

Paint Line Projects Graco

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Driven to DiscoverSM



Company Overview



- Graco is a fluid handling equipment and systems manufacturer
- “Move, measure, control, dispense and spray a wide range of fluids and viscous materials used in lubrication, commercial and industrial settings” (Graco)



Motivations for Change

- The two “greens”
- Cost savings and environmental awareness
- Energy efficiency around the facility

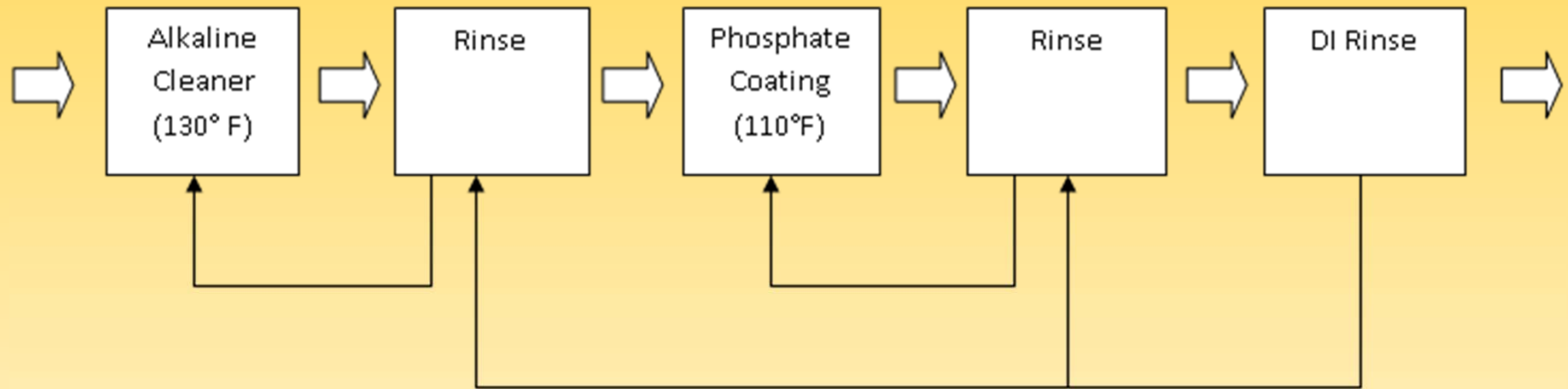


Approach

- Learn “ins and outs” of process
- Determine improvable areas
- Research and test solutions

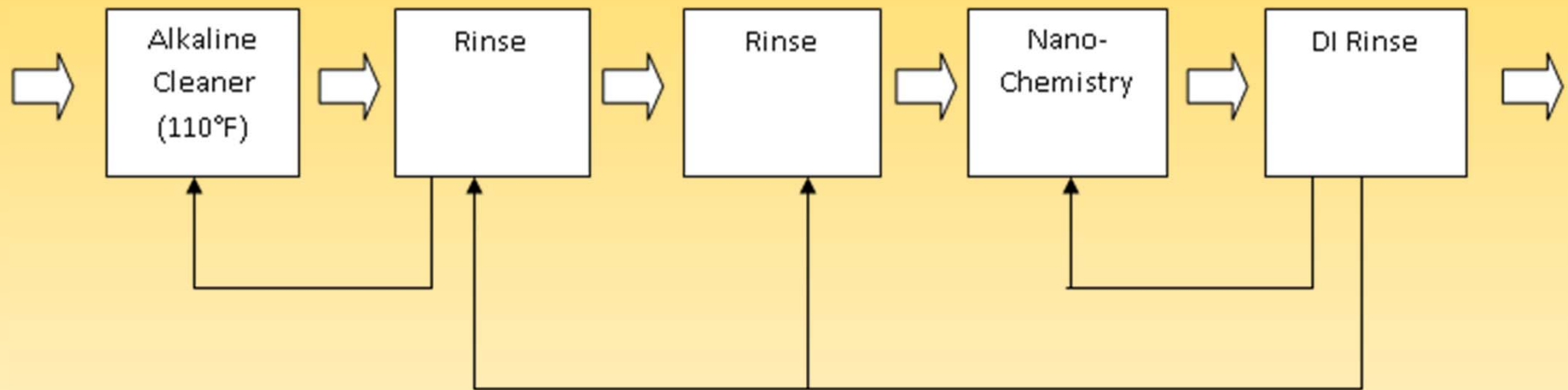


Pre-Treatment Wash Line



- Natural gas use
- Water use
- Phosphorus discharge

Process Changes: Wash Line



- DI water reduction
- Stage one: more aggressive
- Stage four: nano-chemistry

Process Changes: Pre-Treatment Wash Line

DI Supply Reduction	Supply Savings	Sewer Savings	Annual Total Savings
546,000 gallons/year	\$8,000	\$2,000	\$10,000

Recommendation	Chemical Savings	Phosphorus Discharge Savings	Natural Gas Savings	CO ₂ Emission Savings	Annual Total Savings
Switch pre-treatment chemicals	9,000 lbs.	200 lbs.	26,000 therms	300,000 lbs.	\$25,000

Solvent Recycling

- Used for flushing lines between colors
- Recyclable and reusable
 - Reduce purchase and disposal costs
- Purchase solvent recycler



Process Changes: Paint Line

Recommendation	Environmental Savings	Implementation Cost	Annual Total Savings	Payback
Purchase Solvent Recycler	1500 gallons solvent purchases & disposals	\$11,500	\$6,000	Two Years

- Large quantity waste generator to small quantity generator
 - Less regulatory burden

Other Projects

- Compressed air leak audits
 - 310,000 kWh
 - \$23,000
- Xcel Energy Process Efficiency



Personal Benefits

- Daily responsibilities
- Diverse communication
- Manufacturing setting
- Environmental awakening



"OK, 'Leo,' break's over."

Questions?

