

technews

PHARMA & HEALTHCARE

INSPECTION IN PERFECTION

JÖRG RAFFAUF
Service Manager
HEUFT SYSTEMTECHNIK GMBH



"The first impression leaves its mark and the last impression stays – that is my motto as Manager of the Customer Care & Technical Service team. We react fast and do all we can in order to ensure the maximum availability of your pharmaceutical packaging line".

Customer Care & Technical Service

HEUFT will not abandon you!

A supplier who is extremely well positioned globally with fast reaction times is needed in order to avoid costly standstills and production downtimes: a supplier like HEUFT.

We ensure that our experienced service team is on the spot as quickly as possible for installation, commissioning, maintenance and repairs with our own locations in 14 different countries and a comprehensive network of service bases on five continents.

The HEUFT *TeleService* provides an additional advantage: with this device malfunctions can be identified, analysed and in many cases directly rectified using a protected Internet connection from a distance independent of the location. An on-site visit, if this is nevertheless necessary, is shortened considerably due to the information received in advance.

Regardless of what happens: the HEUFT service team will not abandon you and will promptly rectify

sources of interference before lengthy standstills and production downtimes can occur.



HEUFT Training Center

Always knowing what to do

Operators learn what is important regarding the configuration, operation, care and maintenance of HEUFT devices on practice-oriented training courses.

Our inspection systems already provide help for self-help due to their intuitively understandable user prompting. However your team should learn about the functions and possibilities which they offer in order to maintain operational reliability from scratch during a complete intensive training course at the HEUFT Training Center.

Our competent trainers not only impart theoretical background in quiet surroundings in the course of this. Practical exercises play an important role. Whether via online access on the HEUFT *PILOT* user interface or directly at the respective device: the training and workshop rooms with modern facilities in the new HEUFT Customer Center give your employees the opportunity to test important tasks such as cleaning and maintenance or brand changes in peace and quiet without disturbing the running operation in their own plant. Consequently the members of your team are able to identify problems promptly and solve them themselves before the operational reliability suffers. Contact details for the HEUFT Training Center can be found below. Current dates for training courses and further information are available on www.heuft.com.

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JÜRGEN BREITBACH
Technical Trainer
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"The ultra modern equipment in the training and workshop rooms of the new HEUFT Customer Center ensures an optimal learning environment".



Get in touch!

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Pharmaceutical packaging inspection



HEUFT is SYSTEMTECHNIK!

HEUFT SYSTEMTECHNIK GMBH also makes its know-how as regards in-line quality assurance during the filling and packaging of food and drink available to the healthcare and pharmaceuticals sectors with specially designed solutions. Pioneering in-house developments and a consistent modular system for a wide range of technologies, modules and tasks generate superior inspection systems which also meet special requirements exactly and achieve a new level of quality in terms of precision, efficiency and availability when finding product and packaging faults. Whether fill level and closure detection, particle detection or code verification: HEUFT creates solutions with a system because "HEUFT ist Systemtechnik"!

An end to rotary systems!

Straight ahead and not around in circles: the in-line inspection of food and drink containers has been standard for a long time thanks to HEUFT. The technological leader is now transferring the linear principle to the pharmaceutical sector.

Compact, fast, safe and efficient: the new HEUFT systems have a clear advantage over conventional devices for checking the quality of pharmaceutical packaging. Because they manage completely without carousels: ampoules, vials and spray cans no longer have to go round in circles but can run straight through. This straightforwardness pays off. It saves space and makes throughputs of up to 1,200 products per minute

become a reality. Dispensing with change parts almost completely minimises storage, maintenance and spare parts costs and maximises operational reliability.

HEUFT revolutionised the in-line inspection of food and drink packaging over 20 years ago with the introduction of this linear principle. We are now also putting an end to rotary systems in pharmaceutical lines!



The HEUFT SPECTRUM TX

One standard device with a whole host of possibilities!

You know best which tasks have to be performed along your packaging line. The modular construction of the HEUFT SPECTRUM TX series allows you to decide for yourself with which functions you wish to equip your systems for the in-line inspection of pharmaceutical packaging. A universal standard device forms the basis for tailor-made solutions which meet your specific requirements exactly. All the cross-system technologies are accommodated in

this compact, network-compatible control unit. This includes among other things:

- the multilingual HEUFT *PILOT* graphical user interface with user-related and password-protected access rights
- the interface for an online connection to database and MES systems for archiving batch and production data and for a reliable audit trail documentation
- the interface for remote service

using the HEUFT *TeleService*

- extensive product monitoring including reject verification
- integrated self test functions for regularly checking the detection reliability

HEUFT SPECTRUM TX systems for the pharmaceutical and healthcare sectors therefore provide maximum operational reliability and at the same time meet the fundamental FDA, cGMP, GAMP 5 and 21 CFR 11 requirements.



Innovations for ACHEMA

HEUFT will be presenting new systems for inspecting the quality of pharmaceutical and healthcare products live and in action at ACHEMA 2012.

