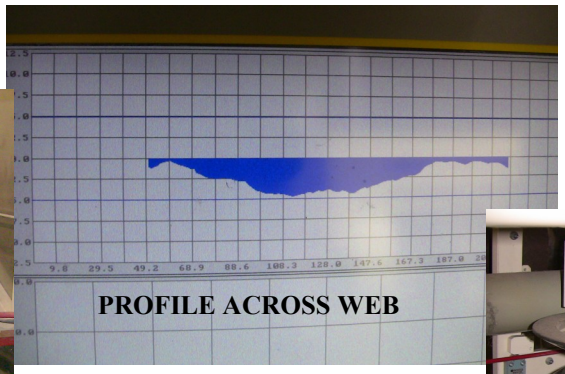
Density Gauge

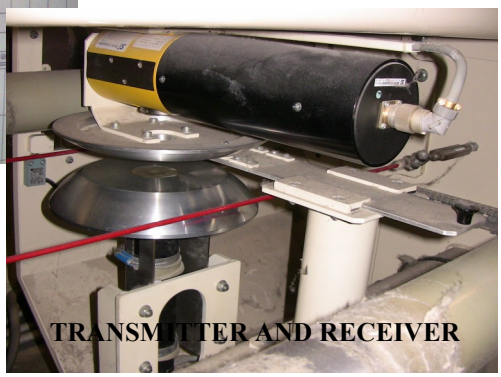
A density gauge measures the amount of fiber in nonwoven fabric usually just prior to the winder. Software then converts the density into a basis weight per square yard or square meter. Most density gauges travel across the web several times a minute on a frame. Density gauges use x-rays or nuclear radiation to determine the amount of fiber in the web. Some gauges have a transmitter and receiver while others are backscatter gauges which measure the radiation not absorbed by the fiber.

The gauge is valuable in that it supplies both real time data as well as historical data. Most gauges average many scans to produce a graph that shows the profile (weight distribution) across the web. A histograph can also be produced to show the weight variations lengthwise within a roll of fabric.

On sophisticated production lines, the density gauge is connected to the card feed roll, crosslapper, and other lines components to control the profile of the fabric. Of course the goal is to make a fabric that is consistent in weight both across the web and in the machine direction.

FRAME


PROFILE ACROSS WEB


TRANSMITTER AND RECEIVER

"Kings and cabbages go back to compost, but good deeds stay green forever."
Rick de Marinis