



The development of the groundbreaking thermoplastics tailgate for the Renault Clio was discussed in detail

in properties such as mixing quality. Successfully feeding difficult materials, such as high levels of low bulk-density powders, combines optimal fill and screw configuration with proper feeder-system layout and design. Having a short drop from the feeder to the extruder is crucial, noted **Paul Andersen**, director of process technology for **Coperion**. Having effective venting and ensuring that powders are fed into the screw are also important.

Woodforce and ICMA San Giorgio discussed the compounding of wood fibres

Turn-key compounding lines can integrate the extruder, upstream dosing, and downstream functions, or the package can include everything but the building shell. Such lines can be built in modules, which minimizes onsite work, can be quickly installed and provide the potential for easy relocation of the equipment, explained **Matt Sieverding**, general manager of **Krauss Maffei Berstorff's** North American extrusion division. Turn-key systems are advantageous for greenfield sites in the developing world, but are also used in North America, he noted.

Steps to sustainability

Biobased polymers and natural fibres add an extra challenge to the compounding process because of temperature and moisture limitations and shear sensitivity. Variable kneading blocks can be used to provide a combination of dispersive and distributive mixing, and fibres can be added downstream so that they experience only distributive mixing, noted **Dean Elliott**, lab manager for **Entek Extruders**.

Woodforce, a high-aspect ratio engineered wood

fibre from **Sonae Industria**, is easier to process than other natural fibres; it is surface-treated similarly to sized glass fibre, explained **Christophe Chambonet**, global manager for **Woodforce**. Extrusion trials have been carried out by **ICMA San Giorgio** using **Woodforce** with the goal of increasing extrusion rates without degrading the fibres. **Silvano Zattra**, ICMA's export sales director, explained that extrusion processing simulation helped predict optimal conditions, such as melt temperature to avoid burning the fibres.

Among all the complex, technical discussions, **Kimberly Williamson**, corporate process manager for **Techmer PM**, brought a fresh look at how using lean manufacturing principles allowed the compounder to improve sustainability in its facilities and save costs at the same time. Bringing about behavioural changes in the way employees functioned was key to significantly reducing water and electricity consumption and the amount of waste going to landfill. Employees shared in the monetary savings from the new, sustainable prac-



tices, with the result that the entire company is engaged in the commitment to reduce, reuse, and recycle.

More information

The complete proceedings for the Compounding World Forum 2013 are now on sale. For details, go to <http://bit.ly/CWF13D>.

The next Compounding World Forum will be held on 9-10 December in Philadelphia. The venue has been switched to the Loews Hotel which provides extra space for more exhibitors and more attendees.

For details on attending, exhibiting, sponsoring or presenting at the Compounding World Forum 2014, please contact Kelly Cressman, the conference coordinator: kc@amiplastics-na.com, Tel: +1 610 478 0800. Book your place by 9 May and save \$500 on the full delegate fee. For details of this special offer and lists of compounders and exhibitors who took part in 2013, visit: <http://bit.ly/CWF2014>.

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The use of hexagonal boron nitride in conductive compounds was discussed by Armin Kayser of ESK

