

PAPER MANUFACTURING SOLUTIONS

The Pulp and Paper industry faces several challenges related to data analysis. **1) Production of multiple grades** – filtering data based on the Grade and applying the proper limit for quality parameters (i.e. Basis Weight) and process settings (HPD/T) often requires a custom exports into Excel **2) Data Silos** – Making multiple sources (Historians, LIMS, MES, etc) available for process troubleshooting is time consuming or requires significant duplication of data across systems. **3) Going digital** – Migrating manual systems/reports (downtime reporting, shift reports, log sheets, etc.) to electronic versions is often a choice between multiple systems from multiple vendors or a home-grown solution. dataPARC was designed from Day 1 to solve these and other problems, making it a great solution for the Pulp & Paper industry.

Grade Troubleshooting

PARCview's Run Browser engine smartly determines when a grade or product was produced, and then loads those time periods in Trends or Chart displays. Also retrieved are the correct limits for the grade, including multiple limit types (ex. Process Limits, Reliability Limits, Operating Limits and Safety limits).



PARCview Trend Filtered by Grade

1. Grade Run #1 2. Grade Run #2 3. Grade Run #3

Centerlines

Centerlining is a common methodology in Paper Making and PARCview contains an integrated module that makes implementation of Centerlining easy. PARCview's Centerline display delivers at-a-glance where the process is currently, where it has been historically and where it's supposed to be - the defined reliable operating range (i.e. The Centerline). Color-coding to indicate limit violations provides immediate feedback to operators.

Grade: GH301020		C		GH301020		Group		Select Group		Notes	
Ctrl	Spec	Both	Date:	Now	900	Refresh	Grade	Time/Fvg	More		
Description	Fl	Current	Lower	Target	Upper	Temp Target	GH301020 16-May 08:41	GH301020 03-May 08:18	GH301020 02-May 07:22	G	28
Production											
PM1 Down (Dedown, Temp)		0.9					0.89	0.66	0.92		
Tankroll Roll Speed		2396.71	2047.39	2385.50	2725.54		2365.32	2160.39	2397.41		
Metrics											
Total Cost		100.96	600	650			534.92	530.8	668.26		
Process											
PM SucRollHiVac		15.71	15	16	17		15.77	15.78	15.72		
PM WE SupplyFan		944	930	950	990		964.51	974.96	963.96		
PM FelInHrHeatr		34.55	30	34	38		32.97	34.8	35.43		
PM 140#SupTemp		403.71					404.3	401.33	405.32		
PM Saveall1		94.18					95	95	95.06		
PM Saveall2		53.83					49.07	46.07	50.54		
PM AccptTosaveall		5111.83					5048.12	5083.57	5113.42		
PM SaveallChest		-5					-5	-3.72	-5		
PM TRPofFwdPwr		75					78.77	76.69	76.89		

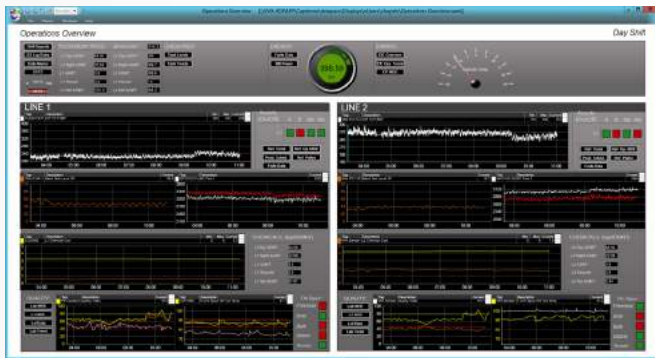
PARCview Centerline Display Filtered by Grade

1. Current Value from Data Sources 2. Grade Based Limits 3. Historical Grade Run Aggregates

MORE FEATURES

Production Loss Tracking (i.e. Downtime)

Analyze lost opportunity events, triggered by process upsets or slowdowns, using actual loss of production to each event. Compare planned down time with slowdowns caused by other factors. Easily build daily, weekly, and monthly reports to calculate lost production and the associated cost.







Production Cost Monitoring

View production cost information in real time and make data-driven decisions. Use MultiTrends to compare individual components with total cost values. Monitor against budgeted values by applying limits to cost tags.

Tank Inventory & Modeling

PARCtips minimizes rate changes and lessen the impact of maintenance interruptions, allowing operators to accurately predict process needs in the most complex production facilities. The model calculates the upstream rate recommendations (Pulp Mill, Recovery, etc.) and monitors intermediate tank levels based on the Paper Machine schedule.

 <p>1 Logical Rules Define Events <i>What rules trigger loss production</i></p>	 <p>2 Visual Event Interactions <i>Prompt users for event annotation</i></p>
 <p>3 Cause Assignment <i>Pick a reason and add comments</i></p>	 <p>4 Root Cause Analysis <i>Pareto charting & production reporting</i></p>

Dashboards

Large amounts of detailed, in-depth data, isn't always necessary. Many users just want the "big picture". dataPARC's built-in graphic designer can be used to create dynamic, highly-informative dashboards that give you an at-a-glance overview of the condition of major process flows and KPIs at your plant.

SPC/SQC

Apply PARCview's SPC/SQC analysis to tags from any data source available to dataPARC. Build control charts (x-bar, range, standard deviation, etc.) from existing sources or PARCview formulas. Define simple min/max limits, choose from Western Electric Rules or custom logic.

Stock Tracking

Improve troubleshooting by time-shifting process data to predict issues before they occur. Easily correlate process issues to conditions that existed in prior stages of the operation. Visualize how equipment will operate as a result of a changes earlier in the process.