

TRISOLVE

SOLVE
CHEMICAL



HELIOJET
CLEANING TECHNOLOGIES



TriSolve Capabilities
and Unique
Technologies Review

Who is TriSolve?

- Is a Joint Venture company between Ware Inc, HelioJET and Solve Chemical
- A multi-million dollar enterprise as a combined company
- Built to leverage the sales and service expertise of Ware, the unique equipment of HelioJET and the safe, green and clean chemistries of Solve Chemical
- Bringing more depth and coverage to the market, as well as greater thermal and energy utilization awareness, can enhance your ROI

TriSolve

- **Our People:**
 - Experienced professionals looking to create more value for the paper and food industries
 - Average industry tenure – 15+ years
- **Our Primary Focus:**
 - Cleaning and deposit control technologies that enhance our customers production and profitability

Mission Statement

- “Our mission is to be recognized as the preeminent cleaning product and solutions provider for our target markets. Operating in a sustainable fashion with our customers, we will create value through technology, innovation and industry leading service and support. Our focus is the continual improvement in customer profitability, sustainability and safety”

Vision Statement

- “Tri-Solve will earn market share through investing in our customers and enhancing the safety, profitability and environmental footprint of their operations.”

Corporate Values

- **Teamwork**
 - “Our specialists engage with your teams to find lowest cost/industry best practices solutions”
- **Investment**
 - “We will always take the long view for our customers and engage them in our business model”

Corporate Values

- **Safety**
 - “Every aspect of our involvement – from formulation, to equipment, to service will have safety as the primary design element”
- **Sustainable**
 - “We will work to improve all elements of operational sustainability for our own and our customers organizations”
- **Innovation**
 - “We will be recognized as the leader in our segment – providing new and process friendly solutions to our markets”

Market Sectors

- Paper Chemicals
 - Packaging
 - Tissue/Toweling
 - Printing grades
 - Specialties
 - Pulping
- Food and Pharmaceutical
- Surface Cleaning

Tri-Solve Technology Offering

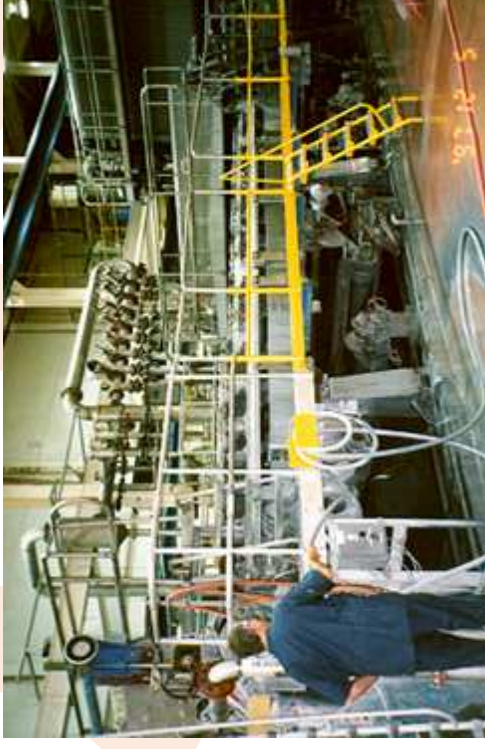
- Our bundle can include:
 - HelioJET fixed flow unit & Paper machine Showering
 - Solve chemical programs
 - Solve/HelioJET/Ware operational expertise
 - Full field service and technical support
 - *Expert Chemical and Mechanical Service*
 - Engineering Support
 - No Capital outlay on the part of the mill
 - *Cost per ton*
 - *Cost per month*

Quality / Environmental Programs

- All Solve Chemical products are prepared in ISO-9001:2000 certified production facilities
 - Manufacturing out of TN, TX, PA, ON and BC
- All HelioJET equipment is sourced and manufactured at Ware's facilities in Louisville, KY and Chattanooga, TN

Pulp & Paper Industry Deposit Control

- Focus on end-user safety, performance and cost effectiveness
 - “Safety” primary design element
 - Cost effective formulations
 - Improve sustainability
- Focused Product Line Expertise
 - Cleaning
 - Contaminants Control
 - Process Additives



