SICAM

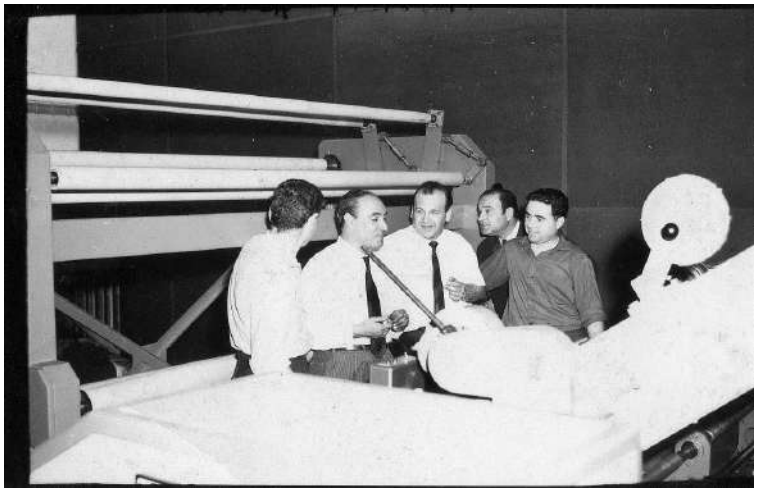
Società Italiana Costruzioni Aeromeccaniche

SOLUTIONS, MACHINERY AND PLANTS
FOR TEXTILE AND FOR NONWOVEN
SINCE 1953

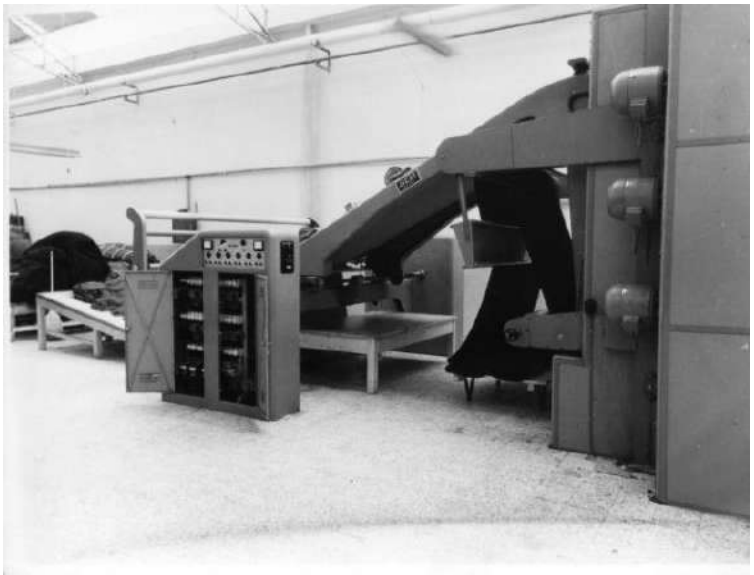
Italian Quality in Machinery Construction

Sicam s.r.l. (Società italiana Costruzioni Aeromeccaniche); via Selvanesco 57-20141-Milano-Italia;

Tel. +39 02 8266081 / +39 02 89300185; Fax +39 02 8266270; e-mail: info@sicamsrl.com; Web: www.sicamsrl.com



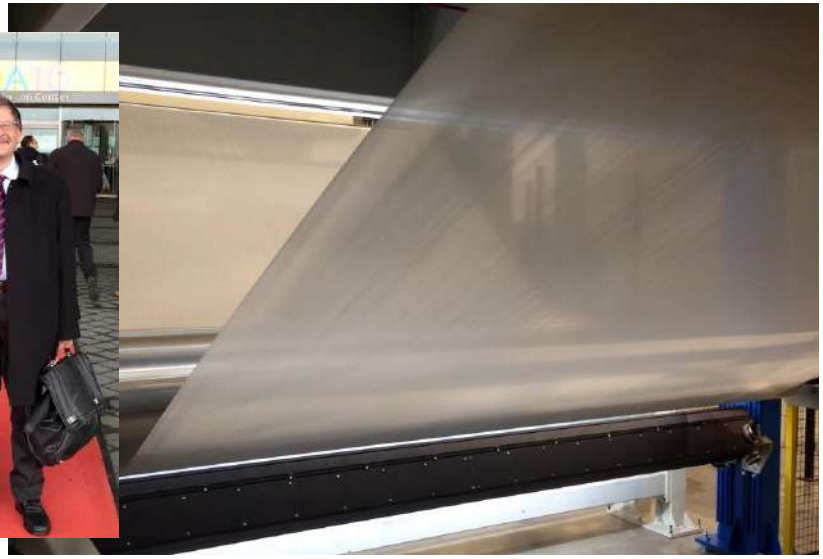
During 50s the 1st generation Mr. Idres Zanardi starts experience in textile process machinery



In the 80s,
the 2nd generation
with Eng. Stefano Zanardi
expanded production range
introducing
technologies for nonwovens

Today,
the 3rd generation
keeps on the mission
to provide best solutions
to the diverse needs
of its customers.

INNOVATION | EXPERIENCE | FLEXIBILITY



SICAM *supplies technologies for the* **NONWOVEN** *and* **TEXTILE** *industries and produces equipments for processes of:*

- DRYING
- THERMO BONDING
- HEAT-SETTING
- LAMINATION
- FIBER EXTRUSION
- IMPREGNATION
- CALENDERING
- WEB FORMING

The above processes are widely used in the following Industries:

- **AUTOMOTIVE INDUSTRY**
- **WIPES INDUSTRY**
- **HYGIENICAL AND MEDICAL INDUSTRIES**
- **CIVIL CONSTRUCTION INDUSTRY**
- **MATTRESSES AND BED INDUSTRIES**
- **TEXTILE INDUSTRY**
- **CARPETS INDUSTRY**
- **GLASS FIBER INDUSTRY**
- **FILTRATION INDUSTRY**

Automotive Industry

Many products in automotive industry needs thermo bonding or resin bonding processes.

