



Application Spotlight

Bonding process of rotor blades

HELICAL FLOW METER IN USE UNDER THE TOUGHEST CONDITIONS

Technical Data

Medium:	Adhesive
Temperature:	+20 °C up to +40 °C [+68 °F up to +104 °F]
Pressure:	120 up to 200 bar [1,740 up to 2,900 psi]
Measuring Range:	8 up to 12 l/min
Viscosity at 20 °C:	50,000 up to 300,000 cSt
Density at 20 °C:	1,150 kg/m ³

Application

Wind energy is used all over the world as a clean energy source. Glass fiber and carbon fiber composites have become established as materials for the rotor blades of wind turbines. These combine essential characteristics such as high strength, low weight and long service life.

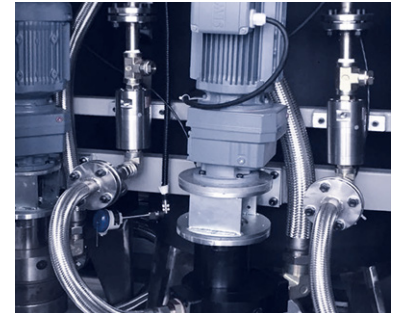
The rotor blades are not molded in one piece. The top and bottom sides are each cast separately and then joined together to form a unit by a bonding process. Adhesives made of glass fibre, carbon fibre, silicone and other composite materials are used. These are highly viscous and abrasive. The aim is to achieve a fast and sustainable bond – a challenge for measurement technology. Even the smallest errors can lead to serious additional costs.

Solution

KEM Helical Flow Meters (SRZ Series) withstand extensive abrasion forces and provide accurate measurement data even at high viscosities. A special metrological bearing concept ensures precise measurement results, high reproducibility and long service life.

Advantages

- 50 years of experience in high-end applications
- Very fast response time
- High measuring accuracy, high resolution
- High quality materials
- Suitable for highly viscous and highly abrasive media
- Suitable for the toughest applications (special bearing concept)
- Compact design (simple system integration)



Certificates:

- Pressure Equipment Directive 97/23/EC, 2014/68/EU
- HPO - Certification
- Explosion protection according to 2014/34/EU
- CSA/UL - Certification
- Accreditation according to ISO 17025



KEM Helical Flow Meters
(SRZ Series)