Sustainability at Tri-Solve

- Focusing on the sustainable use of all resources in the mill.
- Example – “Tri-Solve Technology”
 - Reduces chemical use
 - *Chemicals cost, and environmental gain*
 - Reduces water use
 - *Water cost and environmental gain*
 - Improves felt performance, reducing moisture level leaving the press
 - *Steam cost and environmental gain*

Solve Chemistries

- Solve Chemicals provides a unique line of custom designed products to work specifically with HelioJET equipment.
- High biodegradability
- Improved health ratings
- Ultra-low aquatic toxicity
- Odor free solvents
- Milder acids and captive alkalinity
- Glucosides versus ethoxylates
 - Temperature stability and activation
 - Health, safety and environmental benefits

Solve Chemistries

- >80% compliant with CleanGredients inventory
- Finalizing several products with Dfe certification
- Will be publishing biodegradability on labels in near future
- Faster rinsing with HT surfactants allow better felt cleanliness and avoid chemical interactions with the sheet on high speed machines

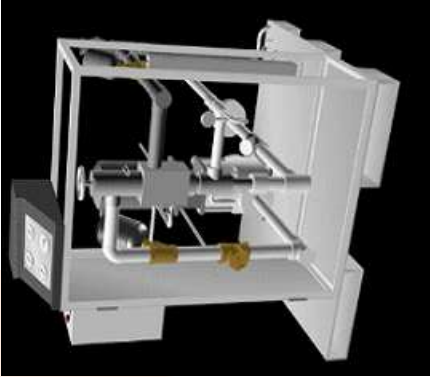
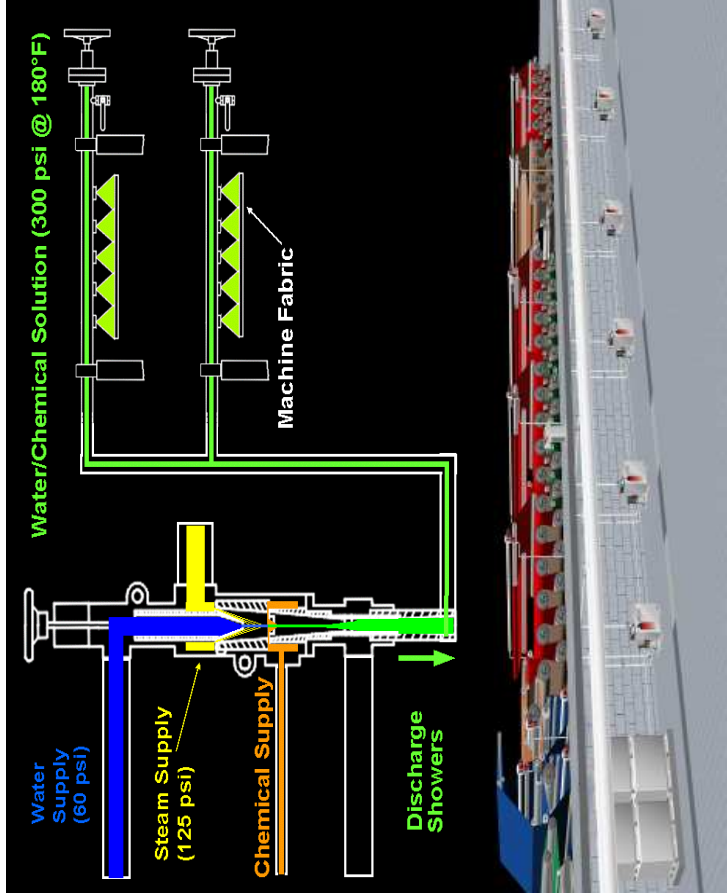
Tri-Solve Unique Benefits

- “No dump boilout” capability
- Less accumulation in “closed” systems
 - Surfactant effects
 - Foam generation
- Minimal impact on system charge (non-ionic)
- Coater cleaning specialists – unique chemistry and equipment

HelioJET Technology Offering

- HelioJET fixed flow unit
 - *PLC or DCS capabilities*
- Showering (all showers have brushes)
 - *Former (motorized)*
 - Oscillating Needed
 - *Press (motorized or manual brushes)*
 - Oscillating Needed or Fan Showers
 - *Dryer (manual brushes)*
 - Fan showers
- HelioJET Central Cleaning systems
- HelioJET Wash Stations
- HelioJET Foaming Stations

