# Monitor Your Machinery Health 24/7 Right from a Web Browser







# Explore the Capabilities

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We have two production facilities with very distinct setups, and the WATCHMAN Reliability Portal works great for both. Each production team can see specifics to their plant, while corporate gets access to the details they need from both.

- Matt Jenkins, Operations Manager

# View the Health of Your Entire Plant

WATCHMAN Reliability Portal<sup>™</sup> provides a secure, web-based, dynamic dashboard for plant managers and key executives to access machine health throughout an enterprise. This robust communications center—fully accessible via a web browser—provides business and mechanical metrics through a selection of simple graphics called Elements. Each user can customize their menu of Elements to meet their needs.

- Access real-time information—for a single machine, an area, a plant, or the entire enterprise
- Retrieve broad, enterprise-wide statistical overviews or drill down to detailed readouts
- Follow changes in machine health
- Track diagnostic histories

- Assess risk exposure to production
- Check condition reports at any time
- Be proactive with your program and in planning your maintenance activities

Discover how the WATCHMAN Reliability Portal, a key component of WATCHMAN Solutions<sup>™</sup>, can help you manage your predictive maintenance program.



## Access All Your Information via the Web....Right Now

### Logging in is as simple as 1-2-3:





WATCHMAN Reliability Portal uses SSL encryption to maintain data security. It is optimized for Microsoft® Internet Explorer®.

### See Exactly What You Want to See

Customize your dashboard with the information most important to you.



## Get the Big Picture, See the Details

|  |          | Velcome,<br>Vou are cannected to TestInsPower in (GMT-05:00) Easte | end Points Utilitie<br>ern Time (US & Canada) | s Help Print Scree   |  | Welcome,<br>You are connecto   | ed to Testin   | tPower in (                  | (GMT-05:00)   | ) Easterr  | n Time (US 8   | & Canada)  |   |   |
|--|----------|--|---|--|--|--|--|------------------------------|---|--|--|--|---|---|
| Dashboard 1 Dashboard 2<br>ulck Views  | · ×      | Machine Status - Manual  | ^ X   | Customize Dashboard A  | Select the Plant:<br>the Backgrone<br>the Carbondya<br>the Carbon<br>the Carbon<br>the Carbon<br>the Carbon<br>the Carbon<br>the Carbon<br>the Carbon<br>the Carbon<br>the Carbondya<br>the Carbond | Program View     View Analy     Sort Alphabetical  | - Analyst<br>st Review                               | t Reviewe                    | ed Result :<br>Status   | Status   | O View C   | Current Ma   | chine St  | atus  |
| VMatch List  | 9<br>(1) | Never Tested   | Total Machines: 285                           | Seventy Frend - Manual -   | A Milard<br>Mile Page<br>Milard<br>Transp Short<br>Marting Rest 2  | Plant Name<br>West Coast<br>Milford<br>Diackstone<br>Chriago<br>CDCSA<br>Northeast<br>Memphis<br>Milford | Extreme<br>0<br>1<br>0<br>1<br>0<br>0<br>0<br>0<br>0 | Serious 16 6 1 2 1 1 1 0 0 0 | Moderate<br>1<br>6<br>0<br>1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | Slight 0 3 0 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | No Faults<br>Detected<br>6<br>11<br>83<br>19<br>0<br>0<br>2<br>0<br>0<br>0 | Never<br>Tested<br>48<br>3<br>13<br>2<br>0<br>1<br>1<br>3<br>30<br>4 | Needs<br>Review<br>0<br>1<br>5<br>5<br>0<br>3<br>5<br>0<br>0<br>0 | Total<br>Machines<br>71<br>30<br>103<br>30<br>2<br>5<br>13<br>30<br>4 |
| Status: 2517/012 90:55 PH Date: 2/17/2012 90:55 PH Att0-2 Train-4/17 100:955 AH 6:29 mithdige Pla Status: 2010/01/01 Date: 2/17/2013 7/17 PM | 61       | Mechine Sasura Online  | Total Machine: 7                              | 140<br>120<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>10 | Recent Reports Database<br>Machines in Database by Severity<br>Event Tracker in Database   | Bakersfield  | 0  | 0                            | 0   | 0  | 0  |  | 0   | 4   |

Dashboard View provides a quick graphical overview.

