



## PIPE-FLO® Professional for the Pulp and Paper Industry

### >>The Big Picture:

The pulp and paper industry is the most capital intensive in the United States, spending approximately \$130,000 per employee each year in plant and equipment. As the world's social and economic fabric has changed dramatically over the past two decades creating a highly competitive market, efficient use of energy and facility productivity are all the more critical to profitability.

Fortunately machinery and equipment in the Pulp and Paper industry is becoming increasingly computerized, which has improved the speed of operations, productivity and efficiency while reducing human error. With slimming profit margins in recent years, technological advancements are key to cost savings.

### >>Fact:

To manufacture approximately one ton of paper, it takes 2,000 to 10,000 gallons of water. The cost of pumping all that water adds up - approximately 25% of total electrical energy used in pulp and paper facilities is for pump systems. Making every dollar count, PIPE-FLO® Professional allows paper operations to realize significant savings in both energy use as well as maintenance and downtime costs by identifying sub-optimal operating conditions and highlighting the biggest energy consumers.

PIPE-FLO® is designed to simulate actual system operating conditions to troubleshoot, anticipate and avert emergencies, increasing system reliability and increasing uptime.

## >>Solution:

Using PIPE-FLO® Professional the Pulp and Paper industry can identify steps to maintain and increase profitability. By simulating system equipment behavior over a variety of operating conditions the root cause of valve and pump wear and failure can be identified and solutions proposed before a shutdown occurs or unplanned maintenance is required. PIPE-FLO® can also identify energy usage within the system and help operators and engineers investigate lower cost alternatives.

Since pulp suspensions have unusual flow behavior, ESI also offers a PIPE-FLO® Professional Stock module that is specific to the Pulp and Paper industry. With this module, users can accurately and easily model pulp and paper slurry piping systems. PIPE-FLO® Stock provides head loss and pressure drop calculations based on the TAPPI standard TIP 0410-14.

**PIPE-FLO® Professional can be used to model systems like:**

Cooling

Compressed Air

HVAC

**REDUCE** system downtime  
**REUSE** system calculations  
**RECYCLE** off quality products



**Every 2,000 lbs. of paper that is recycled, saves 3.3 cubic yards of landfill space**

The PIPE-FLO® Stock Module was specifically designed for the Pulp and Paper Industry. Users can model stock slurries in the same system along with process fluids and other pulp suspensions.