HelioJet Technology Offering

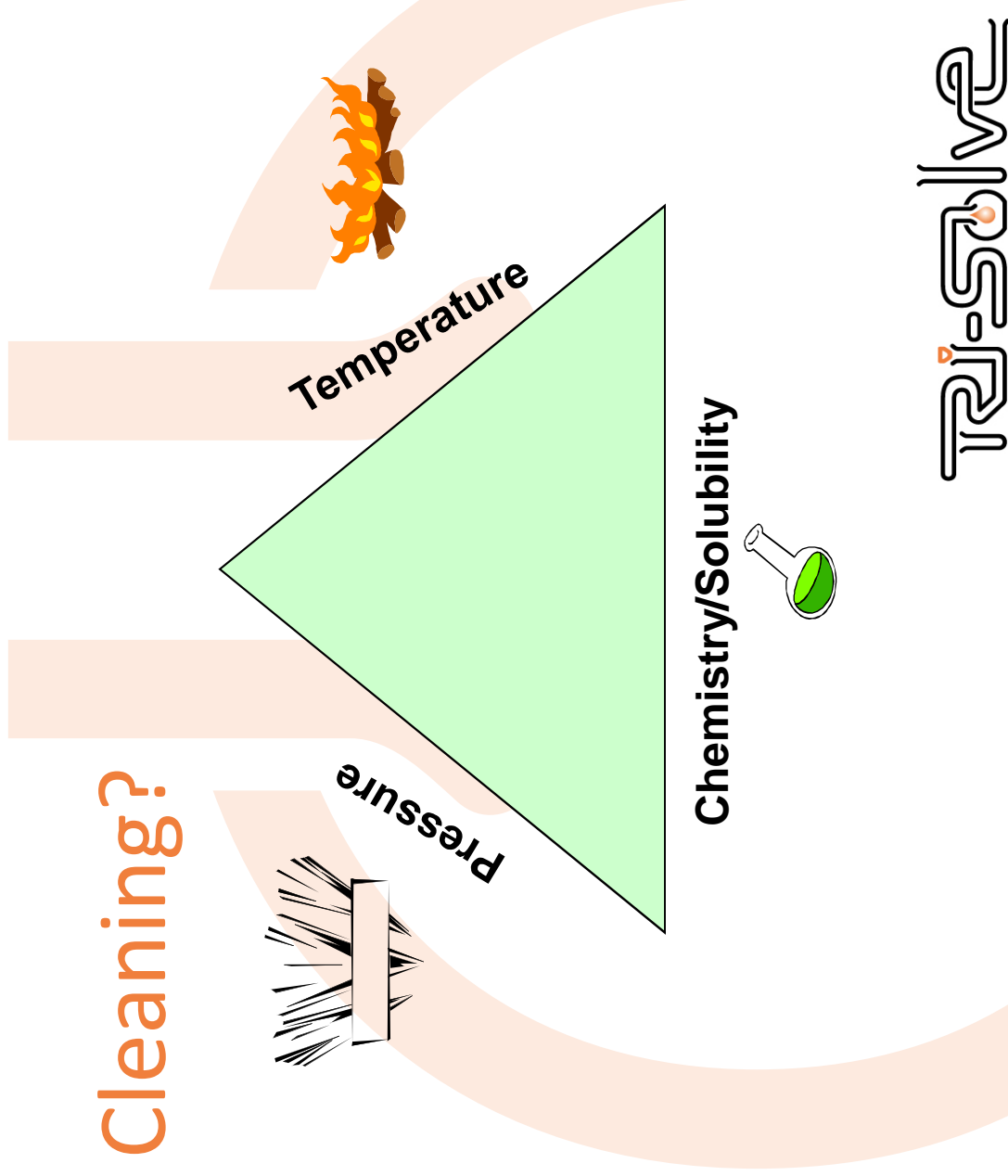


Ware Capabilities

- Expects in Steam since 1952
 - 80 employees
 - Two manufacturing facilities
 - 45 service technicians
- In business for over half a century, WARE has been a long-time industry leader in boilers and chillers, for both rentals, sales and service, and constantly strives to deliver the best boiler and chiller equipment and service available to our customers.
- WARE is committed to understanding your individual hot and cold needs and reducing the costs of operations
- Provides industry leading service, chemical feed systems, boiler chemicals, boiler installation, chiller installation, boiler repair, maintenance.
- WARE also sells top of the line new and remanufactured boilers and boiler equipment from the top boiler manufacturers in the industry.
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What Drives Cleaning?

