Dear readers,

The Control and Motek trade fairs we have been exhibiting at on a regular basis for over 20 years now, have been postponed until 2021 due to Corona. In lieu of a personal contact at the trade fair, we would like to keep you informed by means of this newsletter on the latest developments at CETA.

Wishing you a pleasant reading
Günter Groß – Managing Director

Contents

CETA awarded label „Excellence Made in Germany“

CETA ranks among the most important medium-sized companies in Germany

CETA has been awarded the label „Excellence Made in Germany CERTIFIED COMPANY“ by the business portal DDW - Die Deutsche Wirtschaft. This label certifies CETA as a trustworthy and reliable business partner.
The award was granted after evaluation of 19 key figures and criteria. Beside basic commercial data, the ranking was determined according to further aspects such as investment in research, patents, innovative products, memberships, awards and cooperation partnerships. On the basis of these criteria, CETA was able to qualify for the excellence label.

On account of these data, CETA fulfils the conditions for admission in the TOP 10.000 DDW-ranking of the most important medium-sized companies in Germany („Mittelstand 10.000“). Germany counts 3.5 million medium-sized companies with up to 500 employees.

Günter Groß - Owner and Managing Director of CETA Testsysteme GmbH

„This is a very special distinction that honours our high standards for quality and performance as well as our constant pursuit of improvements and innovations.“

Leak tests of large and small volume containers during production

Plastic containers are used for storage and transport of liquids. This includes bottles, canisters, plastic drums and IBCs (Intermediate Bulk Container) which cover a large volume range from approximately 0.5 l to 1200 l. These containers must be tested for leaks during the production process. Compressed air is often used as test medium for this type of test due to its good availability.

These tests pose certain challenges:

- Expansion of containers due to pressure
- Filling of voluminous products
- Influence of temperature due to previous blow-moulding procedure

▶▶

Leak tests of large and small volume containers during production - Continued

The leak tester CETATEST 715 LV (Large Volume) is specially designed for the packaging industry.
After the start impulse of the system, the complete testing procedure is controlled by the test device. The turbo-fill option allows automatic filling to the required pressure. The test part and the internal device sensors are protected by protective circuits. Temperature effects can be successfully compensated by recording the test part temperature in the test stand control and switching to appropriately parameterised test programs. IBCs are tested in the pallet cage using additional hold-down devices.
This allows stable measuring conditions. The test pressures range from approximately 25 mbar to 160 mbar (depending on product).
CETATEST 715 LV does not need more than 30 s. to test a 1000 l IBC for leaks. Depending on the test part volume, the device can detect holes from 1 mm down to 0.07 mm with high process reliability. Equipped with a large number of available industrial interfaces, CETATEST 715 LV is fully prepared for the requirements of Industrie 4.0.
The device is as standard delivered with an internationally recognized DAkkS calibration certificate (compliant with DIN EN ISO/IEC 17025) and 3-year warranty.

Excellent credit rating once again for CETA

For the 9th time in a row since 2012, CETA has achieved an excellent credit rating and established itself as a reliable business partner. This is appreciated by an increasing number of customers. All over the world, well-known automotive suppliers have already concluded globally valid framework agreements with CETA, which is a clear sign of the high degree of appreciation for the quality of CETA's products and services. The current key figures of the company can be retrieved from credit agencies such as Creditreform or CreditSafe.

News from CETA's calibration laboratory

Change of standards, reassessment as remote audit, participation in interlaboratory comparison

Since 2004, CETA Testsysteme GmbH has been running a DKD calibration laboratory followed in 2014 by a DAkkS calibration laboratory for the measurand pressure (D-K-19566). We also began providing on-site calibration services in 2018.
At the end of May 2020, we successfully carried out the changeover to the revised standard DIN EN ISO/ IEC 17025:2018 in the course of a 2-day reassessment assignment – held as remote audit due to Corona.
We received a very positive evaluation by a neutral party for the laboratory set-up, with the exception of a single discrepancy, which was corrected with little effort. CETA's calibration laboratory took part in a bilateral comparative measurement in 2018 and successfully passed an intercomparison test for the measurand pressure in June 2020. In preparation for the accreditation for volumetric flow rates of gases planned for 2021, CETA took part in an interlaboratory comparison in December 2019.

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-K-19566-01-00

CETA practical tip: Mechanical stabilisation of flexible products during leak tests

The expansion of test parts under pressure cause volume changes of the test part. Small deformations can lead to significant volume modifications. For example:
A casing (100 mm x 50 mm x 20 mm) has a nominal volume of 100 cm^3. With a permissible leak rate of 1 ml/min, the calculated pressure gradient is 16.7 Pa/s. The reject limit for a measuring time of 5 s would have to be set to approx. 83 Pa.
If the casing expands by 1 mm on all sides, the volume expands to 116.7 cm^3. This results in a pressure gradient of 14.3 Pa/s and a pressure loss of approx. 71.5 Pa in 5 s. On account of expansion, the reject limit for a measuring time of 5 s must be set to approx. 71 Pa and not 83 Pa.
When calculating the pressure decay reject limit, we have to take into account the effects due to volume expansion.
These effects can be reduced by mechanical expansion limitations, taking care not to cover leakage points. It is common to use stabilising grid structures (in case of flexible hoses) and force-free hold-down devices (for expanding cases). Besides, in the case of flexible test parts, the measured values scatter strongly in principle. Mechanical stabilisation also reduces scattering of the measured values and helps to reach the measuring system capability.
In case of flexible test parts, prefilling with a slightly higher pressure can be helpful to pre-tension them before filling to the test pressure in the subsequent fill phase.

CETA Testsysteme GmbH
Marie-Curie-Str. 35-37 | 40721 Hilden - Germany | Tel. +49 2103 2471 - 75 | Fax +49 2103 2471 - 76 | sales@cetatest.com | www.cetatest.com
District Court Düsseldorf HRB 45728 | Managing Director Günter Groß | VAT Reg No DE 120957381