Tampere University of Technology (TUT)
Paper Converting and Packaging Technology

Activities

The PCPT research unit offers teaching and research on paper and paperboard converting technology, materials (fibre- and plastic-based) and products. R&D is focused on (co)extrusion coating, laminating, dispersion coating and their applications. The development challenges of today include high-barrier and thin nanoscale coatings (e.g. ALD, LFS), materials from renewable resources (e.g. biopolymers) and sustainable packaging materials. The unique pilot lines provide tailored R2R surface treatment (e.g. corona, flame, plasma, UV, IR) and coating possibilities for various substrates. Well-equipped laboratory has modern analytical methods for characterizing the essential properties of packaging materials (e.g. barrier properties and heat sealability).

ActInPak focus

TAMPERE UNIVERSITY OF TECHNOLOGY

TUT/PCPT is the leader of WG2 "Industrialisation & Market introduction".

We are interested in the development of fibre- and plastic-based materials for active and intelligent packages. We can produce multi-layer structures and coatings and modify surfaces in order to achieve targeted properties. We are interested in finding out the existing active & intelligent solutions and developing new solutions. Furthermore, we look forward to create strategies to introduce active and intelligent solutions for the industry. In this, co-operation between academia and industrial partners and feed-back from various interest groups is essential.

cost EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

ActInPak

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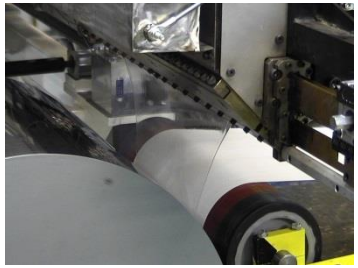
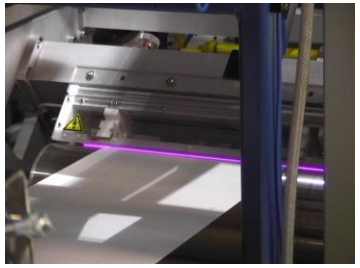
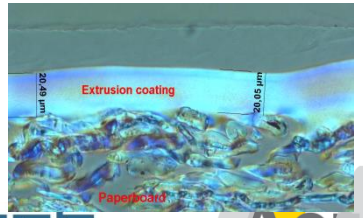
Paper Converting and Packaging Technology

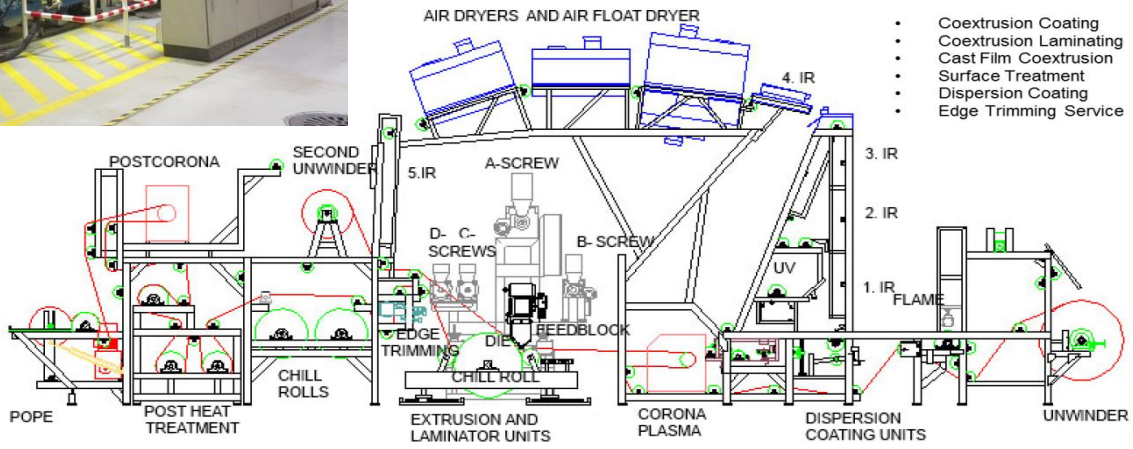
Video available in YouTube ("Nanomend pilot-line")







Coating and Laminating Pilot Line



- Coextrusion Coating
- Coextrusion Laminating
- Cast Film Coextrusion
- Surface Treatment
- Dispersion Coating
- Edge Trimming Service

Winders
Main unwind
Second unwind
Rewind

Extrusion coating:

Extruders
Extruder A
D 60, L/D 30
Extruder B
D 40, L/D 24
Extruder C
D 30, L/D 25
Extruder D
D 30, L/D 25
Die: EBR (Cloeren)
+Encapsulation
Feedblock:
5-layer possibility

Laminator
Working width:
max 550 mm
Max.speed: ~400 m/min
Press roll
Chill roll (matte/glossy)
Release roll
Surface treatments
Corona (Vetaphone)
Flame (Hill GmbH)

Other units
Relaxation

Dispersion coating:
Coating units
Dispersion coating unit
-Blade or Rod

Other units
Chill rolls
Dryers
IR-dryers
Air dryers

COST
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