Switch views easily—from a program summary to a list of troubled machines to the latest WATCHMAN analyst reports.

Program View shows detailed plant status.

Dive deeper into equipment health through clear, simple hyperlink navigation.

View Analyst Reports and other diagnostic results with one click.

# Watch for Trouble Spots

### Build a Watch List of the machines you are most interested in - or worried about.

Add machines as they develop faults or keep a running list of your most critical assets.

Click + to add or – to remove a machine on your Watch List.

Trust the Watch List to stay current with status changes.



**Note:** A machine's presence on the Watch List does not affect the machine, the diagnostics, or other areas of the database.

## Download a Report, Pass It On

### Analyze historical trends at any time.

Get immediate access to expert automated diagnostic results for data processed in the field and uploaded to the WATCHMAN Portal.

|   |  |   |   | ¢ Reader  |  | c Reader  |
|---|--|---|---|---|--|---|
|   | Wave Preferences Welcome, You are connected to AUP Destilities | Create Custom Report User-Catined Points Unite  | net Heip Pro                                  | e Serven 👘 🗆 Log Dut  |  | View Preferences Create Custom Report User Defined Points Utilities Help Print Screen<br>Welcome,<br>You are connected to TestimsPower in (GMT-05-00) Exstern Time (US & Canada)  |
| Solicit the Plant:<br>해 Plant 1<br>해 Plant 2<br>편 Plant 3 - East<br>편 Plant 3 - West          | Recent Reports (Last 20)     View All Reports     Point Name   | Report Description  | Filter Dy : All Types                         | Plant/Area/Machine/   | Plants Areas     Select the Machine:     Areas             | Plant: Cambridge - Area: AHUs<br>AHU-2 Trains-4/5 ID#95-AH-029  |
| 에 Prane 3 West - ONCINE<br>에 Plane 4<br>에 Plane 5<br>에 Plane 5<br>에 Plane 6                   | 🖬 new machine point  | RadicalEquations.pdf<br>Plant 2 Eugene Vibration Report December 2014                                       | 12/29/2014 5:58:14 AM<br>12/9/2014 4:10:26 AM | Plant 3 East<br>Machine: 110 Main Air Compressor<br>Plant 2<br>Area: Eucone       | AHU-7 Trains 1/2 ID=95-AH-068     AHU-8 Trains 3 ID=95-AH-064     AHU-8 Train 3 ID=95-AH-064     FR-3000 S/N F375875   | Expert System Results ② Data Acquired: 3/3/2015 7:17 PM     The Spert System Results ③ Data a "EXTREME" fault that is awaiting review by an analyst.     Proceedings of Detail  |
