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Faster degreasing of aluminium foil

Corona method replaces annealing furnaces

Aluminium which is almost completely airtight is used in households and industry in order to keep food fresh and warm. For this purpose, a foil thickness of less than 0.007 millimetres – even thinner than a human hair – is already sufficient. In order to achieve this degree of thinness, the aluminium foil is rolled in two layers. To ensure that it does not become stuck, separating grease which is not suitable for consumption is applied.

This layer of grease must be removed before the foil comes into contact with food. To ensure that the separating agent evaporates, the rolled-up aluminium foil has until now been heated in annealing furnaces for up to one hundred hours. The aim is to replace this costly degreasing procedure with a corona treatment. The mechanical engineering company Kampf Schneid- und Wickeltechnik from Wiehl has developed a pilot system. The method is presented in the BINE Projektinfo brochure “Degreasing aluminium foil using corona treatment” (04/2013).

The corona method can be incorporated inline into the production process. After the double foil has been separated, it runs through the corona station. The foil is degreased by an atmospheric air plasma. It runs over an earthed roller above which are high-voltage electrodes. Ions from the plasma come into contact with the foil with a high level of energy. This causes the separating grease to oxidise.

The project is being funded by the German Federal Ministry of Economics and Technology. The BINE Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info or by calling +49 (0)228 92379-0. Image material is also available for download on this web portal in the press section.

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