NEW SAFETY COATING FOR PACKAGING SECTOR

Worldwide packaging and goods transportation is a very large market. The safety considerations in the transportation sector have been developed greatly in Europe through the last decades. In that context, Germany, as a pioneer country, has set up a number of regulations for freight trucks and trains, stating certain requirements for the transportation security.

Current paper based anti-slip products does not adhere to these standards, so by developing a paper based product with sufficiently high static friction coefficient, water resistance, scratch resistance, flexibility, and other physical properties, it will be possible to replace the currently used rubber mats or time consuming manual lashing of the goods. These rubber mats has to be placed in the trucks manually, which can create very dangerous situations as large trucks are placing the goods alongside the workers. Safety is thus enlarged in the individual companies that use this new technique for packaging.

The chemical composition of the polymer coating has to be thoroughly investigated in order to map out which chemical and physical phenomenon is behind high friction and low adhesion. The overall purpose of the project is to create a knowledge database of parameters and properties of polymer coated paper surfaces. The idea is to produce a scientific toolbox of various experimental methods and theoretical understanding for predicting prop-

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erties of the finished coating, when changing formulation and conditions e.g. temperature, humidity, contact load, etc. The end coating products are to be patented and sold to the packaging sector, so they can implement a safer way to transport their products in trucks and railroad cars.

As an Industrial PhD project, the work will be carried out both at Aarhus University and at the company PAL-Cut A/S. This collaboration benefits the whole value chain from the investors and suppliers of the company to the end clients and institutions using the newly developed technology and products. The collaboration ensures that the product will have a concrete use in society and not become a small part of a series of ideas that someday might turn out to be useful as a product.

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