

Non Woven Days

Hof, Germany

7-8 November 2012

LOPTEX ITALIA S.r.L.

- Loptex, as manufacturer of systems for the detection and elimination of contamination in a free fibers flow, introduce a complementary solution for the control and the significant reduction of impurities in non woven process.
- The risk of contamination presence in products for medical, personal care and hygienic purposes has been recently highlighted.
- The final consumers require high quality standards. Hence, the final products have to guarantee purity, delicacy and comfort to the human skin.
- The origin and source of foreign matter and/or contamination in non woven process his of different nature. Their frequency is very low. They are included in the category of “rare events” but they can seriously affect the quality of the final products.

Contamination presence in raw material

From man made fiber manufacturer: artificial and synthetic fiber.

We may classify these contamination into the following categories:

- Yellowish fibers;
- Dark fibers;
- Black spots;
- White melted fibers;
- Color and white polypropylene.

They originate during production process due to the chemical treatment and the mechanical action of production machineries. Furthermore, they originate from bale polypropylene woven packaging.

Contamination presence in raw material

Black Spots



Black Fibers



Contamination presence in raw material

Yellowish Fibers

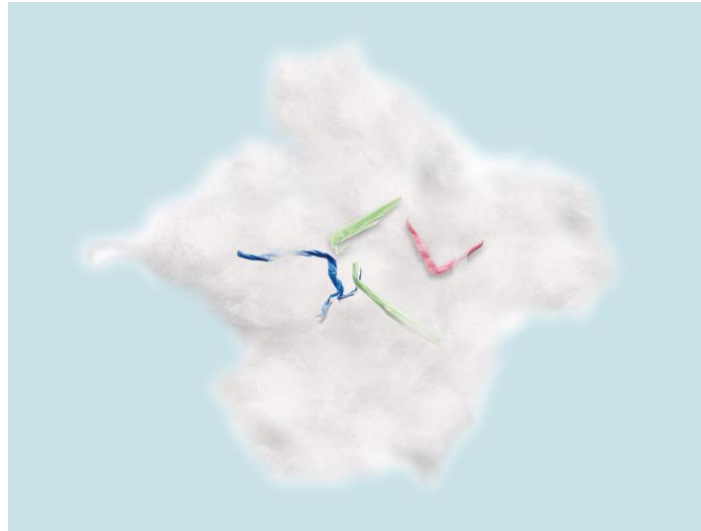


Melted Fibers



Contamination presence in raw material

Polypropylene of different color including white



Contamination presence in raw material

From natural fibers: combing noils and fiber waste

- These contamination have different sources and are of different nature: leather, feather, color and white polypropylene, pieces of cloth, bunch of hairs and others.
- They originate at the very beginning of the process during harvesting due to the presence of manual picking and due to the very critical environment conditions. This is typical from emerging countries and emerging economies.

Contamination presence in raw material

Feather, color and white PP, piece of cloth, bunch of hairs contaminant.



Contamination presence in a non woven plant.

They originate from:

- Mechanical action of machines on fibers.
- Environment debris.

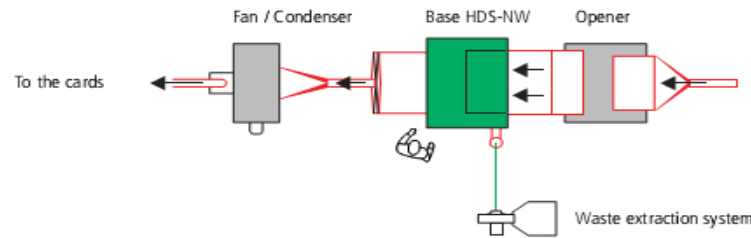
These contamination and/or impurities are difficult to classify as they can be of very different nature.

Detection and elimination of contamination: Loptex solution.

- Loptex is willing to introduce a complementary solution to the already existing quality control methods.
- The target is the on-line detection and elimination the contamination during fiber processing.

Where to detect the contamination in a non woven plant.

- The ideal positioning is in blow room line before carding machines and immediately after an Opener.



- It may be necessary the use of a Condenser/Buffer in case of feeding of high production carding machines.

Loptex system

Working principle

The Loptex system couples 2 technologies for the detection of the contamination.