| 에 Parts<br>에 Plant 8  | Li Vibration Reports   | Plant 3 West West Covina Vitration Report December 2014<br>Plant 4 Smithwite Vibration Report December 2014 | 12/9/2014 3:49:35 AM<br>12/9/2014 3:29:14 AM  | Plant 3 – West<br>Area: West Covina<br>Plant 3 West – CNLINE<br>Area: West Covina |  | Source         Spectra Graphs           Sclerk a         Var/015 7:12:55   Expert System Results Only      (Get Results)  |
|   | hi vibration Reports   | Plant 4 Reading Vibration Report December 2014  | 12/8/2014 7:55:01 AM<br>12/8/2014 7:20:27 AM  | Plant 4<br>Area: Smithville<br>Plant 4<br>Area: Reading                           |  | Income Artis 111         Intervention           Chites when the intervention         mochtron of possible coupling wear or loogeness           Intron rotational, Rate intervention         #Intron Rotation of possible coupling wear or loogeness           Intro Rotational, Rate intervention         #Intron Rotational, Rate intervention           Into Rotational, Rate intervention         #Intron Rotational, Rate intervention           Into Rotational, Rate intervention         #Intron Rotational, Rate intervention |
| Reports   | Li vibration Reports   | Plant 5 Illinois Vibration Report December 2014   | 12/8/2014 1:25:50 AM                          | Plant 6<br>Machine: Pump#2<br>Plant 5   | Reports Recent Reports in Area   | MOTOR FREE END BALL BEARING CONCOLO 4 FAN FREE END BEARING VERAR<br>MOTOR FREE END BALL LOSSENESS 4 MOTOR RIVER END SAFT LOSSENESS<br>4 MOTOR RAVE END ROTOR LOSSENESS 4 FAN FREE END ROTOR LOSSENESS<br>4 FAN FREE END WHELL LOSSENESS 4 FAN FREE END BART LOSSENESS<br>4 FAN FREE END WHET LOSSENESS 4 FAN FREE END BART LOSSENESS<br>4 FAN FREE END WHET LOSSENESS 4 FAN FREE END BART LOSSENESS<br>4 FAN FREE END BART DOSENESS 4 FAN FREE END BART LOSSENESS<br>4 FAN FREE END BART DOSENESS                                     |
| Recent Reports In Database     Machines in Database by Severity     Event Tracker in Database | Vibration Reports  | Plant 9 Vibration Report December 2014  | 12/4/2014 10:27:54 AM                         | Area: Chicago 1<br>Plant 8<br>Machine: 223 Main Air Compressor                    | <ul> <li>Machines in Area by Severity</li> <li>Analyst Review Required in Area</li> <li>Overdue Machines in Area</li> <li>Event Tracker for Machine</li> </ul> |   |
|   | hi vibration Reports   | Plant 10 Vibration Report December 2014   | 12/4/2014 10:10:56 AM                         | Plant 9<br>Machine: 224 Main Air Compressor                                       |  |   |