SICAM machines product output material used, for example, in:

Door panels

Acoustic insulation

Car seats

Headliners

Steam set for the treatment of phenolic powder.

Low melting fibers to coesionate the nonwoven.

Wipes Industry

Produced with SICAM dray or wet process , examples of output material uses are:

Medical wipes

Household wipes

Spunlace wipes

Cleaning rags made of waste fiber

Abrasive pads

Application,
drying and curing
of abrasive resin
and
cleaning pads.

Hydroentanglement and drum dryer in spun lace plant.

Hygenical and Medical Industries

Wipes and tissues made of nonwoven to be thermo bonded, dried or calendered.

SICAM ADL (acquisition layers) can produce, for example, output material for:

Baby diaper coverstocks

Medical wipes

Surgical room dresses

Surgical room table covers

The ADL directly from the carding machine is thermo bonded in the flat oven.

Thermo bonding of medical wipes in the drum oven.

Drying and curing for surgical room webs.

Thermo bonding calender for coverstock. The engraved roll welds the nonwoven.

Civil Construction Industry

The nonwoven produced by SICAM machines are widely used, for example, in:

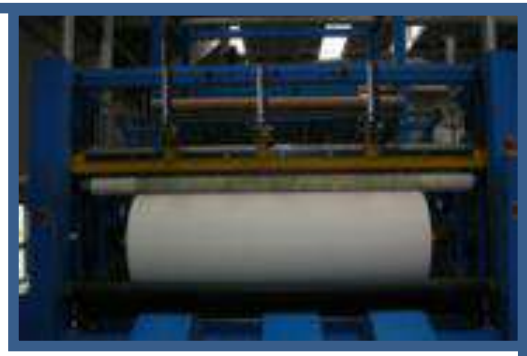
Roofing material | **Road construction** | **Water drainage**

The above uses involve products form the family of the **geotextile**, made of needle punched nonwovens.

To **increase** the mechanical **performances**, an **heat setting** can be made by **calender** or **flat oven** with or without chains.

Wide calenders for needle punched PP nonwovens, used in geotextile.

Roofing plants with thermo setting impregnation, drying, curing and calibration by calender.



Flat stenter frame for heat setting of nonwovens between pin chains (during the load on the truck).

Mattresses and Bed Industries

The nonwovens fibers are bonded by thermo bonding.

The efficiency reached in the SICAM ovens allows high productions.

SICAM machines can product, for example:

Thermo bonded mattresses pads

High loft PES wadding for quilt

Pads for sofas and furniture

Thermo bonding of PP to produce mattresses pads.

PES thermo bonding to produce quilts.

Compression of the wadding at the entrance of the thermo bonding oven

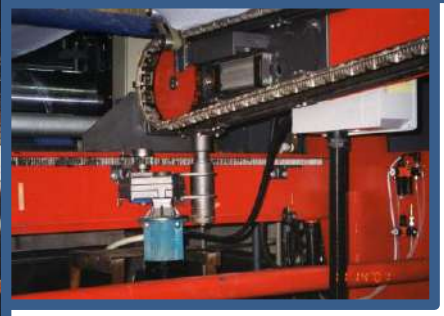
Textile Industry

The drying and thermo setting process in the textile industry has been produced **since 1953**.

The production range include:

- **Flat stenter frames**
- **Multilayers stenter frames**
- **Tunnel oven for loose fiber**
- **Relax dryers**
- **Carbonizing plants**
- **Tunnel ovens for tows of PES/PP**
- **Hot flue ovens**

Flat stenter frames



Tunnel oven for loose fiber

Multilayers stenter frames

Relax dryers

Carbonizing plants

Hot flue ovens

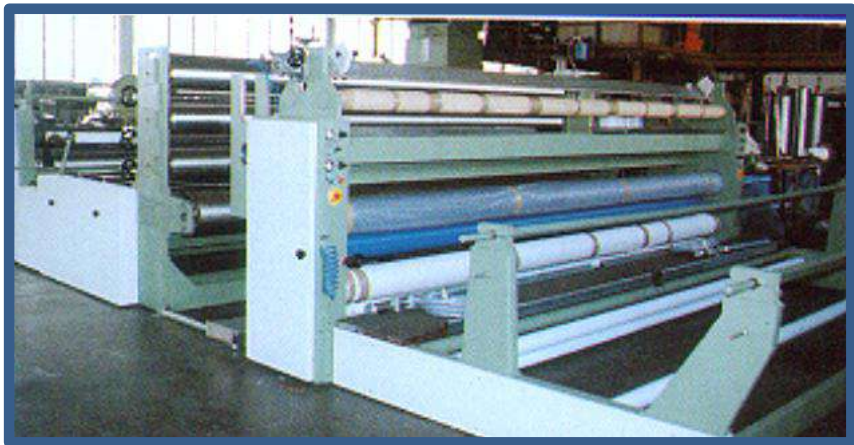
Tunnel ovens for tows of PES/PP

Carpets Industry

Latex back treatment of carpet by drying and curing in stenter frame.

Lamination by powder application.

Back coating



Automotive carpet lamination by powder latex

Glass Fiber Industry

SICAM has in its production range equipment to **form and dry a nonwoven made of glass fiber yarns**: the **CSM (Chopped Strand Mat)**

In addition SICAM produces machines to **cut the glass** yarn for plastic material reinforcement.

