

# ***BLEACHED & BROWN STOCK WASHER LINES***

## ***Evaluation & Upgrade***

### **Introduction**

Evergreen Engineering in Eugene, Oregon provides its clients with a broad selection of services in Mechanical, Civil/Structural, Electrical, Chemical, Instrumentation, Process and Field engineering. We provide complete services from economic impact evaluations through project management and start-up.

One area of specialization is stock washing and screening on both the bleached and brown stock lines. We are very experienced in all facets of refurbishing and replacement of washer drums, including the related upstream and downstream equipment.

### **Services Offered**

- Evaluate the flows through the washer line, identify any limitations and develop viable solutions.
- Optimization of the entire line.
- Equipment selection assistance, specifications, and installation drawings.
- Pumping and piping size modifications.
- Economic evaluations on the shower performance and chemical removal.
- Drop leg vacuum and mat consistency analysis....make recommendations.
- Structural analysis of support systems for corrosion, seismic loadings and codes.
- Design of building modifications that may be necessary for the maintenance or removal of washer drums.
- Make material recommendations to extend the useful life of washer equipment.
- Design electrical, control, and instrumentation upgrades including PLC, DCS, PC, and stand-alone loop controllers. Both electronic and pneumatic.
- Develop complete AutoCAD drawings of the system including general arrangement, structural, piping, P&ID, flow diagrams, loop sheets, and other control documentation using mill standard formats.
- Provide field engineering, inspections and project management for repairs, replacement and new installations.

### **EVERGREEN ENGINEERING**

Eugene, Oregon (541) 484-4771 • Fax (541) 484-6759  
Hillsboro, Oregon (503) 439-8777 • Fax (503) 439-876