Review recommended actions and analytical comments by certified Azima DLI analysts in the Analysts-Reviewed Reports.

Retrieve a static graphical display of the latest collected data simply by clicking **Spectra Graphs**.

### Track Maintenance Progress Automatically

### Automatically track events when problems are discovered.

Update information at any time, dismiss faults or events, automatically close events when faults are cleared—all without changing the diagnostic report.

Improve visibility into your condition-based maintenance program with Event Tracker. Involve the right people to track work orders, financial impacts, and root cause findings.

| Event Tracke   | er                 |                  |                    |                 |                                      | Filter   | Ry : Pendi        | ng   | ~  |                    |                       | 0  |
|----------------|--------------------|------------------|--------------------|-----------------|--------------------------------------|--|-------------------|--|--|--------------------|-----------------------|--|
| Export To CSV  |                    |                  |                    |                 |                                      |  |                   |  |  |                    |                       |  |
|                | Latest<br>Priority | Latest<br>Date ▼ | Insert<br>Priority | Insert Date     | Machine Name                         | Recommended Actions                              | Work<br>Order No. | WO Status  | Status Date  | Days<br>WO<br>Open | Findings<br>Confirmed |  |
| Edit<br>Reject |                    | 26-Mar-<br>2015  |                    | 26-Mar-<br>2015 | Sinewave Generator                   | Test Tracker                                     | 12345             | Work Order<br>Completed  | 26-Mar-<br>2015  | 0                  |                       |  |
| Edit<br>Reject |                    | 13-Mar-<br>2015  |                    | 13-Mar-<br>2015 | Sinewave Generator                   | Overhaul Motor.                                  | 12345             | Work Order<br>Assigned   | 18-Mar-<br>2015  | 12                 |                       |  |
| Edit<br>Reject |                    | 08-Nov-<br>2014  |                    | 04-Sep-<br>2015 | Looseness in locknut                 | Check/Adjust Bearing<br>Clearance                |                   | Work Order<br>Completed  | 07-Nov-<br>2014  | U                  | Yes                   |  |
| Edit<br>Reject |                    | 08-Nov-<br>2014  |                    | 04-Sep-<br>2015 | Looseness in locknut                 | Collect Fft With Peakvue                         |                   | Work Order<br>Completed  | 07-Nov-<br>2014  | 0                  | Yes                   |  |
| Edit<br>Reject |                    | 08-Nov-<br>2014  |                    | 04-Sep-<br>2015 | Looseness in locknut                 | Open And Inspect                                 |                   | Work Order<br>Completed  | 11-Mar-<br>2015  | 0                  | Yes                   |  |
| Edit<br>Reject |                    | 06-Nov-<br>2014  |                    | 06-Nov-<br>2014 | Test Machine 1                       | Replace Motor Free End<br>Bearing                |                   | Op   | 05-Nov-  |                    |                       | View Preferences Create Custom Report User Defined Paints Utilities Help Print Screen Log Out  |
| Edit           |                    | 06-Sep-<br>2014  |                    | 06-Sep-<br>2014 | CBCSA Rig                            | Replace Motor Bearings                           |                   | Op   | WAT  | сн                 | MAN F                 | Reliability Portal"  |
| Reject         |                    | 06-Sep-<br>2014  |                    | 06-Sep-<br>2014 | CBCSA Rig                            | Replace Gearbox Ball<br>Bearings                 |                   | Op   |  |                    |                       | POWERED BY AZMA OLI Welcome, lalikpalat<br>You are connected to TestintPower in (GMT-05:00) Eastern Time (US & Canada)   |
| Reject         |                    | 02-Oct-<br>2014  |                    | 02-Oct-<br>2014 | ST-2000 - TG Stm<br>Turbine TG Motor | Replace Motor Bearings                           |                   | Op Select the Pl   | ant:   |                    |                       | Plant: Testing Plant 0<br>Area: Testing Area   |
| Edit           | <mark>⊆</mark> ł   | 24-Sep-<br>2014  | <b>H</b>           | 24-Sep-<br>2015 | ST-1000 2 - ST<br>Hydraulic Pump 2   | Check Motor Mounting<br>And Foundation Integrity | Test123           |  |  |                    |                       | Machine: Sinewave Generator First Reported: Latest Priority:   |
|                |                    |                  |                    |                 | <u>« First</u> 1 2 3                 | 4 5 Last≥  |                   | Reports Report | el<br>el 2<br>Reports in Datab<br>es in Database b<br>racker in Databa | base<br>y Severity |                       | First Reporters       Latest Priority:         Edit Event       Attached Files         Work Order Status:       26-Mar-2015         Work Order Number:       12345         Findings Confirmed:       Yes         Event Description:       Spectrum Overload (Ski Slope)         Recommended Actions:       Recommended Actions:         Remove       Test Tracker         Additional Findings: |

### **Choose Your Own Preferences**

Each user can manage their own password, contact information, preferred views, home page options, and how they get notified of events in their plant, and set their severity threshold for alerts.

Click **User Configuration** to edit your name, phone number, email address, and password. Configure the Reminder Service to create notifications when reports are due or new data has arrived.

Select your alert thresholds in **User Preferences**, and only get a notification when a diagnostic result changes to a certain severity.

Allow managers of enterprise programs to edit the permissions of all WATCHMAN Reliability Portal users.

Customize the severity trend graph in the machinery diagnostic Program View with start and end dates.