A Chopped Strand Mat plant where glass yarn is cut, airlayed, impregnated, dried and cured

Chopper for glass yarn

Glass Fabric for Electronic Use Finishing Plant

Filtration Industry

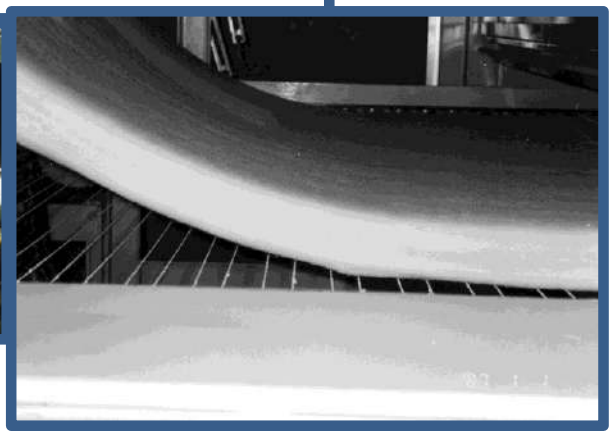
Filtration is a wide branch of use of nonwovens.

Examples about nonwoven filters produced by SICAM machines are:

- **Water filtration**
- **Kitchen filters**
- **Heavy industry filters**
- **Conditioning filters**

The filters can be **thermo bonded**, or **chemical bonded** or **heat setted** for **increase their density**.

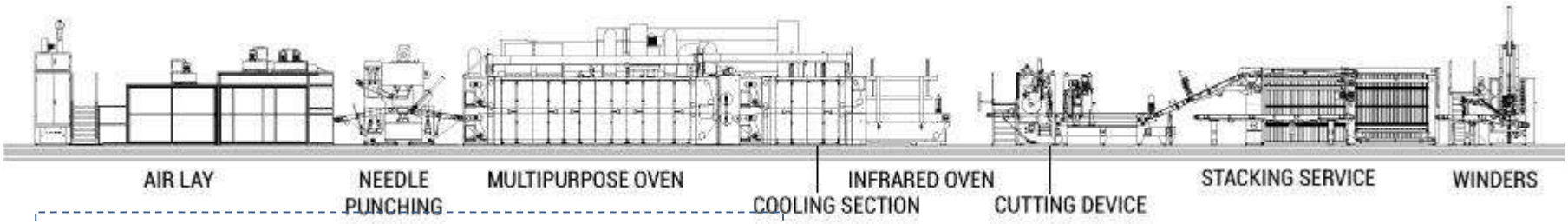
Spray bonding plant with resin spray, drying an curing with or 3 layers oven.



Hot flue for high temperature treatment of industrial filters.

TURNKEY COMPLETE PRODUCTION LINES

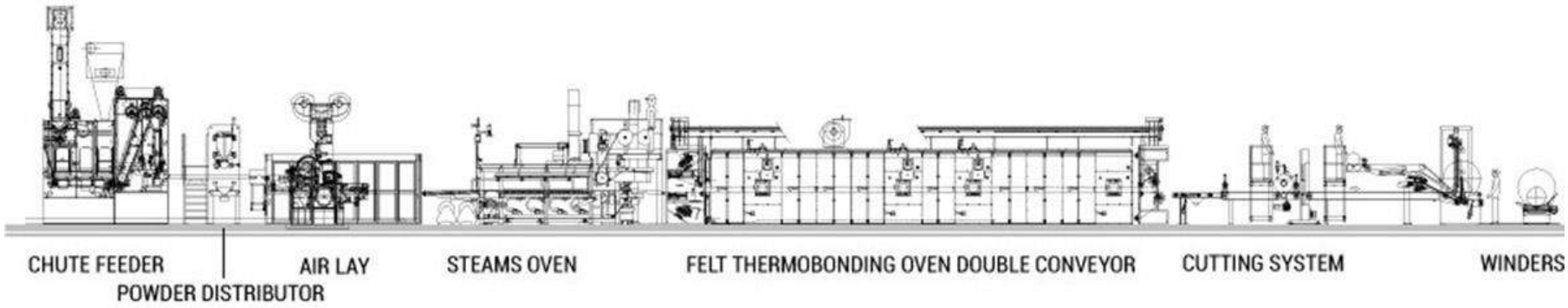
Recycled Fiber Felt Lines



Production from recycled fibers, of **Insulation** felts, **Mattresses** felts and **Automotive** felts.

The felt, from the airlaid or from the card/crosslapper, enters in the thermo bonding oven with or without needle punched treatment.
PPfibers or BicoPES fibers melt in the oven, bonding the felt. The final density is fixed in the calender and in the cooling section.
Surface infrared treatment at the end.

