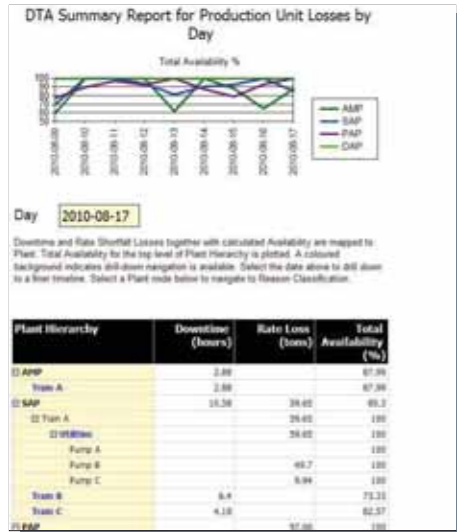


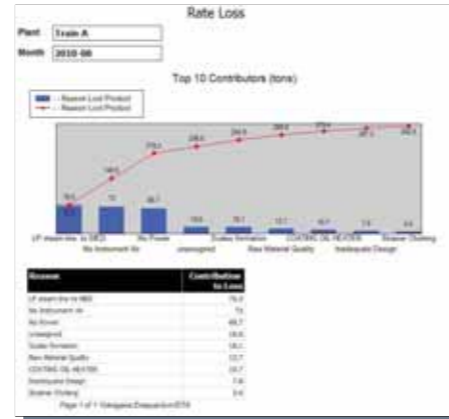
Summary Report



Reasons Classification Report

Reason	Downtime (hours)	Rate Loss (tons)	Production Loss (tons)
01 01M101	15.28	24.62	121.06
02 01M101	0.00	0.00	0.00
03 01M101	0.00	0.00	0.00
04 01M101	0.00	0.00	0.00
05 01M101	0.00	0.00	0.00
06 01M101	0.00	0.00	0.00
07 01M101	0.00	0.00	0.00
08 01M101	0.00	0.00	0.00
09 01M101	0.00	0.00	0.00
10 01M101	0.00	0.00	0.00
11 01M101	0.00	0.00	0.00
12 01M101	0.00	0.00	0.00
13 01M101	0.00	0.00	0.00
14 01M101	0.00	0.00	0.00
15 01M101	0.00	0.00	0.00
16 01M101	0.00	0.00	0.00
17 01M101	0.00	0.00	0.00
18 01M101	0.00	0.00	0.00
19 01M101	0.00	0.00	0.00
20 01M101	0.00	0.00	0.00
21 01M101	0.00	0.00	0.00
22 01M101	0.00	0.00	0.00
23 01M101	0.00	0.00	0.00
24 01M101	0.00	0.00	0.00
25 01M101	0.00	0.00	0.00
26 01M101	0.00	0.00	0.00
27 01M101	0.00	0.00	0.00
28 01M101	0.00	0.00	0.00
29 01M101	0.00	0.00	0.00
30 01M101	0.00	0.00	0.00
31 01M101	0.00	0.00	0.00
32 01M101	0.00	0.00	0.00
33 01M101	0.00	0.00	0.00
34 01M101	0.00	0.00	0.00
35 01M101	0.00	0.00	0.00
36 01M101	0.00	0.00	0.00
37 01M101	0.00	0.00	0.00
38 01M101	0.00	0.00	0.00
39 01M101	0.00	0.00	0.00
40 01M101	0.00	0.00	0.00
41 01M101	0.00	0.00	0.00
42 01M101	0.00	0.00	0.00
43 01M101	0.00	0.00	0.00
44 01M101	0.00	0.00	0.00
45 01M101	0.00	0.00	0.00
46 01M101	0.00	0.00	0.00
47 01M101	0.00	0.00	0.00
48 01M101	0.00	0.00	0.00
49 01M101	0.00	0.00	0.00
50 01M101	0.00	0.00	0.00
51 01M101	0.00	0.00	0.00
52 01M101	0.00	0.00	0.00
53 01M101	0.00	0.00	0.00
54 01M101	0.00	0.00	0.00
55 01M101	0.00	0.00	0.00
56 01M101	0.00	0.00	0.00
57 01M101	0.00	0.00	0.00
58 01M101	0.00	0.00	0.00
59 01M101	0.00	0.00	0.00
60 01M101	0.00	0.00	0.00
61 01M101	0.00	0.00	0.00
62 01M101	0.00	0.00	0.00
63 01M101	0.00	0.00	0.00
64 01M101	0.00	0.00	0.00
65 01M101	0.00	0.00	0.00
66 01M101	0.00	0.00	0.00
67 01M101	0.00	0.00	0.00
68 01M101	0.00	0.00	0.00
69 01M101	0.00	0.00	0.00
70 01M101	0.00	0.00	0.00
71 01M101	0.00	0.00	0.00
72 01M101	0.00	0.00	0.00
73 01M101	0.00	0.00	0.00
74 01M101	0.00	0.00	0.00
75 01M101	0.00	0.00	0.00
76 01M101	0.00	0.00	0.00
77 01M101	0.00	0.00	0.00
78 01M101	0.00	0.00	0.00
79 01M101	0.00	0.00	0.00
80 01M101	0.00	0.00	0.00
81 01M101	0.00	0.00	0.00
82 01M101	0.00	0.00	0.00
83 01M101	0.00	0.00	0.00
84 01M101	0.00	0.00	0.00
85 01M101	0.00	0.00	0.00
86 01M101	0.00	0.00	0.00
87 01M101	0.00	0.00	0.00
88 01M101	0.00	0.00	0.00
89 01M101	0.00	0.00	0.00
90 01M101	0.00	0.00	0.00
91 01M101	0.00	0.00	0.00
92 01M101	0.00	0.00	0.00
93 01M101	0.00	0.00	0.00
94 01M101	0.00	0.00	0.00
95 01M101	0.00	0.00	0.00
96 01M101	0.00	0.00	0.00
97 01M101	0.00	0.00	0.00
98 01M101	0.00	0.00	0.00
99 01M101	0.00	0.00	0.00
100 01M101	0.00	0.00	0.00

