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BMW Looks to "Grind and Shine" -- Buys 6 New Grinder-Polisher Systems to Optimize Production

The BMW brand is known for its quality automobiles, and they are continually improving their operations to live up to these standards. Recently, they acquired six Buehler EcoMet 30 grinder-polishers to prep metal samples more efficiently, with greater repeatability and reduced fatigue.

Buehler is part of the Test and Measurement Segment of the US company Illinois Tool Works (ITW) with some 100 decentralized business units in 52 countries and around 51,000 employees.



BMW recently installed six grinder-polisher systems from Buehler in the metallographic laboratory at their Dingolfing, Germany plant.

Recently, the manufacturer of equipment for materials testing, delivered six EcoMet 30 grinder-polishers to BMW Group's Materials and Process Analytics Technology department located at their Dingolfing, Germany plant. The new grinder-polisher systems, which were introduced to the market in late 2017, are used mostly in quality control, which the laboratory performs on a variety of metals and metallic components, manufactured both in-house and by suppliers.

In the BMW laboratory, the EcoMet 30 grinder-polishers operate around six hours every day, preparing up to 50 samples per unit. Even with this high sample throughput, no compromise can be made in terms of consistency and quality of results. According to Wolfgang Brand, Head of Microscopy in the laboratory, the major features which caused BMW to opt for the single, non-automated system variant were high ease of operation, robust design and fast cleaning, all of which ensure highly efficient and low-maintenance operation over a long period of time.

"Our testing challenges in the areas of ongoing quality control and development are most varied, and accordingly there are many variants to the preparation, measurement and analysis procedures we perform," says Wolfgang Brand. "In addition, testing schedules are often tight, for example, when we have to handle a large number of samples parallel to production. For both these reasons, we require highly trained laboratory staff. Equally important, however, are reliable preparation systems which support our work by reducing the time we spend to a minimum.

"This ensures that results are available according to schedule even under challenging conditions, and they will stand up to validation. Buehler's new EcoMet grinder-polishers meet our expectations in every respect. In addition, the positive experience we made with Buehler's service team throughout the decision-making process leads us to anticipate customer-focused, timely and efficient support aligned to our needs in the future."



Designed for maximum ease of operation, Buehler's grinder-polisher system provides time-saving and efficient operation, along with highest operator safety. Left to right: Sabine Artmann and Wolfgang Brand (BMW Materials and Process Analytics Technology), Raphael Ayasse (European Direct Sales Manager, Buehler) and Tim Sunderbrink (Area Sales Manager for Southern Germany, Buehler)



In addition to the single platen models now in service at BMW, EcoMet 30 grinder-polishers are also available in a twin platen version. Both models are offered for manual or semiautomatic operation.

All models accept platens with diameters of 8" [203 mm], 10" [254 mm] or 12" [305 mm]. Speed can be varied incrementally within a range from 50 to 500 rpm. In the case of the automated versions, frequently used functions can be accessed from a touch screen interface with 7" LCD color screen, without time-consuming navigation through complex menus.

The grinder-polisher's head is equipped with a separate drive which rotates the

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specimen holder, accommodating up to four round samples with diameters of 25, 30 or 40 mm, in a direction opposite the direction of the platen at a speed of 30 to

200 rpm.

Tim Sunderbrink, Sales Manager at Buehler, adds: "EcoMet 30 stands for highest reliability along with advanced time-saving features for grinding and polishing. Cleaning to avoid cross-contamination is facilitated by the easy-to-remove platen and the straight drain system. With intuitive operation, an easily removable sample holder and a swing-out head, automated versions additionally save time when accessing samples between preparation steps. Thanks to their advanced features, all EcoMet 30 grinder-polisher models provide high sample throughput and maximize productivity in the test laboratory."



BMW's Dingolfing, Germany plant manufactured approx. 376,000 cars in 2017 -- almost one in five BMW's sold worldwide was made at this production site.

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