



Hennecke at the JEC Europe from 11 - 13 March 2014 in Paris (Pavilion 7.2, Booth Q42)

New standards for HP-RTM applications – the Hennecke STREAMLINE

As increasingly important part in the area of automotive lightweight construction the High-Pressure RTM process from Hennecke GmbH is steaming ahead. That is no surprise if you consider that the young technology keeps its promises: high-quality fibre composite parts in large-scale production thanks to very short cycle times. The high-pressure metering machine of the type STREAMLINE is perfectly adjusted to the HP-RTM production parameters. The state-of-the-art processing system combines years of process expertise and innovative high-pressure injection to an optimally equipped overall system, which can do a lot more than usual metering machines. At this year's JEC Europe in Paris customers can experience the impressive products that can already be manufactured with this metering machine.



Intelligent filling process in a closed control loop. STREAMLINE high-pressure metering system with extensive sensor equipment for monitoring the internal mould pressure

The focus of the HP-RTM method is on a task that is well-known as well as tried and tested in PU processing: the high-pressure injection of a reactive mix into a mould within seconds. The machine series STREAMLINE is responsible for the very intelligent filling process in a closed control loop. The intelligent high-pressure metering machines not only inject the matrix material, but also monitor the entire filling process at the same time. Before it is started, the machine first checks the vacuum capability of the utilised mould. For this, the matrix material initially does not have any influence. Via an installed sensor for monitoring the internal mould pressure the injection process is then actively managed and controlled in real time in the so-called closed-loop process. A novelty for every application. If the cavity is not equipped with its own sensors the STREAMLINE additionally offers a control via machine-internal sensors. This control interpolates the unavailable internal mould pressure monitoring in this case. In terms of process control, the use of this functionality is so far completely new with high-pressure metering and was developed by Hennecke from scratch and gradually implemented into the STREAMLINE control system at its own HP-RTM technology center. Of course, STREAMLINE can process both epoxy and polyurethane systems. Looking at future applications in the area of reactive thermoplastics the use of polyamide systems is also possible without problems.

True to the motto "everything from one source", Hennecke is offering no less than three new high-pressure mixheads for HP-RTM applications. Again, all required functionality which is necessary for this future-orientated technology is already integrated. The mixheads, for example, possess an adapted injection block for the internal release agent component. Also, the HP-RTM mixhead of the type MN10-RTM can be optionally equipped with a back-pressure function and thus provides an optimal mould filling up to the end of the process – another in-house development by Hennecke.

But Hennecke is not only convincing on the "hardware" side. For newcomers to the HP-RTM technology Hennecke offers a comprehensive process support "on top". How do you build a mould? Where do you position the mixhead? And where do you properly vent using the specifically developed evacuation module? For these questions a

Hennecke team of experts is on hand to ensure that the start of the process runs as simply and smoothly as possible. On top of that STREAMLINE customers can enjoy various support services. For example, an online upgrade can integrate future control developments into the control system, if desired. For this purpose the full control of all functions – up to online operating support via menu-guided process input - is available.

Hennecke is convinced that they have created a strong overall package: *"The topic lightweight construction is currently on the fast lane forward and for the first time we are offering our customers far more than a conventional metering machine. We have achieved this especially because we develop the overall process with the customer's viewpoint in mind and particularly considering the end product. This requirement is especially vital in the case of new technologies,"* says Tobias Jansen, Sales Manager and responsible for HP-RTM technology at Hennecke. At the JEC Europe in Paris the composite experts from Hennecke present various path-breaking components, which are realised by means of HP-RTM technology.

Further information and public relations

Marketing & Communications Dept.

Stefanie Geiger

Phone +49 2241 339 266
Fax +49 2241 339 974
e-mail stefanie.geiger@hennecke.com

Hennecke GmbH

Birlinghovener Straße 30
D-53757 Sankt Augustin

Phone +49 2241 339 0
Fax +49 2241 339 204
e-mail info@hennecke.com

www.hennecke.com