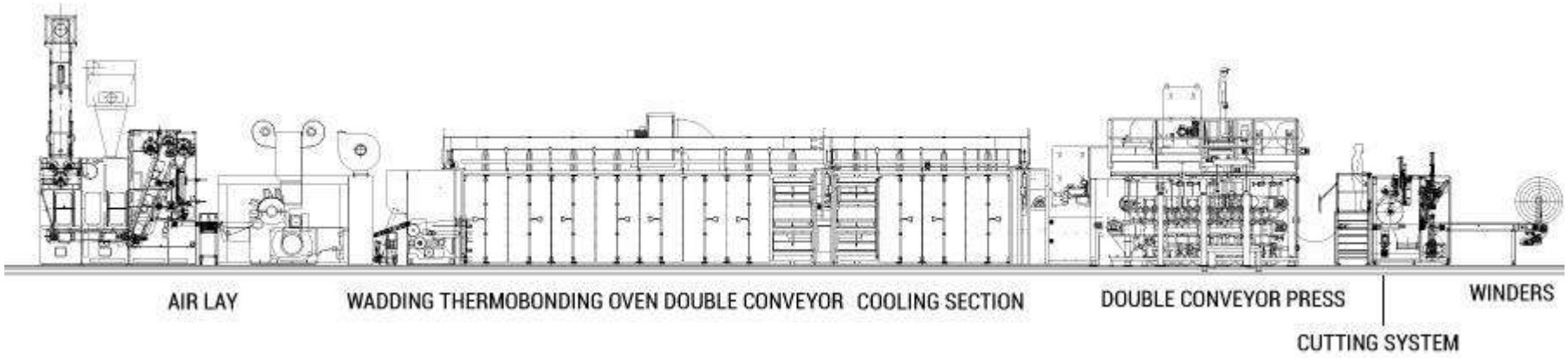
Automotive Recycled Fiber Felt Lines



Production **Insulation** panels, **Automotive** felts.

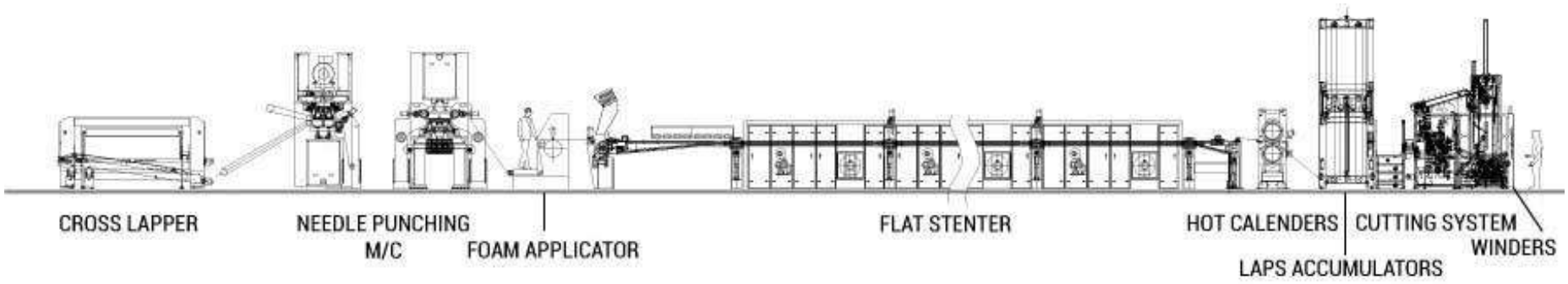
The felt, after the chute feeder, is impregnated with phenolic powder, steam treated and then cured or semi cured in the oven.

Wadding Lines



Production Thermobonding line for **wadding**. Continuous press at the exit for high density or surface finishing, used in automotive felts, mattresses felts, insulation panels.
The continous press can be used like a press to increase the product density or like smoothing and calibration unit.

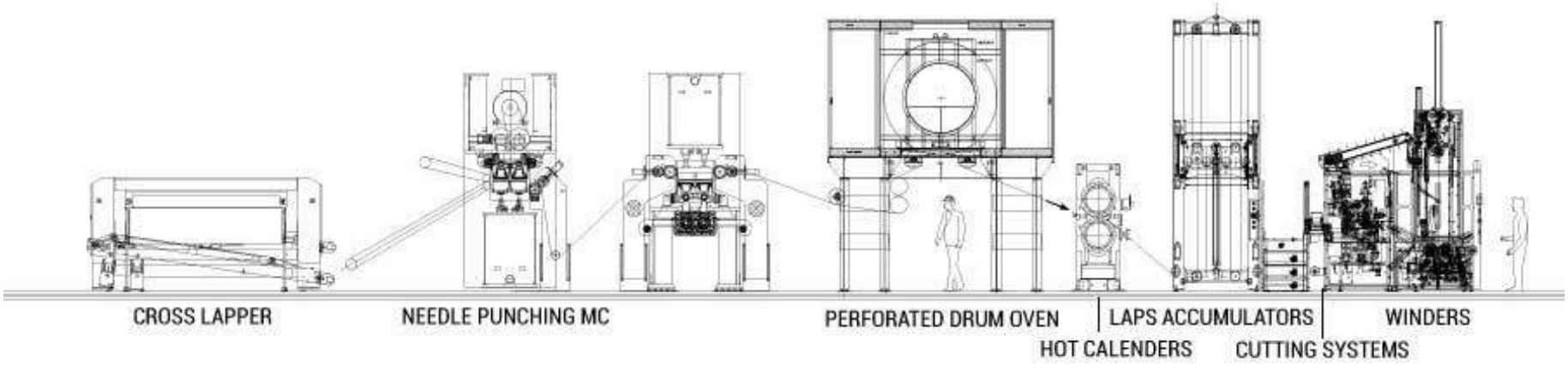
Needle Punching Lines



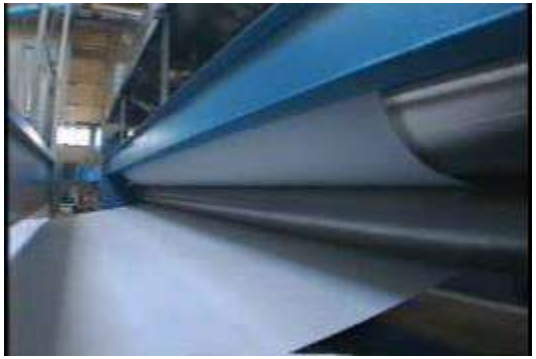
Production **Geotextile**, **Automotive** felts, **Home furnishing** and **Roofing**.

