

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.



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".

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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 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 ensure their 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.

JÜRGEN BREITBACH
Technical Trainer
HEUFT SYSTEMTECHNIK GMBH



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

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PHARMA & HEALTHCARE

INSPECTION IN PERFECTION



HEUFT ist SYSTEMTECHNIK!

HEUFT SYSTEMTECHNIK GMBH is the leading supplier of highly automated solutions for a precise in-line quality inspection when filling and packaging food, drinks and pharmaceutical products. A consistent modular system for a wide range of modules and tasks as well as the continuous innovations of our Development Department generate superior, state-of-the-art inspection systems. Whether sophisticated optical and radiometric detection technologies or particularly efficient image analysis procedures, whether for an empty container inspection or for an extensive quality test of filled pharmaceutical packaging: HEUFT creates solutions with a system because "HEUFT ist Systemtechnik"!

Pharmaceutical packaging inspection

THE STRAIGHT ALTERNATIVE

HEUFT has developed clever alternatives for checking the quality of pharmaceutical packaging such as vials and ampoules based on more than 30 years' experience in detection technologies: fully automatic in-line inspection systems in linear operation!

Compact, fast, reliable and efficient: the innovative HEUFT solutions have a clear advantage compared with conventional rotary systems. Because they manage completely without container carousels: the pharmaceutical packaging no longer has to go round in circles but can run straight through. This straightforwardness pays off. It saves space and makes throughputs of up to 700 products per minute possible. The systems carry out product changeovers without change parts for different container sizes and with

a high degree of automation within a very short time and at the same minimise storage, maintenance and spare parts costs. The containers are not subjected to any mechanical stress worth mentioning either during the linear transport or the inspection process itself.

HEUFT revolutionises the in-line inspection of empty and full packaging for pharmaceuticals for oral administration, as well as parenteral drugs and lyophilised products in particular, with this linear principle.



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, SCADA 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 from HEUFT

HEUFT will be showcasing a detection unit for a precise optical ampoule tip inspection on Stand 11 at the PharmaTechnica trade fair which takes place at the same time as the 15th Pharma Congress in Neuss / Germany from

the HEUFT spotter PH

for extensively testing the quality of newly filled pharmaceutical containers [discover more on page 2].

For a thorough all-around inspection of glass packaging before the filling process

the HEUFT InLine

which even detects mechanical residual stress is first choice [discover more on page 3].

Furthermore HEUFT has numerous other innovative straight-through systems for the pharmaceutical industry in its range. They will not only safeguard the quality of your products but also the efficiency and productivity of all your equipment [discover more on page 3].

Ampoule and vial inspection

MORE PRECISE, COMPACT AND EFFICIENT

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

A high degree of automation, a cleverly arranged optical detection module, a new high-performance image processing system and a consistent linear principle – the HEUFT *spotter PH* achieves a remarkable detection reliability and profitability during the complete inspection of full transparent pharmaceutical packaging due to all these advantages. The system is the first choice above all for the pre-

cise detection of contaminated, damaged or not reliably sealed containers for parenteral drugs. 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. Product changes can be carried out without tools within a very short time.

ner after each of these stations for a complete all-around inspection – namely each by 120 degrees. The HEUFT *reflexx²* image processing system (see page 3) achieves maximum detection reliability with a gap of only 5 mm between the containers even in the high-speed section. It clearly differentiates between critical faults and harmless cosmetic defects. Furthermore it simplifies the cGMP approval of the HEUFT *spotter PH* with reduced 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 permanently traceable.

STEPHAN BACHMEIER
Product Manager
Pharmaceutical & Healthcare
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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Detecting foreign matter and faults

The system tracks down foreign matter and contamination inside vials, ampoules or spray bottles. This is even possible in dark or coloured liquids due to innovative illumination technologies and special procedures for a bright field and a dark field inspection. Deviations in shape as well as chips, scratches or cracks on the container are also reliably detected. The packaging is guided straight past four detection modules each equipped with three CCD cameras for the complete inspection of all the surfaces. The two below the container-friendly conveyor belt carry out the base inspection and the two above it the sidewall, neck, head and ampoule tip inspection. The containers are rotated in a controlled man-

Vials	Ampoules	Spray bottles
		
· Crimp cap inspection with colour detection	· Ampoule tip inspection	· Spray head inspection with colour detection
· Stopper position inspection	· Black spot detection	· Closure fault detection
· All surface inspection	· All surface inspection	· Closure position check
· Fill level detection	· Colour code ring check	· Riser pipe check
· Product colour check	· Fill level detection	· Fill level detection
· Foreign matter detection	· Product colour check	· Foreign matter detection
	· Foreign matter detection	