See for yourself and experience the following on Stand B11 in Hall 3.1:

- the **HEUFT spotter PH** for identifying ampoules and vials which are damaged, contaminated with foreign particles or not correctly sealed [discover more on page 2]
- the **HEUFT VX OCR** for verifying 2D codes and alphanumeric product marking on folding cartons and other pharmaceutical packaging [discover more on page 2]
- the **HEUFT VX ATEX** for precisely detecting the fill level of spray cans in the Ex area [discover more on page 3]

They will not only safeguard the quality of your products but also the efficiency and productivity of all your equipment.

Ampoule and vial inspection

More precise, compact and efficient

The HEUFT spotter PH sets completely new standards for specifically identifying faulty ampoules and vials.

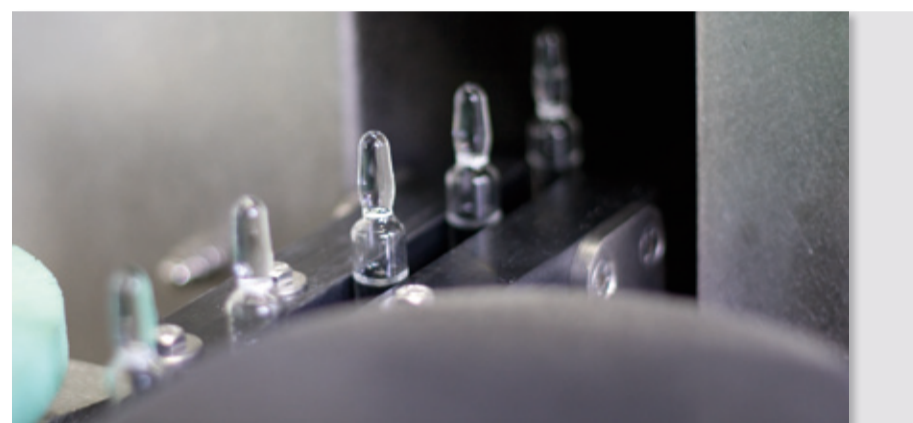
False rejection rates in the two-digit percent range are not uncommon during the optical inspection of transparent pharmaceutical containers. With the HEUFT spotter PH the proportion of products wrongly removed from the production flow can be reduced to tenths of a percent. Because it clearly differentiates between harmless cosmetic defects and serious risks to product safety. This remarkable precision during the

specific detection of pharmaceutical packaging which is contaminated, damaged or not correctly sealed is due to superior optical detection procedures and the new HEUFT reflexx² high-performance image processing system (see page 3). The HEUFT spotter PH, as a straight-through system, is considerably more compact than conventional devices: it requires less than one square metre of floor space. Consequently it is easy to integrate into existing lines or use as a stand alone system in a confined space. Change parts are nowhere to be found inside it and the proportion of moving components prone to wear has been reduced to a minimum compared with common rotary machines. The result: increased availability, throughput and efficiency and considerably less storage and maintenance requirements. Brand changes are carried out within a very short time without any mechanical changeover work: the specific program data adapts itself just as automatically as the height and passage width of the belt drive guiding the containers and the positions of the individual detection modules.

Detecting particles

The system tracks down the smallest particles and contaminants such as dust, suspended matter, scraps of foil or glass splinters inside pharmaceutical packaging filled with transparent liquids. Deviations in shape as well as chips, scratches or cracks on

the container can also be detected. The HEUFT spotter PH identifies burn marks, among other things, during the ampoule head inspection which can occur when sealing the glass containers. It checks the presence, correct position, integrity and brand affiliation of vial crimp and flip top caps. The previously separated packages are guided straight past four bright / dark field detection modules each



equipped with three CCD cameras for the complete inspection. The two below the conveyor belt carry out the base inspection and the two above the sidewall, neck and head or closure inspection. The ampoules or vials are each rotated by 120 degrees after every station in order to ensure a complete all-around inspection. The special arrangement of the servo-controlled belt drive effectively prevents faults being covered by it in the course of this. The HEUFT reflexx² achieves maximum detection reliability with a gap



of only 5 mm between the individual containers even in the high-speed section. The latest version of the image processing system simplifies the cGMP acceptance of the HEUFT spotter PH with a few setting parameters and an automatic mask adaptation. User-related access rights, regular password changes and an extensive audit trail log protect the system against unwanted changes to the adjustments and make all the logins over its complete operating life traceable.

STEPHAN BACHMEIER
Pharmaceutical & Healthcare
Product Manager
HEUFT SYSTEMTECHNIK GMBH



"The linear inspection approach of the HEUFT systems and their clever modular design always make a completely individual machine configuration exactly tailored to the customer's requirements for maximum inspection performance in pharmaceutical packaging lines possible".

