



LIFE+ GLUELESS™ PROJECT

AS NATURAL AS WE CAN



WHAT IS EU'S LIFE PROGRAMME?

"LIFE is the **EU's financial instrument supporting** environmental, nature conservation and climate action **projects** throughout the EU.

The general objective of LIFE is to contribute to the implementation, updating and development of EU environmental policy and legislation by **co-financing** pilot or demonstration projects with European added value."



CCaLC Carbon Footprinting Tool
Results will be validated with University of Manchester



The Fameccanica project LIFE GLUELESS™ "Petrol based Glue and Energy consumption reduction in diapers production processes", aims to demonstrate to industry and policy makers that **significant environmental impact reduction** in Absorbent Hygiene Products (AHP), such as diapers, can be realized, with appropriate solutions that will be the subject of this project. *The project will showcase how environmental impact can be reduced, while cost competitiveness can be held or even increased.*



GLUELESS™ lamination of back ears for baby diapers

Now a commercially available solution with Fameccanica laminating **machine model FLS** for a **Unique technology for in-line processing of breathable laminates with ultrasonically bonded transpiring spots.** (Patented solution)



Example of real application on a baby diaper



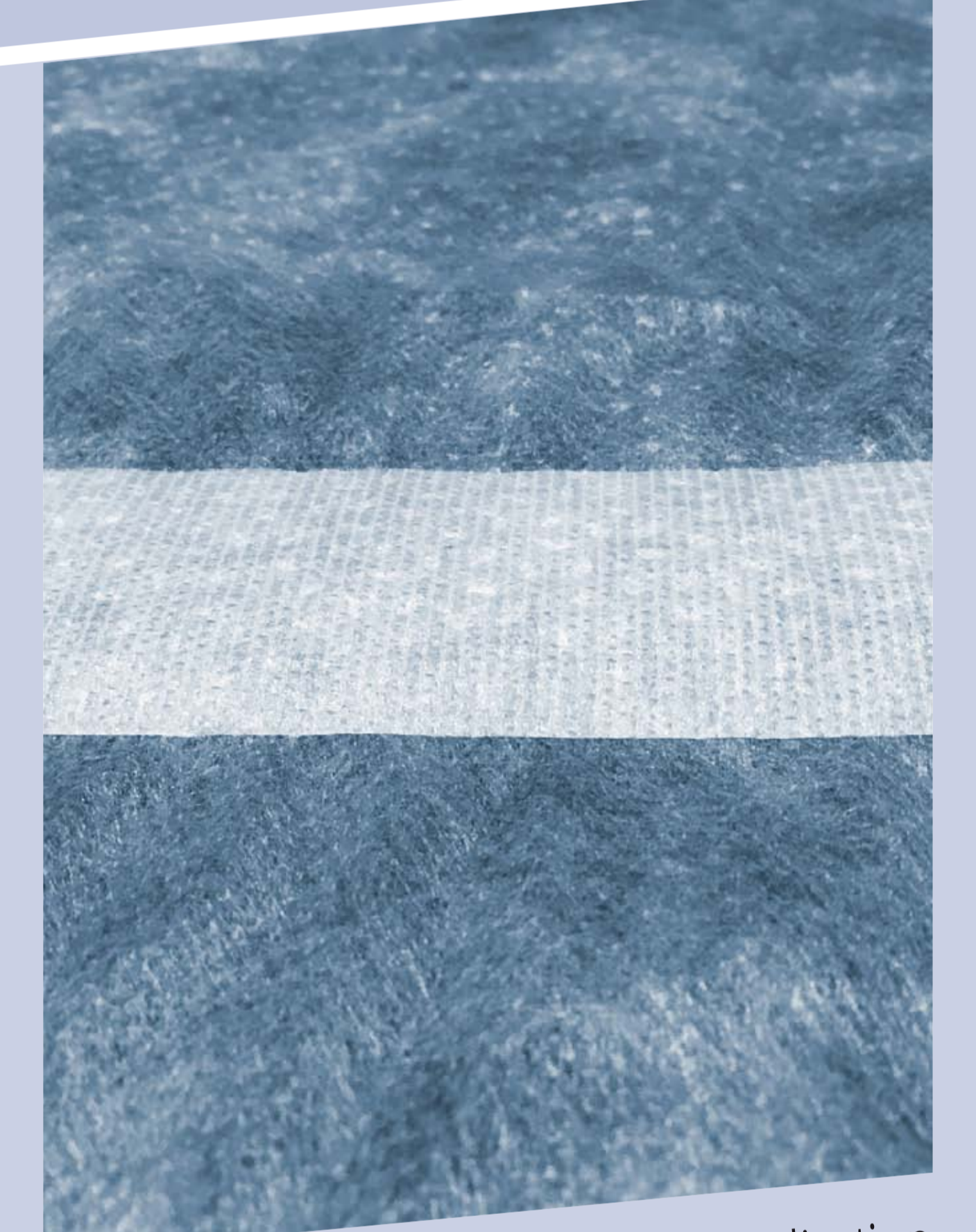
The Frontal Tape GLUELESS™ Lab Test

The Frontal Tape Glueless Lab Test has started validation activities

Fameccanica has started the test activities aimed at validating the technology to manufacture the new Fameccanica GLUELESS™ Frontal Tape product concept, consisting in a innovative composite structure comprising the Backsheet and the Frontal Tape with glueless welding techniques.

Tests done up to date allowed Fameccanica to confirm that all the raw materials identified for the test have a good bonding attitude, that the welding technology allows to reach the product tactile perception required and that the bonding force needed for this process is perfectly in line with the targets.

The test will continue with additional raw material testing and with the engineering phase.



