intelligent digital operations approach that leading producers are beginning to adopt. We are very pleased to be working with an innovative company with leading technology that complements our own products so well".

Evgeny Bunin, CEO of ChemTech, says "coupling the latest in AI technologies with PSE's gPROMS creates strong synergies, allowing us to respond to a key industry trend for process industry customers - digital transformation – with a unique combined solution". He adds "gPROMS technology, with its proven applicability to model complex, large-scale plants, provides the predictive model at the heart of our offering. Rolling this technology out to industrial practice can help realise additional benefits even for plants that are already equipped with the latest technological equipment and automation systems."

PSE's gPROMS is widely used throughout the chemicals, energy, petrochemical, food and pharmaceuticals sectors to accelerate innovation and optimise existing operations based on high-fidelity predictive models.

For Editors

Contact: Kate Burness, +44-20-8563-0888, k.burness@psenterprise.com

'About' information: www.psenterprise.com/news/pr190227

About Process Systems Enterprise Ltd (PSE)

PSE (www.psenterprise.com) is the world's foremost provider of Advanced Process Modelling software, services and solutions 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, in order to reduce uncertainty and make better, faster and safer design and operating decisions.

PSE provides gPROMS advanced process modelling products built on the company's gPROMS® equation-oriented platform. The two core desktop environments for engineers and scientists are the gPROMS ProcessBuilder® flowsheeting environment for optimising fluid process design and operation and the gPROMS FormulatedProducts® environment for integrated design and optimisation of formulated products and their manufacturing processes. The company also provides a number of gPROMS Operational Excellence Solutions for online operational monitoring, optimisation and planning based on high-fidelity models, built on the gPROMS Digital Applications Platform.

The unique advantages that PSE tools bring are the combination of high-fidelity models, powerful mathematical optimisation and global system analysis capabilities, and an equation-oriented framework capable of rapid and robust solution of complex problems. Use of PSE's technology and services results in faster innovation, 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.

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

PSE is committed to defining, developing and driving the adoption of next-generation process modelling software and workflows.

About ChemTech

Chemical Technologies (ChemTech) (www.chmtch.com) is a NY-based technology company that offers unique artificial intelligent (AI) based products that enable process manufacturers to achieve new heights of operational efficiency.

The primary company goal is to replace human operators of chemical plants with AI-based systems to increase the efficiency of the plants and bring additional profit to our customers.

ChemTech's OptimEase delivers real-time recommendations and makes fully automated decision to improve unit capacity, product yield and quality, and to decrease energy consumption and product losses on a new level.