

Evonik hosts 2018 Oil & Gas Symposium in Houston

Event brings together industry leaders and showcases cutting-edge technologies

HOUSTON, Tex., October 30, 2018 - Evonik Corporation kicked off its 2018 Oil & Gas Symposium here today with more than 200 attendees learning about the latest market and industry trends from a wide array of oil and gas experts.

"Evonik is proud to bring together our customers with speakers from industry and academia to learn and network while also gaining a better appreciation of Evonik's broad range of products for the oil and gas industry," explained Dr. John Wey, head of the Evonik Oil & Gas Industry Team.

Within Evonik's Household Care Business Line, the Oil, Gas, & Geotech Product Line offers a comprehensive series of cationic and nonionic surfactants for the oil and gas market. Our ADOGEN®, TOMADOL®, and TOMAMINE® surfactant lines span a variety of chemistries including fatty amines, etheramines, amphoterics, alcohol ethoxylates, and amine quaternaries. These products are ideal for emulsifying and stabilizing the components of oilfield formulations such as drilling fluids, fracking fluids, and corrosion inhibitors.

The CARBOWET® surfactant line is based on unique diol chemistry, which provides surfactants that are not only some of the best wetting agents available, but also provide defoaming properties. TEGO® SL 446 is a new addition to our oil and gas product portfolio. It is a unique sophorolipid biosurfactant designed to enhance the performance of fracking fluids while being environmentally friendly.

Evonik SEPURAN® NG membranes are the newest addition to the SEPURAN® portfolio of gas separation products. They are intended to maximize methane produced with the high selectivity of SEPURAN® NG. In addition, stable performance and long membrane life mean reduced maintenance and low lifetime costs. Also, Evonik SEPURAN® N2 membranes offer high nitrogen throughput and good air consumption, keeping membrane count low and costs down.

Evonik's VESTAMID® NRG, Polyamide 12, has the highest level of efficiency and performance for downhole markets. For many years, steel had no competition, until the arrival of VESTAMID® NRG. This material withstands operating pressures of up to 230 psi, making it suitable for distribution lines and industrial connections. Fittings and end caps are made of the same material. Another group of VESTAKEEP® PEEK materials offers exceptional performance and reliability for downhole applications, under HPHT (High Pressure High Temperature) conditions and extreme sour gas / chemical environments. Unique high molecular weight PEEK compounds exhibit superior ductility, toughness, and long-term performance with highest resistance to brittleness and creep.

COPI™ (Crude Oil Paraffin Inhibitor) technology has been developed by the Oil Additives specialists at Evonik to modify the size and shape of wax crystals by co-crystalizing below the cloud point of wax, dispersing them and preventing them from adhering to pipeline or vessel surfaces. This technology results in the reduction of viscosity, pour point, and wax deposition. It provides important benefits when it comes to crude oil production, transportation, and storage.

VISIOMER® methacrylate monomers support high performance in processes from wellbore drilling to pipeline transport. Application areas include fluid loss control, kinetic hydrate inhibition, wax/paraffin control, and drag reduction. A new liquid extended-release scale inhibitor increases treatment lifetime relative to conventional products, thus decreasing the need for intervention.

This year, Business Line Silica reports the expanding number of applications in the Oil & Gas sector for its nanostructured and microporous particles. With AEROSIL®, SIPERNAT®, and ZEOFREE®, Evonik offers the industry unique, safe carrier/absorbent technologies for transport and controlled delivery of chemicals to oilfield operations. As a particular addition this year, we will introduce our concept for use of nanostructured particles for chemical EOR (Enhanced Oil Recovery).

DYNASYLAN® functional silanes are versatile additives for adhesion promotion, coupling between inorganic materials and organic polymers, polymer crosslinking, and surface modification. Downhole applications include coated proppants and stone

consolidation. Low-VOC and water-based DYNASYLAN® HYDROSIL products offer easy-to-use, innovative silane systems.

PERACLEAN® 15 from the Active Oxygens Business Line is an eco-friendly EPA-approved antimicrobial used to treat flowback and produced water. Unlike non-oxidizing biocides, PERACLEAN® 15 acts rapidly to destroy acid-producing and sulfate-reducing bacteria. It can also be used to oxidize reduced sulfur species, such as sulfide. In addition, PERACLEAN® 15 leaves no toxic residue, as the product decomposes to water, oxygen, and carbon dioxide.

Evonik is also a supplier of catalysts (DABCO® and POLYCAT®) and additives for PU (polyurethane) coated proppants. Compared to conventional unmodified sand, PU-coated proppants can minimize flowback, increase conductivity, improve crush resistance, and improve downhole proppant scaling. The right catalyst in the coating formulation leads to an optimal cure profile that results in higher productivity during the proppant manufacture and can lower the impact to the environment.

In 2012, Evonik established the Oil & Gas Industry Team in Houston, Texas, to enhance product offerings for the oil and gas industry. Evonik's broad oil and gas product portfolio and innovative technologies provide effective solutions to meet oil and gas customer needs. This strategic move has sharpened the company's focus on domestic and international energy markets.

For additional information about Evonik in the oil and gas industry, please visit www.evonik.com/oil-gas.

Company information

Evonik is one of the world leaders in specialty chemicals. The focus on more specialty businesses, customer-orientated innovative prowess and a trustful and performance-oriented corporate culture form the heart of Evonik's corporate strategy. They are the lever for profitable growth and a sustained increase in the value of the company. Evonik benefits specifically from its customer proximity and leading market positions. Evonik is active in over 100 countries around the world with more than 36,000 employees. In fiscal 2017, the enterprise generated sales of €14.4 billion and an operating profit (adjusted EBITDA) of €2.36 billion.

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