Example of GLUELESS™ frontal tape application



Details of samples of GLUELESS™ ADL application

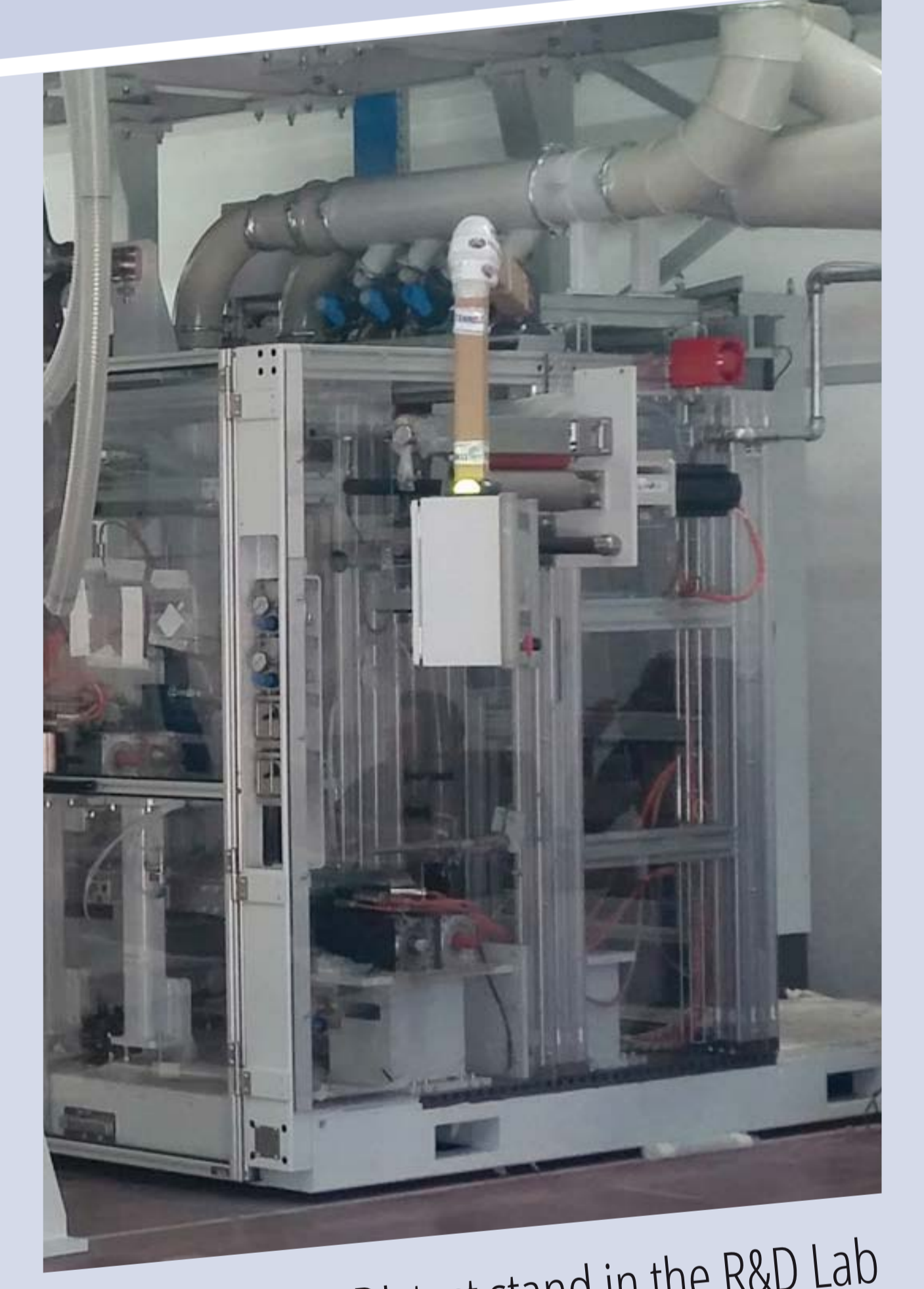
GLUELESS™ ADL application

Fameccanica has completed the qualification of its GLUELESS™ application of ADL (acquisition-distribution-layer) on diaper topsheet.

The objective of this project phase has been to make available a proven technology to be used on Fameccanica converters with commercially available raw materials and a validated set of product performance data.