This kind of line is Indicated for needle punching high production speed. The web, carded and cross lapped web, is needle punched and processed in the stenter frame, before be calendered and then is rolled . The passage in the stenter improve the mechanical performances, but mainly correct the MD orientation of the fiber caused by the high production speed

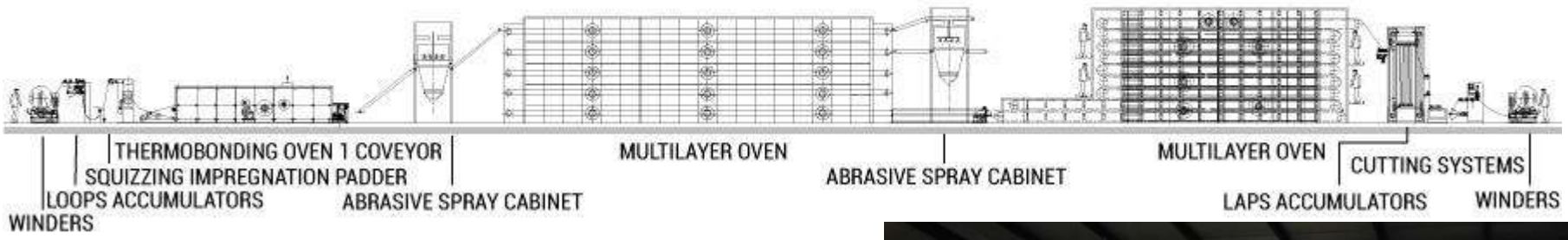
Finishing Lines for Needle Punched Web



Production of **Geotextiles**, material of **Shoe** industries and **Technical filters**.
The carded cross lapped web is needle punched and processed in a drum oven for thermo bonding. The right thickness is reached in the calander used cold or hot, then the web is rolled



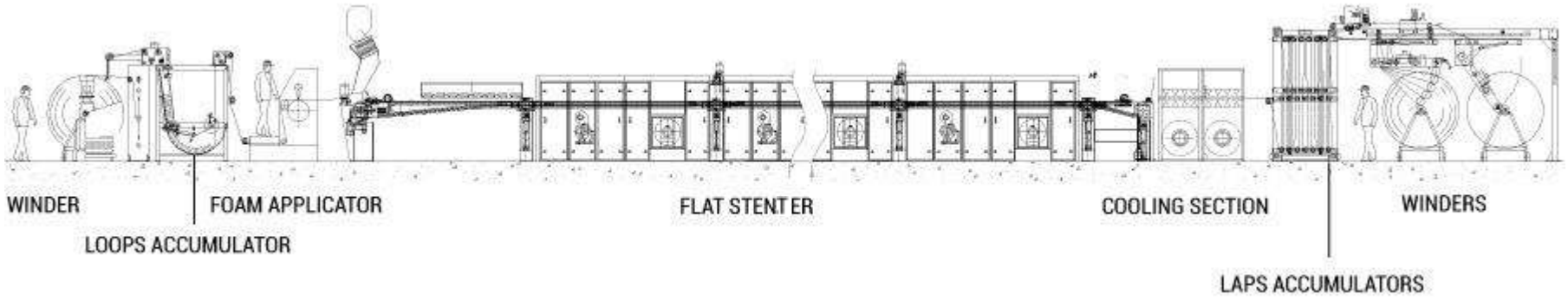
Abrasive Wadding Lines



Production **house hold cleaning pads** and materials for **Industrial abrasive wheels**.

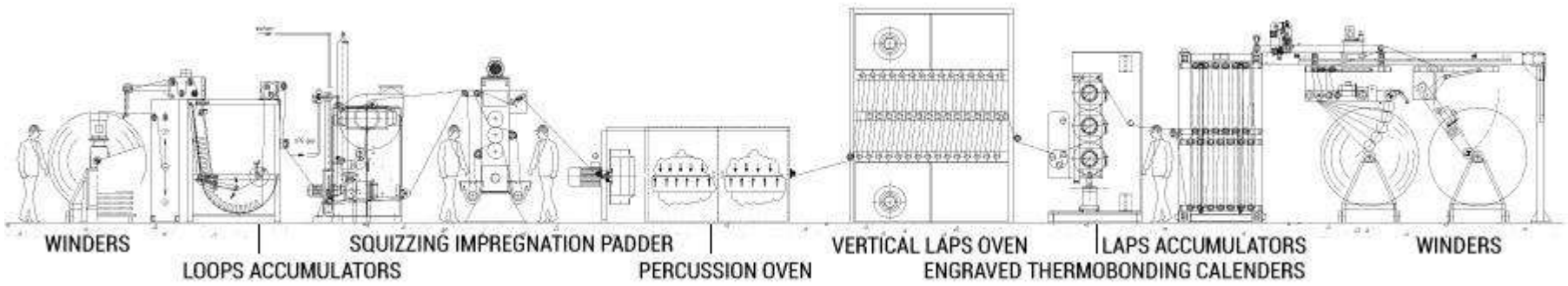
The wadding is unrolled in the first unit, impregnated by liquid in a foulard, dried in a flat single conveyor oven, sprayed two times in the spray cabinets, dried in a multilayer oven , cured in a multilayer curing oven and then rolled.

Coating Lines



Production material for **shoes**, **carpets** and **cleaning pads**.

