

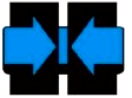
PRESS RELEASE

Hand-operated spraying instead of laminating by hand: Polyurethane as cost-effective and environmentally compatible GRP alternative

For PU processors, the Polyurethane-Composite-Spray-Moulding (PUR-CSM) technology from Hennecke GmbH based in Sankt Augustin near Bonn is a set expression. For the very first time a new type of system allows hand-operated spray application, thus making the advanced polyurethane spray technology interesting for processors who laminate GRP in small series by hand. A novelty which offers the end consumer real added value and which can also convince in production as it uses neither solutions containing solvents nor explosion protection zones (ex zones).

PUR-CSM enables glass-fibre reinforced components or composite mouldings to be made from PU systems in a PU spraying process. Due to the continuous further development of the spray technology and the associated identification of more and more fields of use, polyurethanes are now moving into typical GRP applications. The use of PUR-CSM fulfills the highest demands with regard to flexibility in production, reproducible component quality and efficient material input.

Decisive for manual processing is a new 3-component spray mixhead with individually connectable glass fibre feed. In the hand-operated spraying process, the mixhead with its compact dimensions and its relatively low weight enables ergonomically correct handling for the machine operator. This means that longer operations, e.g. when manufacturing large components or great numbers, are no longer a problem. Thanks to the optional adaptation of spray lances which allow PU application at angular positions of 45° or 70°, even the reinforcement of complex shape geometries or undercuts is considerably faster and simpler than is the case when processing glass fibre reinforced plastics. However, the mixhead not only enables a targeted reinforcement with cut glass fibres. In combination with state-of-the-art high-pressure poly-urethane metering machine technology and thanks to its three-component design, the hand-operated PUR-CSM version is also suitable for direct application of various



polyurethane foam layers (sandwich construction). This ensures, optimal amongst other things, thermal insulation and improved acoustic component properties in the form of clearly reduced acoustic emissions.

Another plus for the operating company is the excellent environmental balance of polyurethanes as, in contrast to traditional hand lamination, time and energy-consuming tempering processes can be eliminated. The fact that no solvents are used also reduces the need for occupational safety measures, such as special exhaust filter systems or safeguards for operators. This means that PUR-CSM spray technology considerably cuts production costs.

Therefore, the use of CSM technology makes sense from both economic and ecological aspects.

Moreover, the elimination of ex-zones is of major importance against the background of existing hazard potentials for man and machine.

In general, production by means of the hand-operated polyurethane spray technology does not need any special requirements due to its conceivably simple system geometry. The PUR-CSM equipment demands little from the production location, but offers many options. For example, when using auxiliaries such as component positioners or smooth running systems, which can be integrated at any time for production support without elaborate explosion protection measures.



Hand-operated spraying process. Photo above: without glass fibre metering, below: with glass fibre metering.

Photo: Hennecke GmbH

The sum total of the advantages makes CSM spray technology a convincing alternative compared to traditional production methods. Simply because the PUR-CSM technology of Hennecke GmbH adapts to the respective application and not the other way round.



Weitere Informationen:

Jens Winiarz
Sales Engineer
CSM SprayTechnology
Tel. + 49 2241 339-945
Fax. + 49 2241 339-324
e-mail: jens.winiarz.jw@hennecke.com

Hennecke 
Polyurethane Technology

Hennecke GmbH
Polyurethane Technology
Birlinghovener Str. 30
D – 53754 Sankt Augustin