Rate Loss Ranking Report



VigilantPlant excels at bringing out the best in your plant and your people - keeping them fully aware, well informed and ready to face the next challenge.

SEE CLEARLY **KNOW IN ADVANCE** **ACT WITH AGILITY**

VigilantPlant is Yokogawa's automation concept for safe, reliable and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed and ready to take actions that optimize plant and business performance.

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Represented by:



Exaquantum/DTA
Down Time Analysis

Maximizing Production Availability

“Exaquantum/DTA is an important analysis tool which helps you identify lost production capacity.”

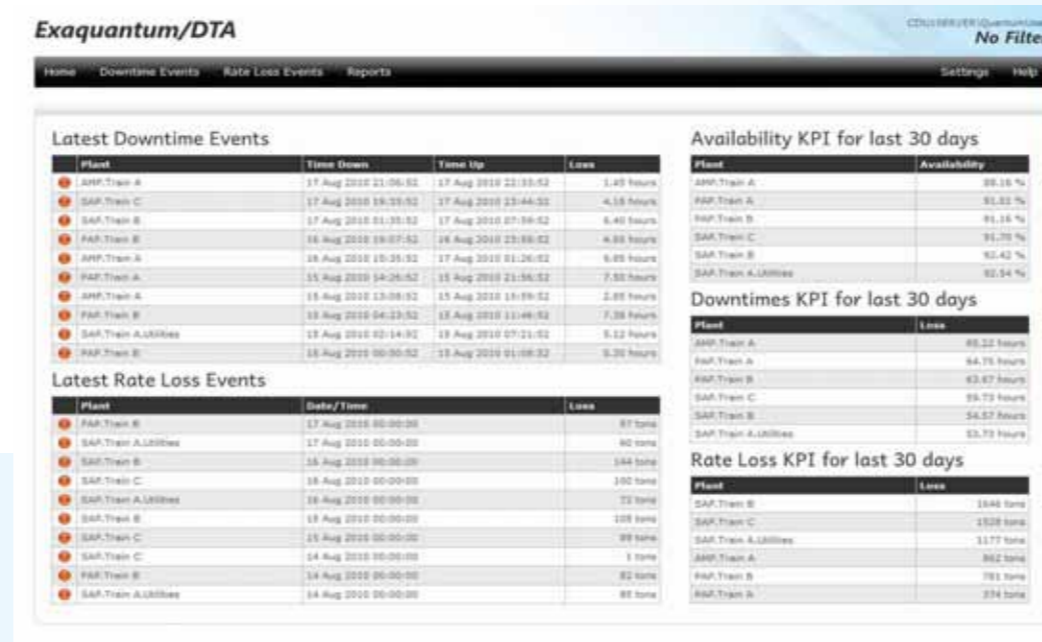


Introduction

Unplanned stoppages and slowdowns can have an enormous impact on the productivity and profitability of Production plants.