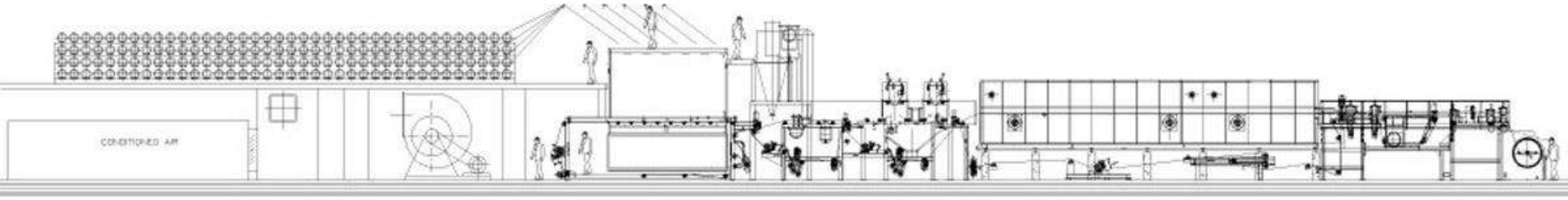
Filter Continuous Lines



Production **Filters** and **Densified technical filers**.

The process starts from the unrolling of a niddle punched web .
Singeing treatment allows a flat surface , impregnation by chemicals, high speed impingement driers without contact, vertical up woven for curing , calender and winder with accumulator.

Glass Fiber Chopped Strand MAT Lines

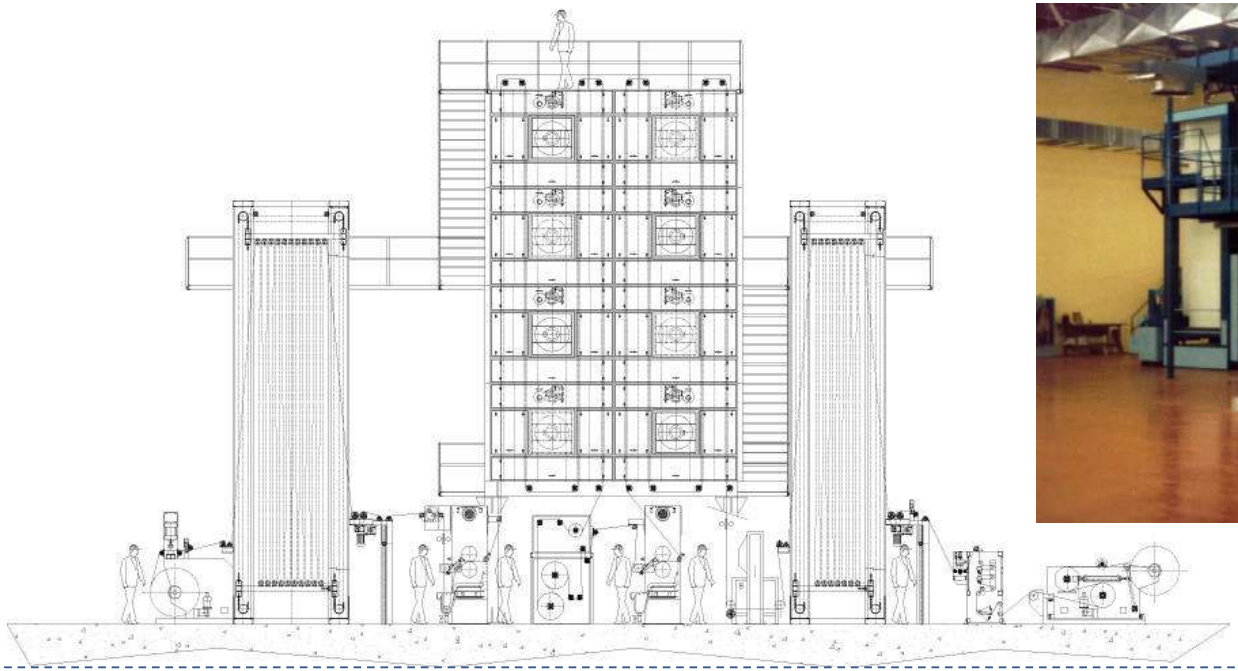


GLASS FIBER EQUIPMENTS

Production **glass fiber MAT** for **naval construction** or **composites**.

The glass yarns from bobbins are unrolled and cut into short pieces. The web is formed in a proper hood with collecting conveyor. Impregnation by power or emulsion. Drying and curing, calibration, cooling and winding.

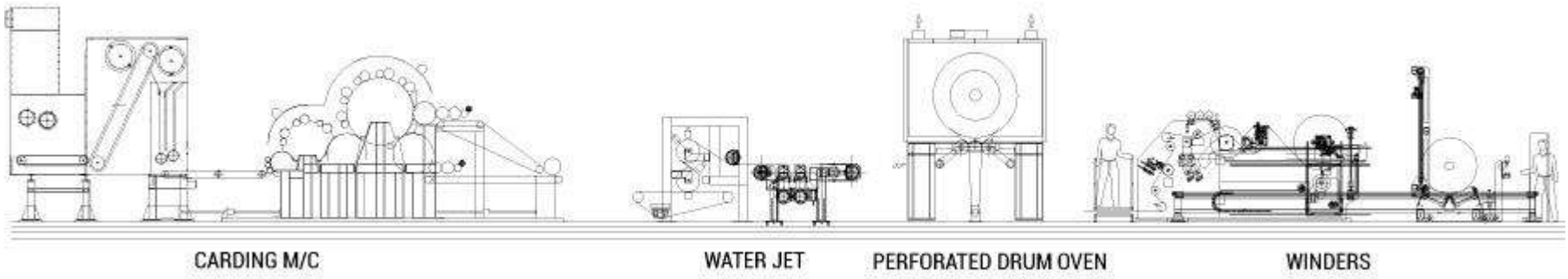
Glass Fabric Chemical Impregnation for Electronic Uses



Production **Electronic circuit**, **Technical fabrics**.