- Temperature
- Shower Pressure
- Chemical Solubility



RE-SOLVE

Typical Product Offering

- Wire passivation
- Felt Cleaning
- System cleaning
- Boilouts
- Antiscalants
- Heliojet system(s)
- Degreasing/system cleaning
- Roll release
- Dryer Fabric cleaning
- Stickies control
- Biosolvents
- Pitch control
- Antifoam
- pH control
- Microbiological control

Primary Applications

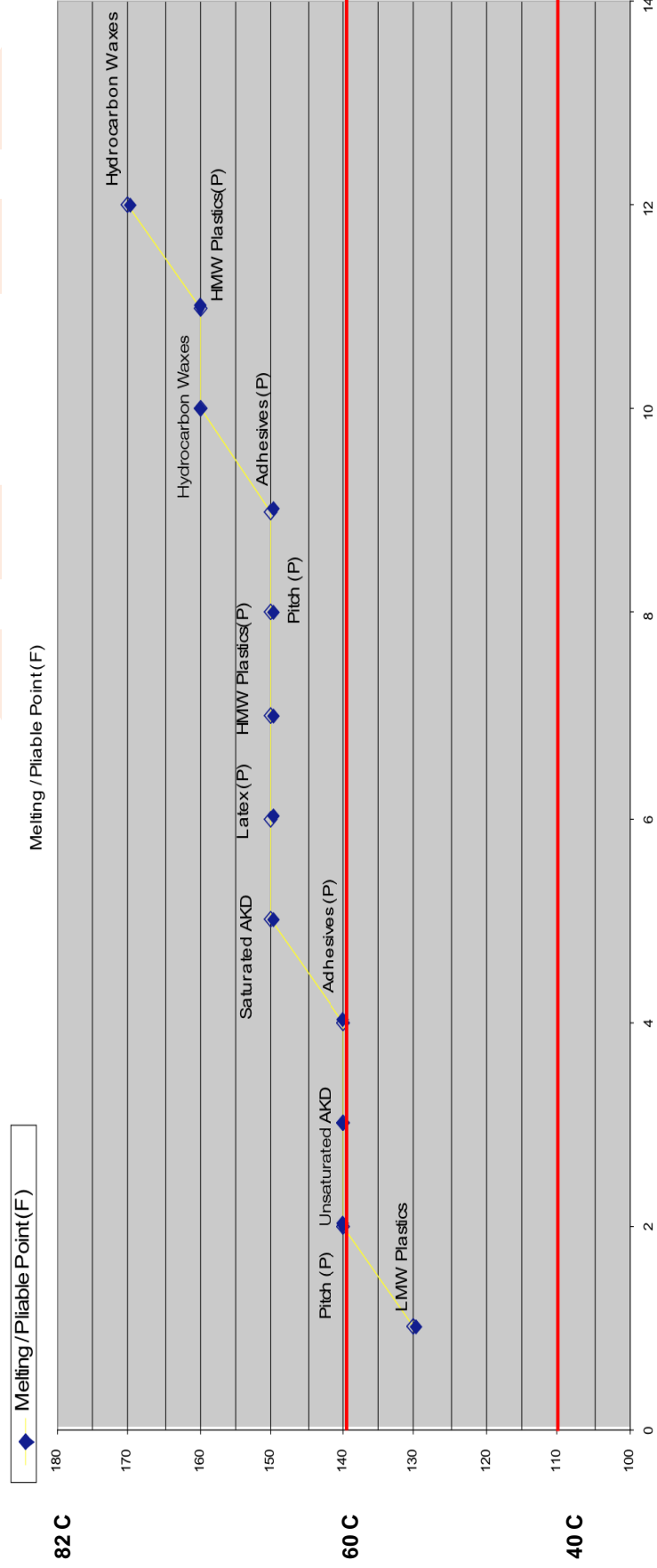
- Machine Clothing Cleaning
 - Forming Fabrics, Press Felts,, Dryer Fabrics
- System Cleaning
 - Coaters and size press
 - Boilouts/Bubble-Ups
 - Surface Cleaning and degreasing