The lab test demonstrated that **the process and technology developed are appropriate** to realize this type of application at the full speed of the commercially available diaper machines.

Also, the product performance validation phase shows that the **key performance indicators** selected (peel force test and fluid handling-acquisition) meet the initial **objectives.**



GLUELESS™ ADL test stand in the R&D Lab



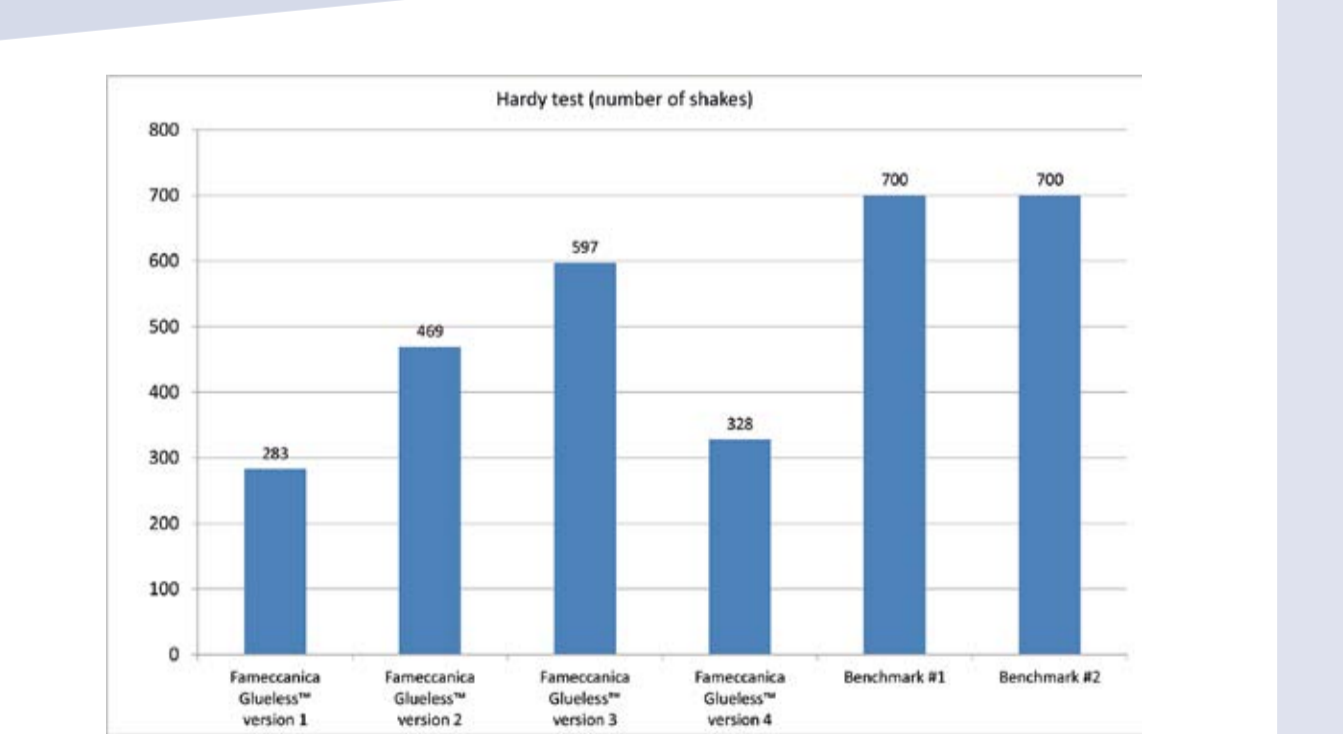
The GLUELESS™ Core test stand

GLUELESS™ Absorbent Core concept

Fameccanica has realized and validated a proper **Absorbent Core concept design**, capable to achieve the Glueless Project objective.