The glass fabric is unrolled in a proper section equipped with welding unit and accumulator to allow continuous production. The fabric is impregnated with chemicals and dried in a vertical air drier. Accumulator and winder allow continuous production.

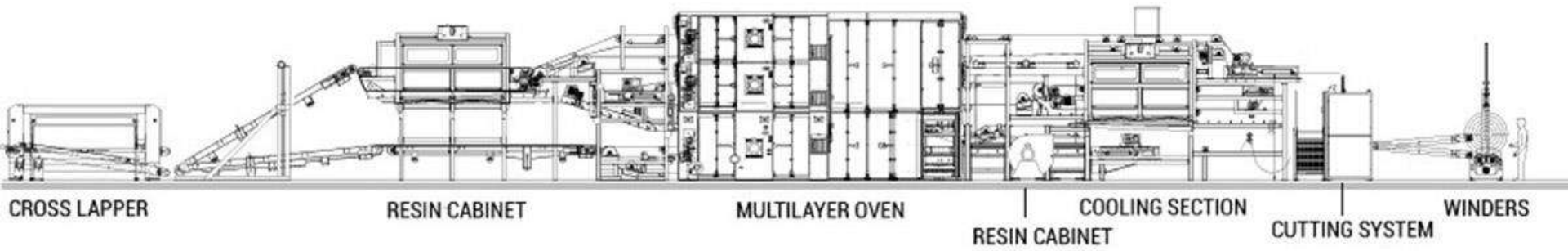
Spun Lace Lines



Production **Health care**, **Wipes, cleaning** clothes.

The web, after card forming, is hydroentangled, predryed in the padder and dryed in a high efficiency double drum oven and then is rolled.

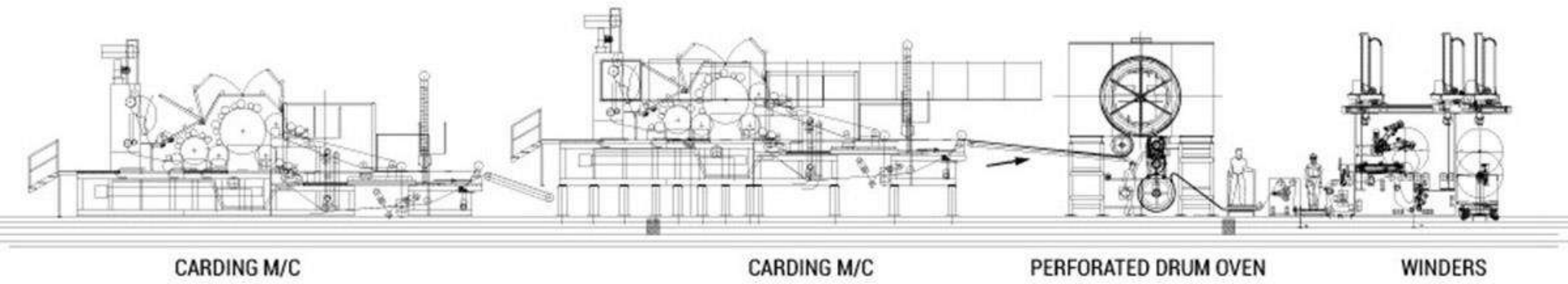
Spray Bonding Wadding Lines



Production **Wadding** for **furniture** industries, for **garments** industries, for **automotive** industries, for **Air filers**, **Scouring pads**, **Thermoacustic materials**.

After the cross lapper the wadding is first sprayed on one surface and then dried in the oven. Then the wadding is sprayed on the other surface and dried again. In the lower pass of the three passes oven, the wadding is cured and now ready for cooling and winding. By pass at the entrance to use as thermo bonding oven the lower pass of the oven without using the spray cabinet.

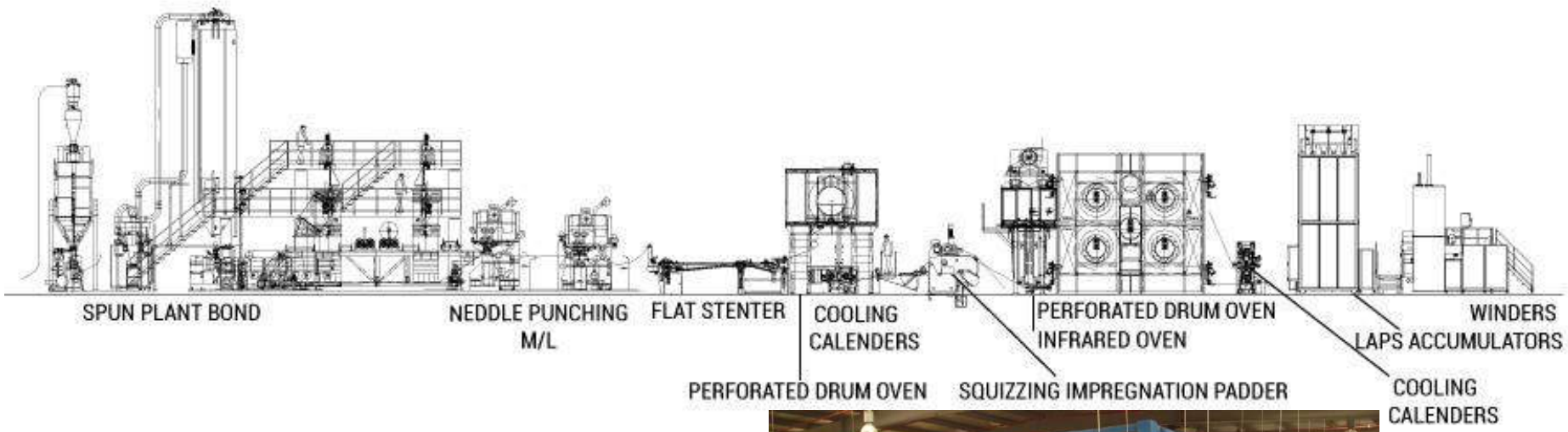
Lines for Light Webs from Carding Machine



Production **Top sheet for lady diapers**.