Primary Applications

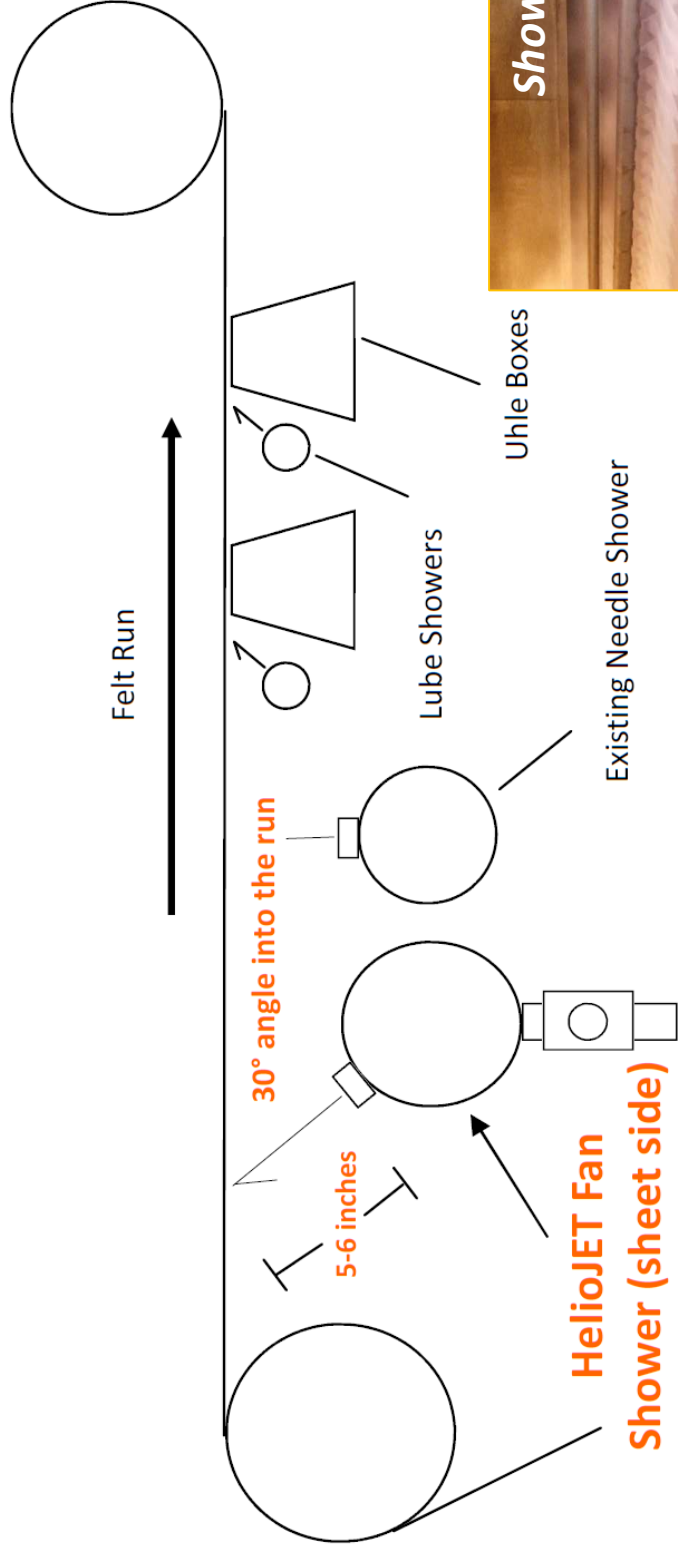
- Pitch and Stickies Contamination Control
 - Roll Treatment
 - Wire Passivation
 - Dispersants and Fixatives
- Process additives
 - Defoamer, pH control, Tissue Yankee chemistries

Contaminates vs. Melting / Pliable Points HelioJET Typical Runs Temp at 170 degrees F

(red lines indicate typical paper machine operating temperature)