Thanks to the installation of a dedicated Lab test stand for the manufacturing of hand made Glueless Absorbent Cores, it has been possible to create a proof-of-concept and the results achieved were successful according to the expectations. This allowed to go ahead with the new project steps.

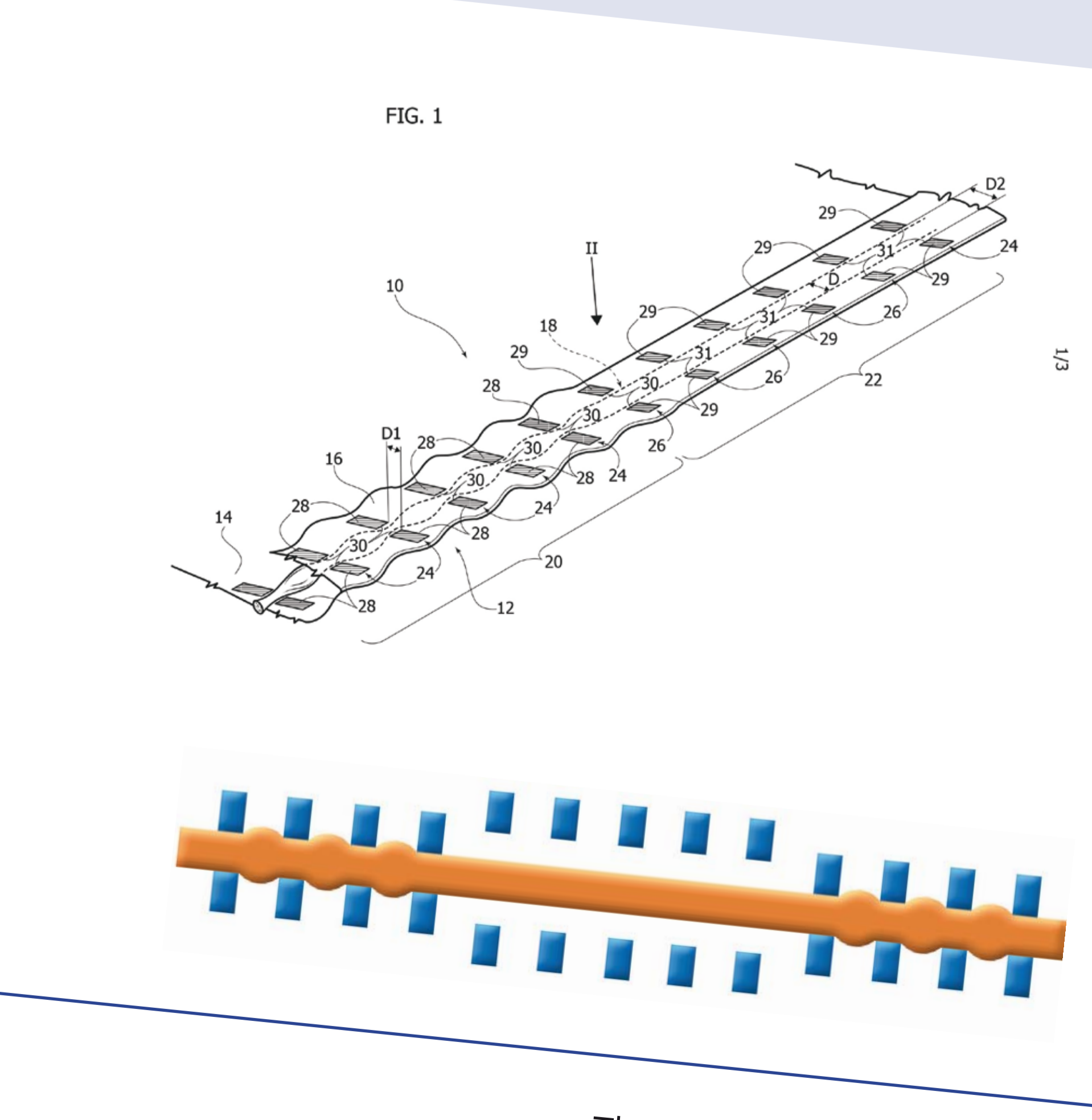
The GLUELESS™ test stand has been installed to produce the defined Core solution at the target speed and obtain a consistent number of samples realized in the real production conditions with all the quality and performance tests defined.



