Pulp and Paper

There Are Several Ways a Plant Can Produce Pulp:

The four primary processes employed in the U.S. and Canada are:

1. Kraft (a chemical process)
2. Sulfite (a chemical process)
3. Mechanical
4. Thermomechanical

Filtration Solutions

MEGApleat® M8
(see page 118)

SAAF™ Cassettes
(see page 213)

Contaminant Risk

The primary source for gaseous contamination in pulp and paper mills is the pulping process. In the Kraft pulping process, highly malodorous emissions of reduced sulfur compounds are produced. These compounds are measured as total reduced sulfur (TRS) and include hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide. These sulfur compounds are often described as smelling like rotten cabbage. In the sulfite pulping process, sulfur oxides are also emitted in fairly significant concentrations. Other pulping processes, such as the mechanical and thermomechanical methods, generate significantly lower quantities of air emissions.

In addition, steam and electricity-generating units using coal or fuel oil emit fly ash, sulfur oxides, and nitrogen oxides. A secondary source of corrosive gases in the pulping process is during the bleaching step. These bleaching chemicals, which often include lime, are caustic and cause corrosion to occur.

Optimize Your Environment

For particulate filtration, dust collectors (wet and dry), bag houses, and several stages of HVAC-type air filtration products are employed to help keep the wood fiber and associated dust to a minimum. Ensuring that this dust is removed is extremely important to both the paper quality and the maintenance of the pulping equipment and paper production machines.

At a minimum, protection of the control room includes pressurization with purified air. This prevents corrosive gases from infiltrating the control room and causing corrosion problems. Additionally, recirculation air may require cleaning, if the room is a high traffic area or there are other internal sources of contaminants.

Using SAAF™ Tech Tools, a decision science solution program for configuring gas-phase applications, AAF Flanders experts can identify optimal media and equipment solutions. SAAF Tech Tools simplifies the complexities surrounding gas-phase applications through a guided problem solving experience.

A thorough air filter audit of your HVAC Systems is the first step that AAF Flanders takes in order to provide you with professional guidance and analysis for cost savings and risk reduction. By conducting this audit, we will be able to understand your current state and then utilize SAAF Tech Tools and TCO Diagnostic®, advanced analytical software tools, to identify how you can improve air quality, energy savings, and operational flexibility while reducing risk and total cost of ownership.