Newsletter 42 09 / 2022

Motek

Visit us at Motek in Stuttgart, 04 - 07.10.2022, Hall 1 / Stand 1821
Request a free admission ticket: +49 2103 2471-75 or sales@cetatest.com

Dear readers,

we are exhibiting this year at the MOTEK 2022 trade fair in Stuttgart in Hall 1, Stand 1821 from 04 - 07.10.2022. We will be pleased to send you a free admission ticket.

We would like to draw particular attention to our online seminar offer especially for plant engineers in the 4th quarter of 2022.

Yours sincerely,
Günter Groß, Managing Director

Content

CETA technical papers: Know-How around leak and flow testing

Over the last 30 years, CETA has been working on and implementing a wide variety of testing applications. And many interesting applications and methods were reported on in the form of technical articles.

Technical papers: Testing of products

Connectors | Electronic control units
Sensors | Microswitches | RFID transponders
Lamps | Headlights
Solenoid valves | Injection valves
Medical products | Electronical displays,
Butterfly valves | Ball valves
Plastic drums | IBC | Canisters
Membranes | Tubes, etc.

Technical papers: Procedures and methods

Selection of test methods
Definition of test parameters
Integration in the production process
Disturbing factors
Measuring system analysis
Type test versus routine test
Encapsulated products
Products with pressure compensation elements, etc.

CETA Digital: CETA online seminars for special machine builders in Q4/2022

As part of the program „CETA Digital - From practice for practice", free online seminars are offered in the 4th quarter, which are specifically aimed at plant engineers, special machine builders and in-house equipment construction.

20.10.2022 Basis-Seminar für Anlagenbauer
Konzeption und Realisierung von Dichtheits- und Durchflussprüfständen

24.11.2022 Experten-Seminar für Anlagenbauer
Tipps und Tricks für die Auslegung von Dichtheits- und Durchflussprüfständen

15.12.2022 Profi-Seminar für Anlagenbauer
Inbetriebnahme und Betrieb von Dichtheits- und Durchflussprüfständen

Here, practical topics are dealt with that are relevant for the design and operation of leak and flow test stands. You can find more information on our homepage (www.cetatest.com). Currently, these seminars are held in German (English online seminars are planned).

If you are interested in the CETA technical papers or the online seminars, please contact us at www.cetatest.com | +49 2103 2471-75 | sales@cetatest.com

CETA Testsysteme Finalist of the ife-Award 2021 „Innovationspreis Losgröße 1+“ (Innovation Award Lot Size 1+) Production of leak testers by using variant generators

The ife network for single manufacturer companies has named CETA Testsysteme GmbH as one of the finalists of the ife-Award 2021 „Innovationspreis Losgröße 1+“ (innovation price for lot size 1+) in the category of manufacturing companies.
The variant generator set up and in use by CETA for the process-reliable production of application-specific test devices was recognised.

The test devices are designed to match the application and manufactured order-related. A pre-production is not possible due to the large number of possible variants. The technical configuration is determined on the basis of 10 main features, whereby there are between 2 and 11 options per feature. Mathematically, this results in more than 400,000 theoretically possible combinations, but not all of them are technically feasible. With the help of a variant generator, only those combinations can be selected that are technically feasible. The variant generator is integrated into the SAP Business One ERP system and controls the commercial process (e.g. pricing, dynamic creation of the quotation), the production process (creation of the production order, material reservation and debiting) as well as the generation of the technical configuration file, which is imported into the test device as firmware. The device configuration is automatically stored in the digital device file. Further advantages are the acceleration of quotation generation, the simplification of work for the user as well as the reduction of possible errors. In addition to this variant generator, corresponding generators are also in use for the other CETA test device types (mass flow testers, volumetric flow testers). The use of the variant generator allows the process-safe selection and production of the appropriate test device configuration in lot size 1.

CETA practical tip: The correct connection of test parts to differential pressure leak testers

For a leak tester to measure correctly, it must also be correctly installed in the test stand. This in itself is a matter of course.

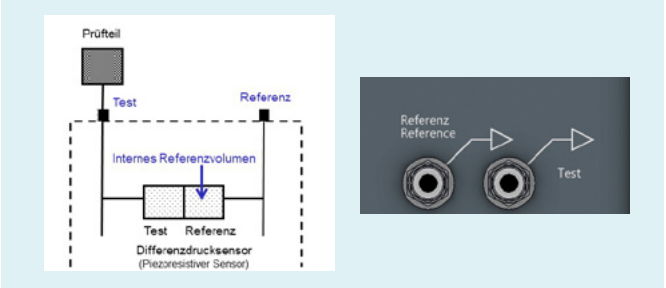
But in practice, problems can arise due to carelessness when connecting the tester for the first time or after reinstalling it after maintenance.

With differential pressure testers, the leakage-related pressure loss is measured in relation to a tight reference volume. The internal reference volume can be enlarged according to the application by connecting an external volume.

The test device has therefore two connections. These are marked „Test“ and „Reference“.

! The test part is connected to the test port, while the reference port is usually closed by a cap. If the connections are mixed up, it can happen that the test part is connected to the reference connection and the test output is closed with the cap. If no special checks are made, there is a risk that this will not be noticed during series operation.

CETA test devices show the pressure loss as positive. If the connections are mixed up, leakages of the test part are displayed negatively. In the case of „good“ series parts (pressure decay values close to 0 Pa), however, this circumstance is only noticeable on closer inspection of the measured value distribution.



However, if a master part is connected and a test leak is also connected to the test leak connection of the test device, unexpectedly high pressure loss values are measured (the test leak is only connected to the internal measuring circuit volume (a few cm^3), but not to the master part).

! Therefore, it is recommended to perform and document measurements with the master part (connected to the test output, of course) with and without test leak before and after each intervention in the leak test bench. This ensures that connection errors are detected at an early stage.

These plausibility tests should be carried out at regular intervals to check the tightness of the adaptation and the operating point. It is also helpful to estimate the expected pressure loss using the leakage rate formula (see CETA newsletter No. 1 and No. 10).

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