

TRIM HANDLING IN A CLEAN ROOM FOR PRODUCTION OF FLEXIBLE PACKAGING

/ THE CHALLENGE /

- The SABIC Snij-Unie production company in the Netherlands processes a wide variety of customized LEXAN™ polycarbonate film & sheet materials - by cutting smaller-sized film rolls or sheets, making shorter rolls, or making laminates with basic materials supplied by their customers.
- The installation of the pneumatic trim removal system is in an air-controlled clean room. Therefore the challenge was to limit the amount of air sucked out of the clean room. However, for obvious reasons a filter cannot be installed in a clean room, so the placing of the Kongskilde equipment in an adjacent room entails some loss of air, temperature, and humidity.



/ THE FACTS /

- Material: Foil, polycarbonate/polyester
- Material thickness: From 50 μ up to max. 380 μ
- Trim width: 50 mm
- No. of trims: 1 pc. per pick-up point
- Speed: 40 - 100 m/min.
- Max. conveying distance: 20 m
- Max. no. of bends: 5 x 90°



Pick-up points with two MultiCutters going into one main pipe



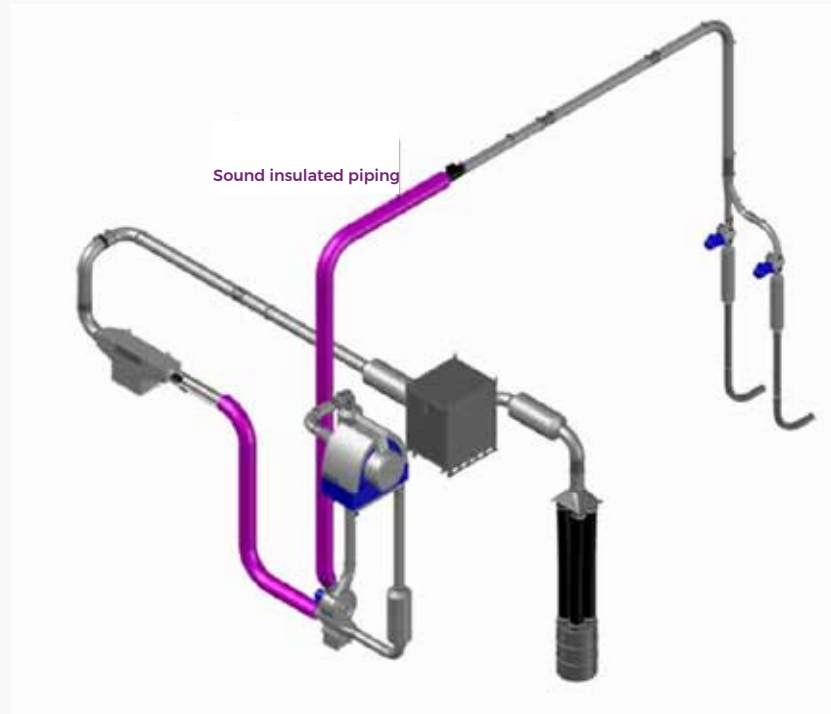
Winding and slitting machine in the clean room. Here you see the extraction points with flexible steel pipe and a MultiCutter per extraction string. Both pipes come together in one main pipe which will convey the shredded material to the waste bin.

// THE SOLUTION //

The pipes, with a pick-up point in the clean room, run through an attic to an adjacent packing room where the separator equipment is placed. This setup simplifies maintenance and ensures that there is no pollution in the clean room.

The complete trim suction system consists of:

- Two suction points with a MultiCutter on each line
- Fire damper
- MultiAir FC 2190 blower
- MTD 22 blower in sound booth
- 4-bag filter unit
- RVS 75 separator with a locally made sound cabinet
- OK 160 pipe, partly sound isolated
- STS 160 separator with Anti-Static Unit
- Piping



Filter unit



STS 160 Separator

/ THE ADVANTAGES AND BENEFITS /

- Upon installation, the manual labour of removing the trim has been substituted by a pneumatic solution.
- There is no longer any waste handling inside the clean room which makes the process even cleaner and saves considerable amounts of time.
- The productivity has increased as SABIC Snij-Unie eliminates manual labour by removal of the full rolls of trim.
- The noise reduction contributes to a better working environment.



The MultiAir® blower is placed on a frame to optimize floor space