

FILTER & EQUIPMENT LTD

LAMINATING - PAPER PROCESS



PRODUCT KEY





APPLICATION

Raw ingredients that include polymers, solvents, coating aids, etc. are combined in a reactor to produce the resin coating. The paper substrate is coated in the Resin Impregnator. The coated substrate then passes through air dryers where the resin is set. Solvents and other volatile components evaporate and the resincoated laminate dries. The laminate may require further air cooling and water cooling prior to being cut and stacked for the next process. All of the raw materials used to make the resin should be filtered to remove contaminants introduced during their manufacturing process. Impurities in polymers, solvents, coating aids and other ingredients can carry over into the resin and cause defects such as grease spots, fish eyes, bacteria spots and others.

Gels and agglomerations can form in the reactor due to inadequate mixing of polymers. They can, also, form in kettles and solution lines. Classic Filter recommends a depth style filter downstream of the reactor at the point-of-use just prior to the resin impregnator to remove these contaminants.

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At the back end of the drying process, water is often used to cool the laminate or re-infuse moisture. The water used in these processes should be filtered to remove particulate contaminants that might mar the surfaces of the laminate.

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Air used in the dryer process can have a high level of contaminant particles. To prevent these particles from depositing on the laminate, Classic Filter recommends HEPA style filters. These filters will remove up to 99.99% of particles .03 micron and larger.

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