



Welcome to the first issue of the LIFE ALL-IN semestral newsletter that will keep you informed about the evolution of this innovative project, conceived to **drastically reduce the environmental impact of the hygienic products sector.**

More than 2.5 million tons of solid waste stream in Europe are resulting from the use of absorbent hygiene products (AHPs). The LIFE ALL -IN project aims to launch **an innovative combination of production processes allowing, for the first time, a strong contraction of the entire supply chain, compensating the final consumer solid waste production.**

Discover more about how we are working on creating a cleaner production chain with this newsletter.

What's new with the LIFE ALL-IN project ?

THE INSTALLATION OF 2 PERFORATION UNITS

FAMECCANICA, coordinator of the LIFE ALL-IN project, dedicates a complete test stand to the web transformation action, with the installation of 2 units: 2D perforation and 3D perforation.



2D PERFORATION

Overview

FAMECCANICA is working on this process since a couple of years and the project is at the final stage of the validation. The reason of this development is triple:

- Product appeal: apparent increase in the breathability of the product for the external layers (backsheet or outer NW for pant)
- Increased fluid handling performance of the product when used as a topsheet
- Saving, if we compare this product with a pre-made and environmental impact reduction.

Test and next steps

The process has been tested at full speed (450 m/min) A long run of 24 hours has been done to validate the process stability The phased process has been tested and validated



3D PERFORATION

Overview

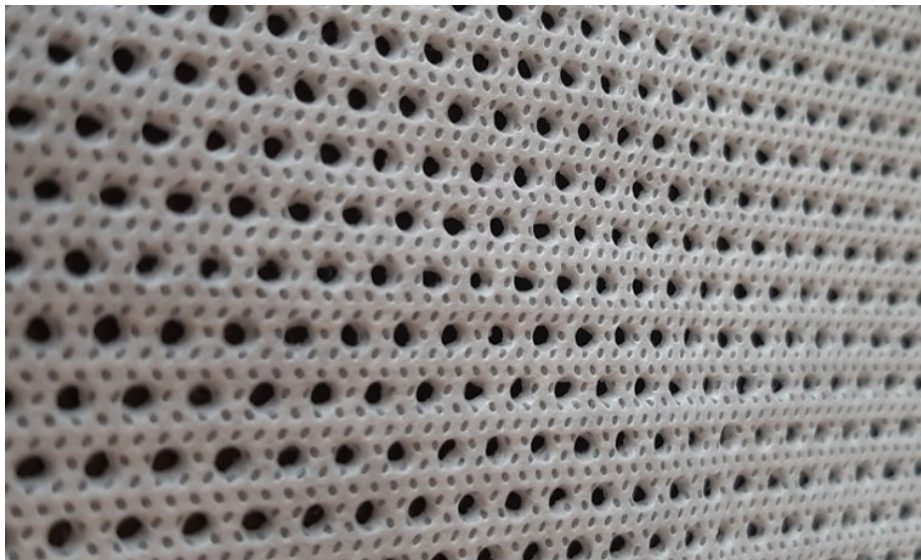
The development of the 3D perforation process of the sheets aims to create product layers with funnel-shaped holes oriented in a specific direction. This allows to obtain good fluid handling benefit. This kind of raw material is already used in hygiene products and FAMECCANICA is already processing this type of premade NW in its line. The in line creation of this kind of product will give environmental impact reduction and product/process benefit in comparison with standard product.

Test and next steps

FAMECCANICA has installed a complete unit for nonwoven perforation. The unit consists of two rolls:

- the upper roll has needles
- the lower roll one has holes, in phase with the needles

FAMECCANICA is working at the validation at full speed.



3D TOPSHEET: CONCEPT & PROTOTYPE

Process concept

3D topsheet is a product feature, mainly developed in Asia, which involves the use of a topsheet with many protuberances (like bubbles) made in an organized way according to a particular design^{3D}. This feature has the effect to:

Increase material softness by increasing material volume

Give an esthetic feeling and value perception improvement to the final consumer

From a market analysis it is possible to have a 3D topsheet single layer or double layer. After many brainstorming, design review, handmade

prototype creation and patent analysis, FAMECCANICA define the best process and pattern design. Preliminary results are positive, process validation is ongoing.

Pattern design and prototype

After many analysis of products on the market and patents FAMECCANICA defined the final pattern.

Creation of the 3D topsheet layers by deforming the NW and bonding it manually

Final product making to have an idea of the final result

Preliminary results are positive, product validation is ongoing.



[LEARN MORE ABOUT THE PROJECT](#)

What are the next steps for the LIFE ALL-IN project?

1. **3D perforation:** final process validation by the end of the year
2. **3D topsheet:** final process validation by the end of the year
3. **Elastics extrusion and corrugation:** final process validation end of the year

A project granted by Life Programme





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LIFE programme is the EU's funding instrument for the environment and climate action created in 1992. For the period 2014-2020 the LIFE programme has a budget of more than €3 billion at European level, divided into two separate sub-programmes: the "Environment" sub-programme and the "Climate Actions" sub-programme.

The European Commission manages the LIFE programme through its services Directorate-General for Environment and Directorate-General for Climate Action, and its Executive Agency for Small and Medium-sized Enterprises (EASME).

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