The web can be produced by one or two carding machine in tandem. The web mixed with melting fibers is thermo bonded in a drum oven and cooled.

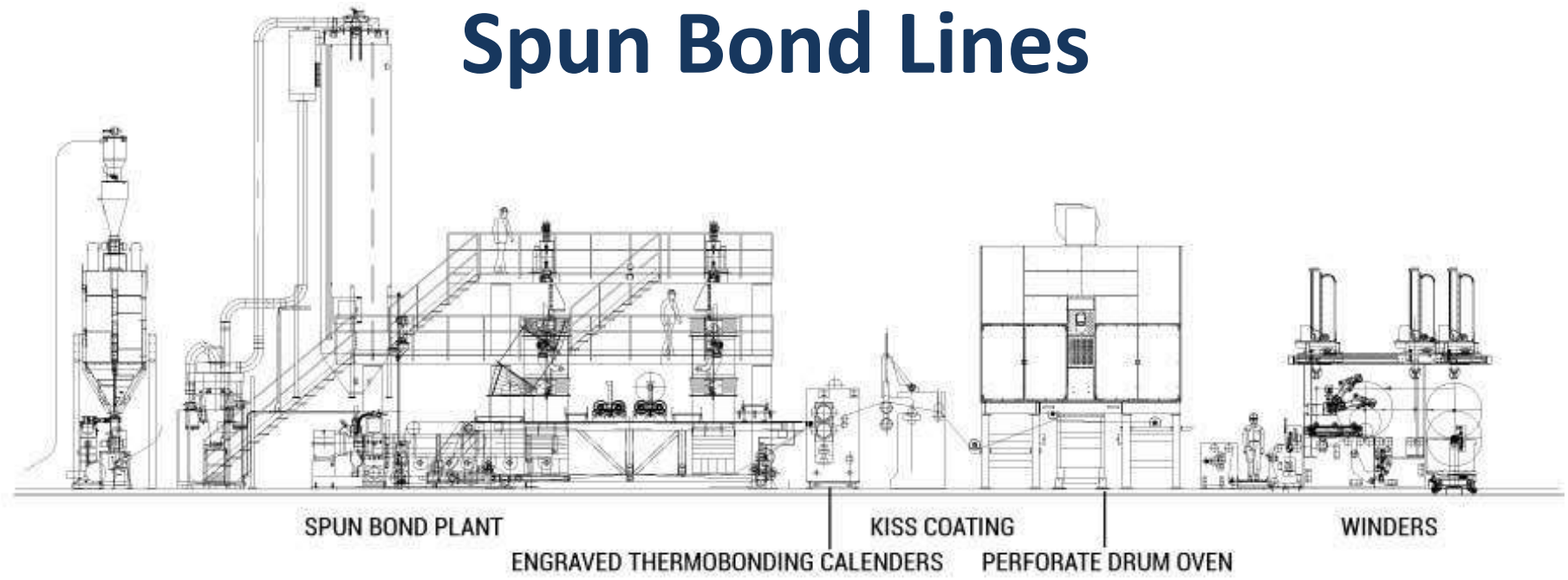
Spun Bond Lines (Roofing)



Production **Roofing, Civil engineering, Technical felts, Separators for batteries, Carriers of PVC flooring**.

After the forming, the web is needle punched, thermo fixed, calibrated, impregnated, pre dried, dried, cured, calibrated and rolled.

Spun Bond Lines



Production of **Health care**, **Coverstock** for **diapers, Wipes**.

After spunlaid forming, the web is calendered with engraved rolls and rolled. Possibility of impregnation and drying for hydrophilic webs.

Swiss Perception of Quality

Quality System

QS International

Certificate

Certificate No. **V-20-3033**

SICAM S.r.l.

Office: Via Selvanesco 57, 20141 Milano (MI)

Production Site: Via Nilde Iotti, 30/32/34, 20090 Pieve Emanuele (MI)

QS SCHAFFHAUSEN AG confirms that the Management System of the company has been assessed and found to be in accordance with the requirements of the following standard:

ISO 9001:15

The Management System includes:

Development and manufacturing of machinery and plants for textile and for nonwoven (IAF 18)

Date of Certification Decision: **July 31st 2020**

The validity of this Certificate is subject to the successful implementation of annual surveillance audits planned and performed by QS SCHAFFHAUSEN AG.

Date of issue: **July 31st 2020**

Valid until: **July 30th 2023**

QS Schaffhausen AG
Postfach
CH-8222 Beringen
info@qsinternational.ch

SWISS ACCREDITATION sas.admin.ch SCESm 0059

Management

SICAM
Società Italiana Costruzioni Aeromeccaniche

Managing Director
Eng. Stefano Zanardi stefano.zanardi@sicamsrl.com

Head of Sales
Eng. Luca Zanardi luca.zanardi@sicamsrl.com

Sicam s.r.l.
(Società italiana Costruzioni Aeromeccaniche);

via Selvanesco 57-20141-Milano-Italia;
Tel. +39 02 8266081 / +39 02 89300185;
Fax +39 02 8266270;

e-mail: info@sicamsrl.com; Web: www.sicamsrl.com