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The HEUFT VX OCR 2D code verification

Protection against counterfeiting guaranteed

PPN codes contain clear product information which is traceable at any time. In this way they make an elementary contribution to preventing the counterfeiting of medicines – provided that they are present, readable and the contents are correct. The HEUFT VX OCR checks whether this is the case whilst still on the packaging line.

prescription only medicines – not only in optical characters but also as a 2D data matrix code. Such PPN codes which often include serial numbers, batch designations and expiry dates ensure that the authenticity of the medicine can be checked throughout the whole supply chain. For this their presence, grading and readability as well as their compliance with the alphanumeric information on the packaging has to be validated in-line immediately after they have been applied - with the latest version of the HEUFT VX OCR.

The system always reads PPN codes and up to four lines of optical characters accurately even at high line outputs of 1,200 packages per minute and compares their contents simultaneously with each other. This is achieved with unprecedented precision due to LED illumination, high-resolution camera technology and the new HEUFT reflexx² image processing system. The HEUFT VX OCR removes incorrectly coded pharmaceutical packaging from the production flow consistently.

Therefore it makes an effective contribution towards ensuring protection against counterfeiting medicines.



ABDELGHANI TAFTICHT
Pharmaceutical & Healthcare
Sector Manager
HEUFT SYSTEMTECHNIK GMBH



"Authenticity, integrity and clear marking: it is essential that medicines, as high quality products for maintaining health, should meet these criteria. Our modular systems, especially developed for the pharmaceutical industry, for the in-line quality inspection of product and packaging make a significant contribution in this respect".

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The HEUFT VX ATEX fill level detection

Ex and safe

Checking the fill level of spray cans with X-ray technology and dividing up the container flow: this is also possible in potentially explosive areas with the HEUFT VX ATEX.

It bears the marking Ex II 3G EEX IIB T4. This means: the HEUFT VX ATEX may be operated in the Ex area of aerosol lines where an



explosive mixture of air and gas can form. For this the control unit of the system has been strictly separated from the X-ray detection for checking the fill level: whereas the former is outside the hazard zone the latter can operate without any problems and safely in an ATEX Group II, Category 3G risk area. The emission of heat, electric or electrostatic energy is prevented.



X-raying instead of weighing

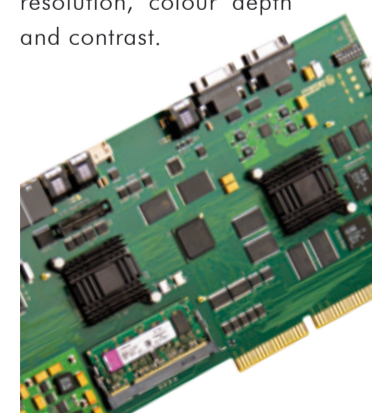
The fill level detection is an efficiency increasing alternative to conventional weighing systems. Because it minimises the required gap between the individual spray cans on the conveyor. The result: a significant increase in the throughput during the in-line determination of the filling quantities for a higher line output and more productivity. The system can be equipped with up to two X-ray measuring bridges. Consequently underfills as well as overfills are precisely identified. The average filling quantity of complete batches can also be checked

with the integrated quantifying system.

The HEUFT VX ATEX also increases efficiency as a laning system. It distributes the container flow onto up to three lanes and therefore avoids jams in the conveyor sections which are running slowly. The ratio with which the system allocates the aerosol containers to the different conveyors is freely selectable. Jam detectors ensure that the lanes are evenly used to capacity. Full sections are automatically identified and excluded from the laning process. This prevents efficiency losses or even production stops in the case of lines which are running at their capacity limit. An upright rejection of the incorrectly filled spray cans is possible with the HEUFT DELTA-FW multi-segment rejector as an alternative to the laning system.

The HEUFT reflexx²

An extremely powerful image processing system is required in order to obtain optimal inspection results even at high production outputs. Therefore we have developed our own which is specifically designed for our systems. HEUFT reflexx² is the name of the latest generation of this hardware and software for the real-time combination and analysis of a wide range of detection pictures. Integrated filter and evaluation masks clearly distinguish between cosmetic defects and real risks to the product quality. The HEUFT reflexx² reaches a new dimension in detection reliability with a false rejection rate which is in the tenth of a percent range due to greatly increased computing power, resolution, colour depth and contrast.



Other HEUFT products

The correct solution for each case

Other highly efficient linear machines for inspecting the product and packaging along pharmaceutical and healthcare lines are also part of the HEUFT range in addition to the new and further developments presented at theACHEMA 2012 exhibition. The highlights:

- the HEUFT InLine carries out a complete all-around inspection of vials, flacons, small bottles or pots in order to detect contamination and defects before the filling process
- the HEUFT VX checks the fill level, closure and labels, monitors the

complete filling and packaging process including the detection of serial faults and issuing of exact production statistics as well as sampling during production conditions

- the systems of the HEUFT squeezer series check the integrity and tightness of pouches filled with enteral and parenteral food and other plastic packaging



The solutions of the HEUFT modular system effectively contribute to excluding recalls and product liability cases and to increasing the profitability of complete lines. Numerous successful installations all over the world are proof of this.