Integrity Tests of several versions of Fameccanica GLUELESS™ core vs. the two selected benchmarks.



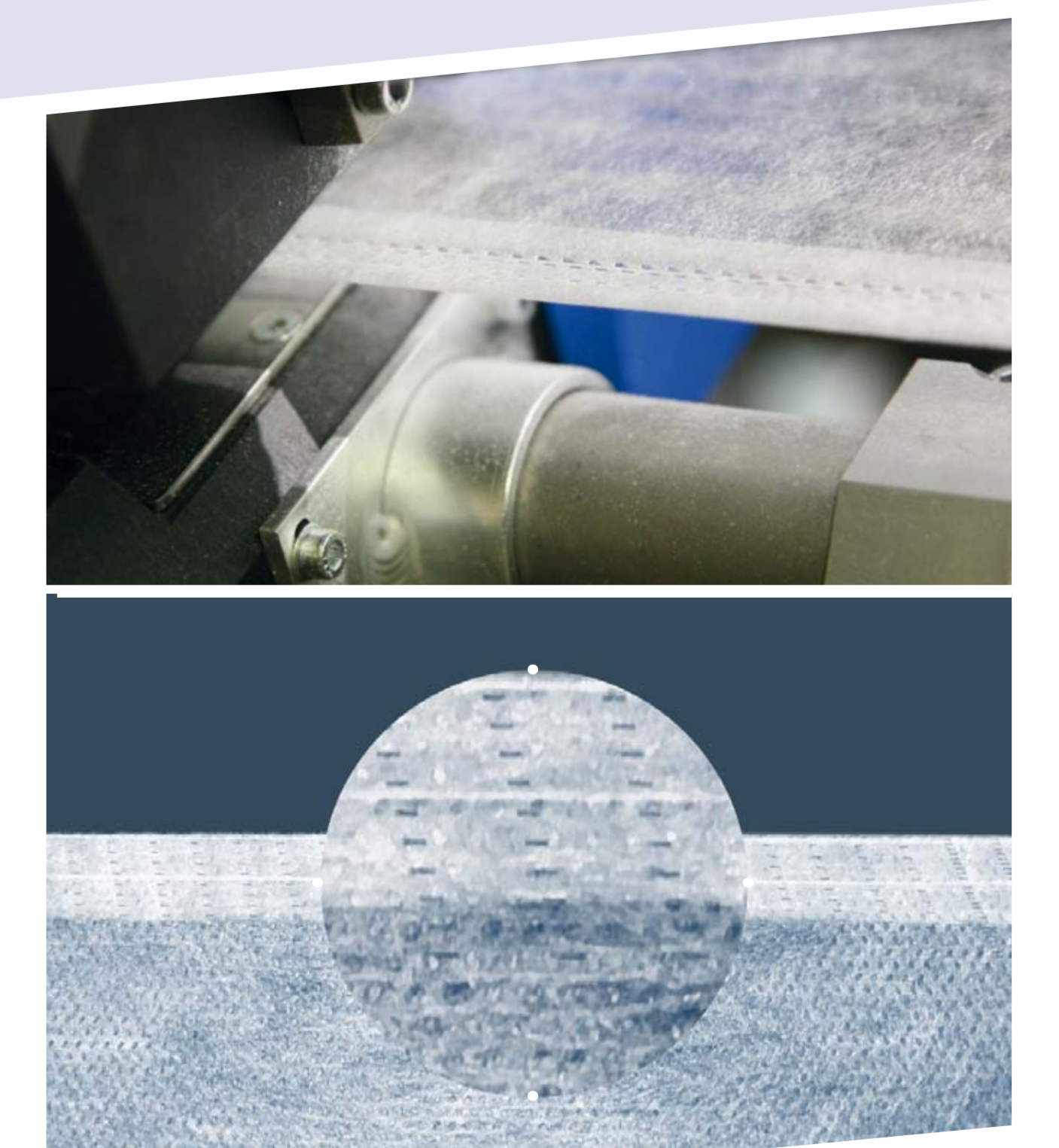
Sample of GLUELESS absorbent core.



The concept of GLUELESS™ intermittent elastic strands application

GLUELESS™ Elastic: the new Fameccanica solution for intermittent elastic application

Fameccanica has identified an innovative system for the intermittent elastic application. The new system has been tested in the laboratory with successful results and the solution confirmed to be a clear step change in the processing of this application vs. the known art in the field, thus providing the evidence that the identified solution was adequate to reach the target production speed.



Details of process and samples of GLUELESS™ application