Press release 11/2018

Reduce costs by optimizing the gas barrier layer

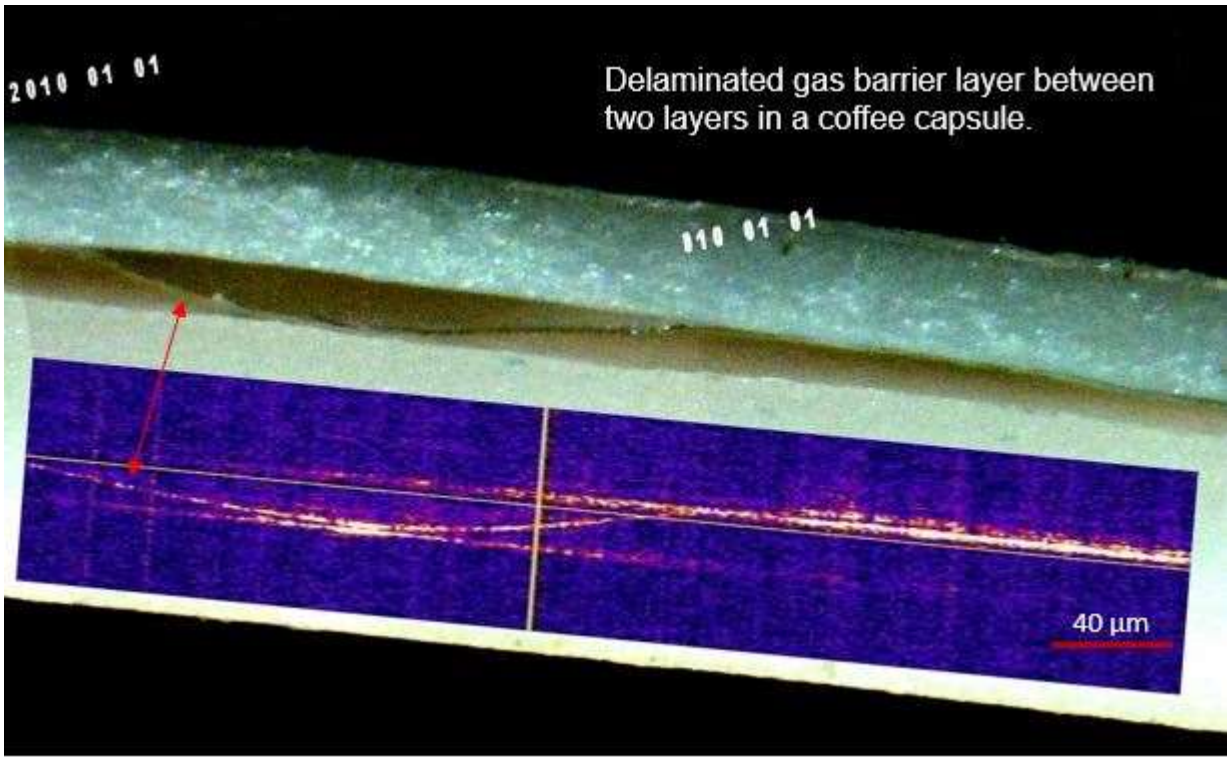
Longer keepability, more safety for the product and the consumer are permanent challenges in the food industry. When producing films for food trays, coffee capsules, food products or high-quality plastic films, information on individual layer thicknesses in the layer stack are required.

Nowadays, food packaging's have to fulfil various functions. Their main purpose, however, is to ensure the longest possible keepability of the products from the time it is packaged by the manufacturer until it is consumed by the consumers. Therefore, high-quality barrier films are used for environmentally compatible and economical packaging. Packaging with an intact gas barrier layer guarantees none or hardly very low permeability of oxygen and water vapour and protects against loss of flavour.

To gauge the thickness of individual layers in multi-layer films, special optical methods can be used to gauge the thickness of each layer even at high production speeds and with fluttering films. Flo-ir GmbH produces customised test systems for laboratory operation, product testing and process monitoring for exact gauging and full-surface control of the individual layers of barrier films.

The sensors of Flo-ir GmbH gauge selectively films up to 10 layers. They require only little space, are robust, can be installed anywhere - even additionally - and are suitable for use in industrial measuring environments. During test gauging's, the gas barrier layers could also be gauged and checked on thermally formed packaging (coffee capsules, trays, etc.). The thickness of transparent layers, gas barrier layers or adhesive medium layers are quality criteria's that must be checked, verified and documented or even corrected in the case of deviations.

Packaging's with gas barrier layers have become indispensable. This is why it is so important to ensure the thickness of these layers. Only through the technological optimization of the individual layers can cost savings and, at the same time, cost-effectiveness be achieved in the long term. Consistent quality is a major challenge for the food industry. The dilemma is to reduce the layer thicknesses to a minimum and still be able to guarantee the function of the film. The most important but also most cost-intensive layer of barrier films for food packaging is the gas barrier layer. If the gas barrier layer can be minimized by half, more than half a million Euros can be saved with an annual production of 260,000 tons.



OCT - short explanation

OCT is the abbreviation of "optical coherence tomography" and is comparable to ultrasound in a simplified way. Only instead of sound waves a special and completely harmless laser light is used. The laser light consists of coherent light waves (optical) for the generation of sectional images (tomography).

Company information / short profile
The world of contactless gauging technology

In 1978 Christian Florin founded the "Ingenieurbüro für Infrarot-Technik" and acquired a comprehensive knowledge in this special field. In 1999 "Florin-Ingenieurbüro für Infrarottechnik" developed into the engineering office flo-ir contactless measuring as "Solution Provider" for technically demanding solutions with the help of photonic gauging technology. In 2013 the sole proprietorship was transformed into Flo-ir (Infrarot) GmbH.

Flo-ir (Infrarot) GmbH develops solutions to current questions in the industry and converts the findings into products. The production of the devices as well as the distribution are implemented selectively with established and competent partners.

Today, gauging technology with light is well-engineered, tested, field-proven and already firmly established in many industrial companies. It provides a clear insight and opens up

economically interesting perspectives. Our products meet the highest requirements, which leads to better added value and meets the increased needs and expectations of our customers. Flo-ir (Infrarot) GmbH supports operators, developers and planners of production plants with the integration of contactless gauging technology with light in industrial production and offers solutions for current measurement tasks, such as for example:

- Contactless gauging of all individual layers in a layer compound
- Geometric gauging of coffee capsules and thermally formed components
- seal seam inspection

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