Impingement Cleaning – Shower Placement

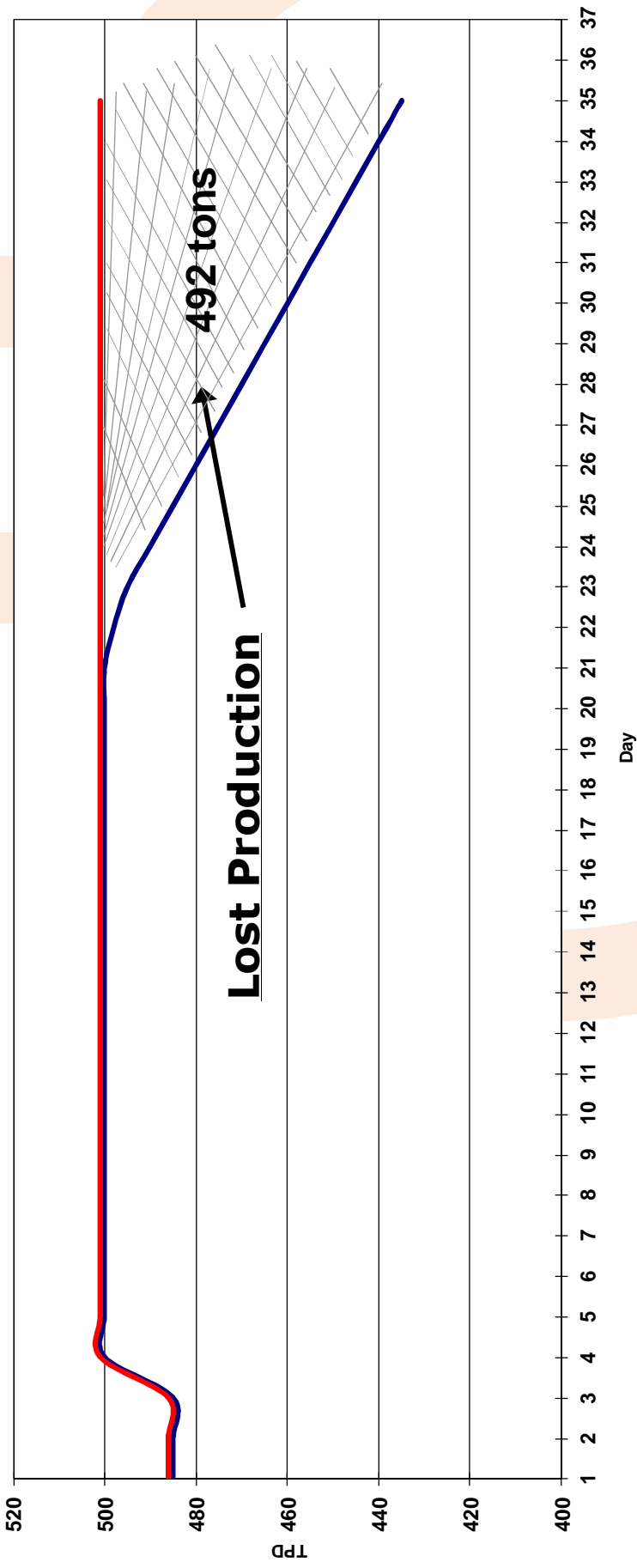


Areas of Opportunity – Mill Objectives

- Improve felt permeability
- Maintain level CD moisture profiles
- Extend felt life
- Increase machine speed
- Maintain maximum production
- Reduce sheet breaks
- Reduce quality rejects
- Minimize or eliminate shutdowns to clean machine clothing
- Increase sheet solids in press section
- Reduce energy/steam consumption in dryers
- Maintain original vacuum levels throughout the life of felts

Maintain maximum production over life of felt

TPD vs. Age of Felt



Newsprint Mill-Dryer Fabric

Back Side

Before



After



TRJ-SOLVE

Cleaning Coater Systems

- Patent pending chemistry approach
 - AlkaSolve E/OxySolve
 - Boilout and foam cleaning
- Chemistry save on all elastomers and substrates at usage conditions
- Unique chemistry limits impact on waste system – no harsh acids or solvents used by other companies
- Solution pH just over 10.0 and peroxide component decomposes after usage to oxygen and water

Canadian, Coated Specialty Paper Mill: Coater Service Tanks



Before Cleaning



After Cleaning

TRJ-Solvent

How are we approaching business

- Performance basis
 - Cost per ton
 - Cost per month
 - Bundled chemical and equipment
- Capital is tight in NA mills
 - Good fit
 - Turns capital into operating expense
 - Sustainability a key selling point

How are we approaching business

- Guaranteed trials
 - 90-180 days no risk
 - Have full ROI spreadsheet to capture pre-trial and trial data
 - Finalizing **Si** application to accompany
 - **Water**
 - **Energy**
 - **Carbon Footprint**
 - **Waste**