Exaquantum/DTA enables you to identify and quantify this lost production capacity by providing easy to understand and comprehensive KPIs which show the causes, duration and timing of such losses. With this information the true impact of production interruptions can be determined and corrected improving ROI, availability and utilization of critical production assets.

By utilizing automated processes to capture all production stoppages and slowdowns, Exaquantum/DTA provides a record of lost production. Operators can add valuable additional information which complements information gathered automatically. This provides a holistic view of all relevant information which is key to diagnosing underlying issues and providing effective solutions.



Overview Screen

Production Slowdowns

Exaquantum/DTA is designed specifically for the process industry and therefore includes the ability to measure 'Rate Losses' – identifying discrepancies between target and production. These 'hidden' losses are often overlooked or difficult to see in other applications but can have an enormous impact on the overall plant productivity.



Lost Time for each Reason per Plant Report

Downtime Assigned Reasons Screen



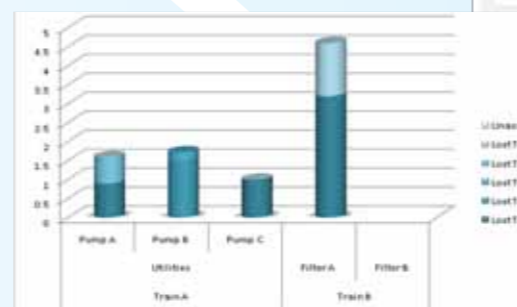
Reports

Exaquantum/DTA provides reports covering:

- * Summary Report
- * Reason Calculation
- * Downtime Ranking
- * Rate Loss Ranking

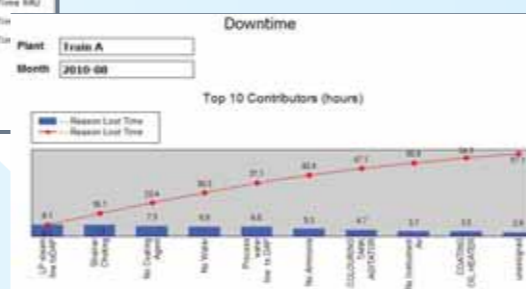
Users can view reports by month, quarter, year, day, week and day of week.

Custom reports can also be created via Excel or SQL. Both these and standard reports can be scheduled for emailing to users.



Downtime Ranking Report

Lost Time per Plant Report



Functionality

DTA provides KPIs for lost production over a chosen time period and also the latest Downtime and Rate Loss events. This enables comparisons to be made between different production lines and shifts on the same production line over a chosen time period.

Lost production can be measured either as Downtime (on a time basis) or as Rate Loss (measured by production quantity lost). Downtime information can be translated into Rate Loss (and visa versa) based on assigned plant and unit capacities.

DTA enables staff to add reasons for each event, adding valuable understanding to the underlying reasons for lost production. Losses can also be attributed to multiple reasons, dividing the total loss by assigned percentages. Downtime will still appear in reports even if a reason has not been entered. Downtime Losses are automatically collected and registered on a per-Plant basis while Rate Loss is calculated and registered on a daily basis, per Plant item.

Benefits of Exaquantum/DTA

DTA provides benefits for Production Operations and the Enterprise.

Operational Benefits

- Increase productivity by comparing production lines and shifts by sharing best practices
- Identify common equipment failures
- Reduce unplanned stoppages and production slowdowns
- Compare existing and past production performance

Business Benefits

- Increased production and asset utilization
- Improved planning and scheduling
- Reduced delivery times to customers
- A culture of continuous improvement based upon an effective and formalized Downtime Analysis and Reporting System