News release

Distinguishing between HDPE and LDPE at the blink of an eye: New PE applications for trinamiX's mobile NIR spectroscopy solution

25 March 2021 - Ludwigshafen, Germany – In view of rising prices for polyethylene (PE), the production of single-grade PE recyclates has become increasingly attractive in recent months. By launching two applications for its mobile NIR spectroscopy solution, trinamiX is improving on-the-spot sorting of the sought-after plastic. In addition to quickly distinguishing between HDPE and LDPE, the ratio of PE to PP in mixed plastics can be precisely determined as easy as pushing a button. Thanks to the flexibility of a handy measuring device, the process for obtaining high-quality PE and PE/PP recyclates is now significantly enhanced.

Polyethylene (PE) is the most widely produced plastic in the world and the most popular thermoplastic for foils and packaging. Depending on its density, PE can be divided into HDPE (high-density polyethylene) and LDPE (low-density polyethylene). While the similar characteristics of HDPE and LDPE lead to overlaps in their respective applications, differences in their mechanical properties have an impact on their processing and the subsequent recycling process. In the context of recycling, a separation by type has a favorable effect on the quality of the recyclate.

Also, trinamiX's solution now provides valuable insights when it comes to the recovery of mixed plastics made of PE and PP. By determining the percentage ratio in PE/PP mixed plastics, recyclers can sort incoming commodity streams with greater precision. This way, the different specifications and quality requirements of the recyclates can be attained more accurately.

"The current undersupply in the PE market and the associated price increases we're observing on our digital trade platform are opening up new opportunities for recycling companies," explains Florian Hüter, Head of Sales at cirplus, the global marketplace for circular plastics. "trinamiX's applications make their sorting process for the different commodity streams fast and easy, thereby increasing their recycling capacities for PE recyclates."

Since the introduction of the plastic sorting application last year, trinamiX's solution has already empowered users with the rapid identification of common plastics, including the classic polyolefins PE and PP. Since then, trinamiX has been continuously expanding its broad offering in close cooperation with customers - most recently by introducing its latest application enabling the quick differentiation of the engineering plastics PA6 and PA66.

About trinamiX's mobile near-infrared spectroscopy solution

trinamiX's solution combines robust hardware with intelligent data analysis and a mobile app. NIR spectroscopy is a proven technology that trinamiX has integrated into a portable format for on-site analysis. In doing so, trinamiX relies on cloud-based data processing, which ensures continuous development of the solution – there is no need to replace hardware. This allows

trinamiX to continuously develop new applications and react flexibly to new challenges in the field of plastic sorting – while working closely together with customers as in the case of its new PA6/PA66 application.

For more information, visit: https://trinamixsensing.com/plastics

About trinamiX

trinamiX GmbH develops and sells cutting-edge 3D vision and infrared sensing solutions for use in both consumer electronics devices and industrial designs. The company's products enable humans and machines to better capture data, with the goal of understanding the world around us. This results in improved decision-making as well as stronger biometric security. trinamiX, based in Ludwigshafen, Germany was founded in 2015 as a wholly owned subsidiary of BASF SE. The company employs 170 people worldwide. Further information on: www.trinamixsensing.com.

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