|                        | View                       | Preferences            | Create Custom Report      | User-Defined Points     | Utilities   |
|------------------------|----------------------------|------------------------|---------------------------|-------------------------|-------------|
|                        | <b>Welcom</b><br>You are c | e,<br>onnected to Test | IntPower in (GMT-05:00) E | astern Time (US & Canac | la)         |
| 100                    | User Pre                   | ferences               |                           |                         |             |
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| -                      |                            |                        |                           | 0                       | Add         |
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| Jser Configuration     | Email N                    | Notifications          | and the fill can a share  |                         |             |
| Reminder Configuration | Online (                   | Dnly                   |                           | Other                   |             |
| User Preferences       | ۰                          | No Email Notificatio   | ns                        | Analyst Report          |             |
|                        | O E                        | BLUE - Slight or gre   | ater                      | Attach Report [         |             |
|                        | 0 1                        | YELLOW - Moderate      | or greater                |                         |             |
|                        | 0 0                        | ORANGE - Serious o     | r greater                 |                         |             |
|                        | F                          | RED - Extreme          |                           |                         |             |
|                        | Default                    | Settings:              |                           |                         |             |
|                        | Home P                     | age Option             | Dashboard Page            | O Program View Page     | 201         |
|                        | Time Zo                    | me (G                  | MT-05:00) Eastern Time (U | S & Canada)             | ~           |
|                        | Langua                     | ne Fr                  | nglish-US                 | •                       |             |

### **Explore More Features**

Several more Elements can be added to your dashboard depending on the information that is most relevant to your program. With all this data, you can get a snapshot of the high-level statistics to make informed decisions for your PdM program. Just drag and drop them to fit your desired layout.

#### **Data Collection Compliance**

Check how many machines are on schedule or overdue for data collection across your program by given time periods.

#### Machine Status for Manual and Online Collection

Each element includes a summary of the total collected data with a colorcoded pie chart showing how many machines are in each state of health. The dashboard can present manual and/or online data collection depending on your program. Easily generate a report showing all the monitored machines in the plant in order of health status, with the most severe appearing first.

#### Severity Trends for Manual and Online Collection

Track machine faults by plant or area, and by severity over time. They are presented in two groups: *Moderate, Serious, and Extreme* and *Slight and No Fault* conditions for both manual and online data collection.

#### **Compound Risk Index (CRI)**

The Compound Risk Index displays the amount of operational risk to production associated with the continued operation of a specific set of machines in a plant or area. View the risk level based on how critical each machine is to production and the severity of detected fault(s).

#### **Derived Machinery Readiness (DMR)**

See a summary of the overall readiness of the machines in a plant or area. Readiness is represented by a percentage—the higher the percentage the more ready the fleet. The DMR rating takes into account the number of faults reported for each machine, the severity of those faults, and the importance of each machine to production.

#### **Open Event Ratio**

*Open events* are recommendations that have been identified by an analyst within the last 365 days and have a status of "Open" in the Event Tracker. This Element displays the ratio of open-event faults to active machines. A low number is indicative of high-quality machine repair practices, consistent data collection techniques, and rapid resolution of identified issues.

#### **Proactive Response Index**

This index shows the completion rate of analyst-recommended actions within 60 days of reporting, sorted by level of urgency. The score is affected by fixing machine problems and retesting after repair—the sconer the actions are taken, the higher the score.

### The following elements are specific to the Event Tracker feature in ExpertALERT<sup>™</sup>

#### **Event Tracker Summary**

This provides a snapshot view of the number of repair recommendations, sorted by level of urgency (mandatory, important, desirable). This information is generated by analyst reports.

#### Average Time to Repair

This chart shows the average time it took to repair a fault based on the initial date of reporting and latest priority stored in the Event Tracker.

#### Percent Root Cause Evaluations

By seeing the root cause that occurs the most frequently, you can identify maintenance issues such as improper lubrication or temperature problems, among others.

#### **Top Five Root Causes**

The most frequently reported root causes of faults across your program are presented on a quarterly and annual basis.

- Azima DLI Warranty Terms and Conditions can be found on our website: www.AzimaDLI.com/warranty
- Contact Azima DLI Customer Support:
  - » Hours: 8:00 am 7:00 pm EST
  - » support@AzimaDLI.com

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- » 800-654-2844 (toll free)
- » +1206-842-7656 (international)
- Context Specific Help can be found by clicking on the question mark icon found on each page of the WATCHMAN Reliability Portal. You can also find help content in the "Help" menu at the top of each page.
- Version information can be found at Help/About Reliability Portal.