Crimp cap inspection

FIRMLY AND SAFELY SEALED

The safety of the closure makes the difference! This applies in particular to vials filled with sensitive liquid or lyophilised parenteral drugs. HEUFT also has a suitable module available for the specific inspection of the presence, completeness, integrity, position and brand affiliation of crimp caps as well as a precise stopper position detection. It generates several, optimally illuminated side views of the head and closure area of vials either directly

integrated in the HEUFT *spotter PH* or alternatively as a single device. The HEUFT *reflexx²* image processing system puts them together into a complete 360 degree general view in real time. Another camera checks the presence and colour of the closures from above. Unsealed vials are identified just as reliably as incorrectly crimped, canted or damaged crimp caps or incomplete or non-brand flip off closures.



Empty container inspection

A THOROUGH COMPLETE EXAMINATION

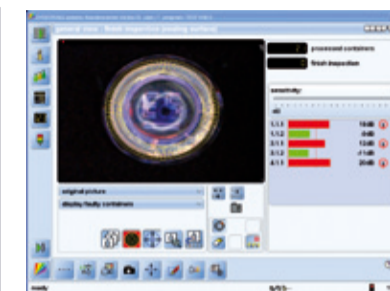
The HEUFT *InLine* inspects the complete volume of each individual pharmaceutical container before it is filled and detects foreign matter, contamination, chips, inclusions, cracks and even glass defects which do not exist yet.

The risk of pharmaceutical containers being damaged or contaminated on their journey from the glass manufacturer to the filling plant should not be underestimated. The dangerous breakage of glass occurs on the line too. Costly losses are taken by those who only identify and dispose of the vials, medicine bottles, flacons or pots in question when the high quality drugs are already contained in them. An all-around inspection of the empty containers just before the filling process is therefore more than advisable. It should not just be carried out randomly but should include all the surfaces of each individual packaging. The HEUFT *InLine* fully meets these high requirements.

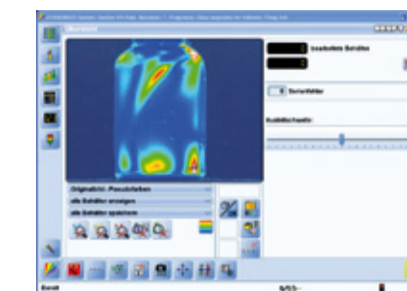
The compact straight-through system equipped with highly developed modules for an optical base, sidewall, thread and finish inspection and the HEUFT *reflexx²* image processing system takes over the thorough complete examination of empty containers. Special image analysis algorithms filter out packaging structures such as knurling marks, press marks or cavity numbers effectively in the course of this. Nevertheless the container areas in question are completely inspected so that glass chips, chipping, inclusions, spikes, bird swings and contamination are also reliably identified there.

Preventing glass breakage

The detection of minute thermal cracks and the finest hairline cracks in the container finish is achieved by means of a multicoloured LED complete illumination of this area and a sophisticated camera, filter and image analysis technology. It is even more difficult to identify qual-



Detecting hairline cracks in the finish.



Making mechanical residual stress visible.

ity defects such as cracks and glass breakage before they occur. The HEUFT *InLine* solves this problem with especially developed optical technologies. They make mechanical residual stress visible in the containers which reduces their breaking strength.

The packages in question are consistently removed by the system. Container tracking and reject verification ensure that each individual one is really inspected and each faulty one is removed. The vials, bottles or pots are specifically rotated on their journey through the device so that the inspection covers their complete volume. A servo-controlled conveyor

belt carries out a specific angle of rotation for each type of packaging so that they are exactly aligned at all the detection stations. In addition the servo technology reduces the proportion of components prone to wear and makes fast and uncomplicated product changes a reality due to clearly reproducible brand adjustments.



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 ANY EVENTUALITY

We have numerous other highly efficient linear machines for the complete inspection of the product and packaging on pharmaceutical and healthcare lines in our range in addition to the solutions presented in this issue. The highlights:

- the HEUFT VX OCR verifies the presence, grading and readability of PPN codes and that the contents correspond to the alphanumeric information on the pharmaceutical packaging

- the HEUFT VX checks the fill level, closure and labels, monitors the complete filling process including the detection of serial faults and issuing of exact production statistics as well as sampling under production conditions
- the systems of the HEUFT *squeezer* series check the integrity and tightness of plastic packaging filled with enteral and parenteral liquids such as stand up pouches or infusion bottles.



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.