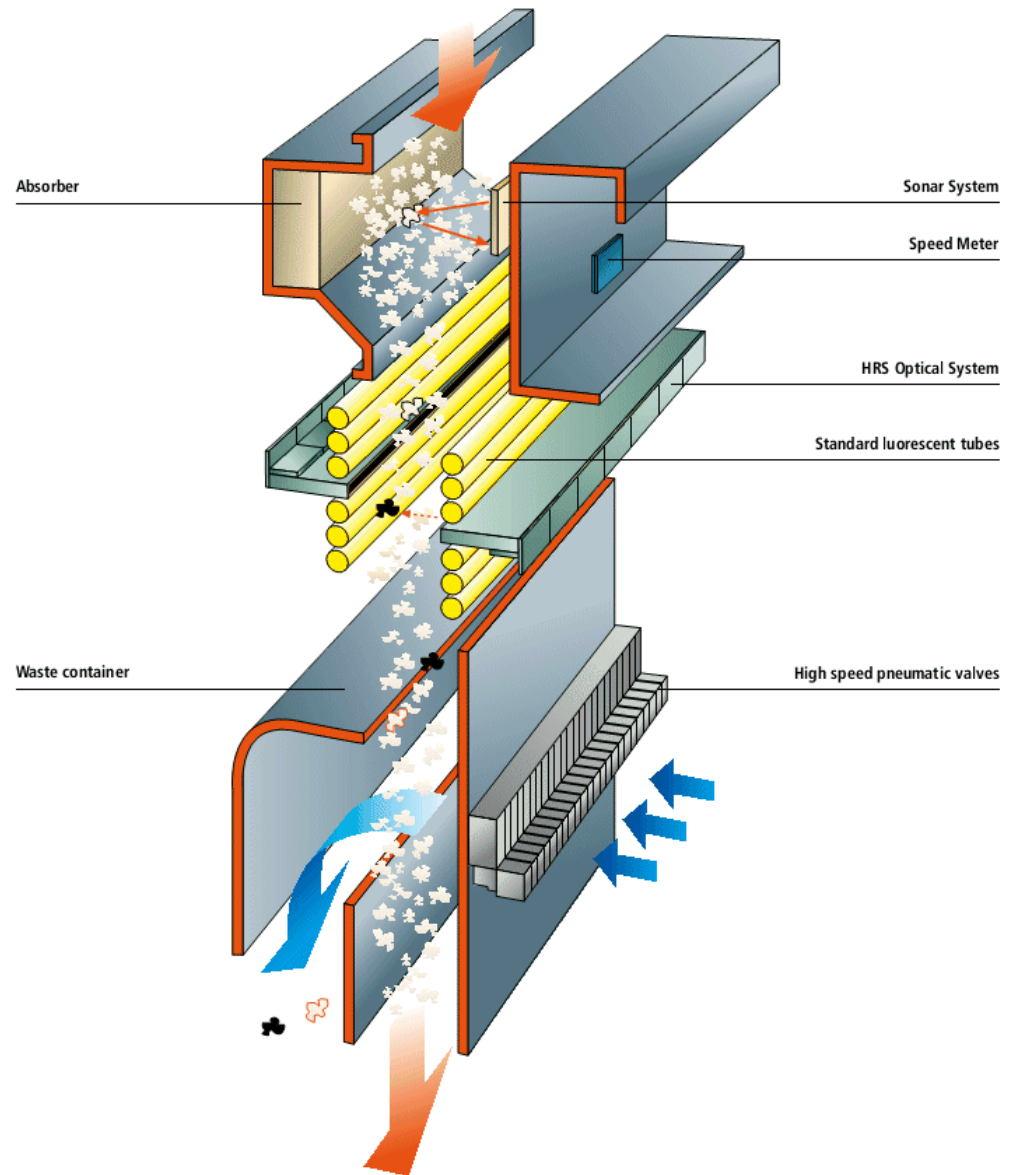
- Sonar Technology

The fiber stream is scanned by an ultrasound acoustic sensor. Any white and/or color plastic contaminant reflects the sound towards an array of piezoelectric sensors which activate a solenoid valves for its rejection in a waste container. The production is not affected.

- Optical Technology

The fiber stream is illuminated in both sides by fluorescent light tube. Any visible color contaminant with different refractive index that the fibers is detected by mini-built in camera systems which activate a solenoid valve for its rejection in a waste container. The fiber production is not affected.

The loss of good fibers in this process his reduced to its minimum.





Loptex Italia S.r.L.

Via Dell'Industria 7/b

22070 Montano Lucino (Co)

info@loptex.it www.loptex.it