

Glass jars and containers are in demand – but can break easily. The specialists at the Turin-based company Dylog can detect even the smallest glass fragments and remove the defective items from the line.

Safety inspections in food, pharmaceuticals and textiles

Clear perspectives on detection

Purity standards in the food and pharmaceutical industries are becoming ever more stringent, with **the modern consumer expecting quality first every time. Producers need to prove there are no foreign bodies in their products.** X-ray technology offers real added value not only in this area, but in the clothing industry too – the designer brand Ferragamo uses x-rays to search for pins in their clothing. **Italian inspection system manufacturer Dylog has its finger on the pulse and relies on a combination of in-house software and x-ray components from COMET.**



Marco Pipino (left) explains what makes Dylog so strong: The very best technology is used (top) in order to satisfy even the most demanding customers – such as those in the baby food industry (bottom).

Anyone opening a jar of honey, fruit preserves or baby food expects something that tastes good, and not – as is sadly sometimes the case – a shard of metal or glass inside a peach. Fortunately, the likelihood of this happening in Europe continues to diminish. “The technologies used to find impurities and foreign bodies in foodstuffs and packaging have improved rapidly in the past 20 years,” explains Marco Pipino, qualified engineer and Managing Director of Dylog Hi Tech in Turin. “Thanks to x-ray technology, we are able to detect metal, glass, stones and plastic fragments in products and reject the offending items,” explains Pipino, who remembers how it all began back in 1991. “Italian customers such as Ferrero and Nestlé were the first to show an interest in eliminating all kinds of impurities from their foodstuffs. All production sites are now equipped with quality inspection systems, something that is also required by the Food Act.” Smaller manufacturers are also following suit, with all producers now having to prove they have taken all

possible precautions to detect and root out products with impurities if claims should arise.

Glass packaging back in fashion

Glass fragments pose a particularly dangerous and sensitive issue. Although in-

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spection technologies for detecting foreign bodies were around 20 years ago, they were not yet advanced enough to detect glass. “This is why we specialize in detecting even the smallest glass fragments. Glass, one of the oldest packaging materials known to mankind, is experiencing a revival across Europe,” says the Managing Director. “Glass is delicate and can break easily in the rapid inline filling process. Re-

Dylog Hi Tech

Dylog was founded in 1980 as a software company in the Italian city of Turin. The staff developed algorithms for computer systems in major companies. In 1991, Dylog founded the Hi Tech division to specialize in x-ray inspections. For over 20 years, Dylog has developed x-ray systems to detect foreign bodies in the food and pharmaceutical industry in more than 50 countries. The company's biggest customers are in Italy, France and South Africa. Argentina and other markets in South America offer expansion opportunities. Dylog employs some 300 staff members at four production facilities in Turin. The software and technology company has an annual turnover of 30 million – and rising.

More information:
www.dyloghitech.com



liable x-ray systems are needed to detect fragments," emphasizes Marco Pipino. The filling machines for glass jars and containers must operate precisely to avoid damage. "If a glass breaks, the entire system has to be halted and cleaned. Plastic is flexible and more durable," he says.

Averting disaster

Why is detecting glass fragments so important to food manufacturers? Marco Pipino has the answer: "If you bite into a piece of metal you might end up with a broken tooth. While this is unpleasant and you might need to see the dentist, it is not potentially fatal. Glass fragments, on the other hand, can have much more serious consequences – even life-threatening ones." Glass container screening is in demand across Europe given that glass is popular, recyclable and considered a high-quality material. "Glass is associated with cleanliness and high quality. It is odor-free and aroma-neutral. Alcohol, for example, can trigger a chemical reaction in plastic containers and honey tastes different when it comes from a glass jar. Consumers can even recognize differences in mineral water," explains Marco Pipino. Last but not least, sensitive baby food products are packaged in small glass jars. In America, Asia and Africa, glass packaging is used for goods in the higher price range. "However, supersize packs are usually sold in these countries. Packs con-

taining three or five kilos of food are extremely rare in Europe, but commonplace in America and Africa. Such volumes are usually packed in cans or plastic containers here rather than breakable glass. Let's not forget that glass also weighs something too."

Dylog x-ray systems with in-house software solutions

Demands from food producers for better and more exact foodstuff inspections are growing constantly; after all, they want to be able to guarantee the best possible quality. "It goes without saying that demands are increasing as stricter inspections become possible," says Pipino. The success of the Turin-based company is not only down to hardware – they can offer the right software solution too. "Dylog was originally founded as a software company, which is a big advantage as we already have this critical expertise at our disposal. We are very proud that many of our staff members have been with us for many years. This allows us to keep on refining and developing our skills and expertise as part of the same team." Thanks to software from Turin, glass fragments can be detected immediately and eliminated with outstanding reliability. Additionally, the number of glass containers that are mistakenly discarded remains extremely low. "The percentage of incorrectly discarded glass containers should not be underes-

timated," cautions Marco Pipino. "Each container that is mistakenly disposed of means lost money and wasted resources that have to be destroyed unnecessarily. Our software offers real added value in this area," emphasizes Pipino.

Another strength of the Torinese company lies in inspections for pharmaceutical applications, where glass packaging is commonly used (for example, for large ampoules). Inspections can also be made to check whether all blister packs are filled with tablets, for instance.

Finding the needle in a haystack

A new field of application is the textiles industry, where clothing from the designer brand Ferragamo is inspected for pins. "Checking men's suits is not always easy, as a suit can also have metal parts such as buttons. To find pins or needles, their shape has to be defined. The x-ray systems then detect this shape of any pins and sort out these items of clothing. The same goes for shoes to check that no nails are stuck in the heel and ensure all nails have been correctly inserted," explains the Dylog manager.

Always surpassing themselves

Dylog is constantly developing and refining its technology and software. "We are in constant contact with our customers and always aiming to perform better than

the day before," says Pipino, summing up the company philosophy. The latest development at Dylog is in the field of fat analysis. "Fat analysis will become very important over the next few years," believes Pipino. That's because food producers will be required to declare the precise percentages of meat and fat in salami or mortadella products. "There will be laws to stipulate fat content. Thanks to our x-ray systems, we can already determine fat content with only minimal deviations." This year will also see the launch of a brand new inspection system. With three integrated COMET x-ray tubes, this system will be able to inspect a product si-

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multaneously from different sides, and do so more quickly and accurately than ever before. "This opens up new opportunities for us. It's another major step forward for ourselves and our customers in the field of food inspection."