Structural Integrity Associates, Inc.®

ASSET INTEGRITY MANAGEMENT

PLANTTRACK ASSET INFORMATION MANAGEMENT

PlantTrack™ Engineering Insight Through Data

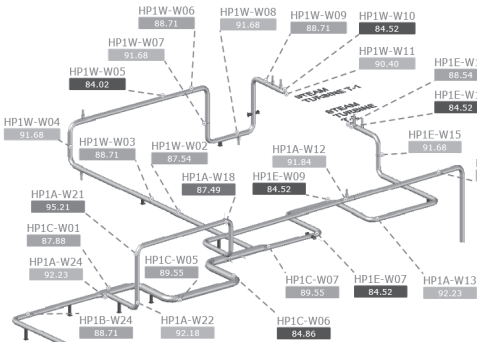
AN INTEGRATED DATA MANAGEMENT SOLUTION

Maximizing unit reliability while minimizing risk is the goal of an asset management plan. Structural Integrity (SI) has developed the industry leading program and methodology to achieve these goals. At the core of the date driven program is PlantTrack™ - a tool capable of data mining and analysis - transforming information into knowledge and insight. Through PlantTrack you can proactively manage your plant operations, inspections, maintenance and, most importantly, its reliability. An essential part of any useful program is a system that will warehouse the associated data. However, simply storing the data is not sufficient. The data management system must be capable of mining and analyzing the data to transform it into information which can be used to make informed and effective decisions. Through intuitive interaction with this information, knowledge is developed that helps you to proactively manage your plant.

PlantTrack is a web-based system with modules for offline data management and online damage tracking of key power plant equipment (e.g., boiler, HRSG, header, piping, etc.). The offline modules facilitate management of component history and inspection data and provide tools to transform this data into knowledge for future decision making. The online apps are an integral part of the SIIQ™ monitoring solution and calculates accumulated damage or life expended in real-time – allowing operators, engineers, or managers to track key damage mechanisms as the plant operates through start-ups, transients, and steady state operation.

BENEFITS OF PLANTTRACK

- Easy, web-based access from different operating systems and platforms
- Central location for plant data and asset management
- Flexible graphics with data overlays to aid in visualization
- Ability to utilize standard and custom reports and charts
- Powerful database with advanced sorting, filtering, and data mining
- Online tracking of component damage based on actual plant operation
- Automated, user-defined, notifications



Sample piping system with risk scores (0-100) from SI's Vindex prioritization approach

FLEXIBLE GRAPHICS OPTIONS

- CAD isometric or orthogonal view drawings
- Scanned in isometric drawings

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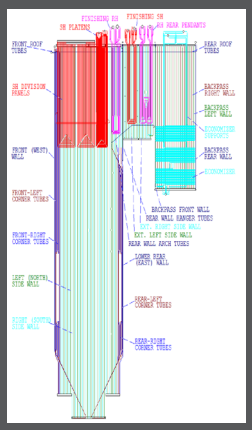
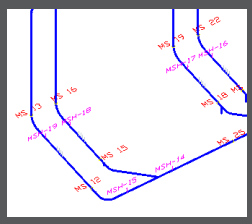
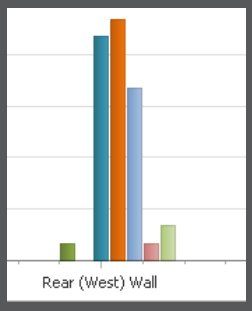






PLANTTRACK - A MODULAR, SCALABLE PLATFORM

BOILER MODULE

The **PlantTrack** boiler module provides users with a simple user-interface to record tube leaks, header cracks, repairs, and inspection data, and map that data to interactive plant-specific drawings.

PIPING MODULE

The **PlantTrack** piping module provides users with a web application and database to track not only the data collected such as weld inspections and hanger walkdowns, but the future actions to be taken.

BALANCE OF PLANT MODULE

The **PlantTrack** balance of plant module allows users to manage the information, data, and knowledge for heavily engineered equipment such as turbines, pressure vessels, and environmental equipment.

SIIQ ON-LINE HEALTH MONITORING

SIIQ uses the PlantTrack Lifecycle Management software along with SI's proprietary sensors, transmitters, and wireless network to provide a suite of real-time damage tracking applications for common plant components: piping, headers, tubing, attemperators, etc. It is modular in nature, enabling a complete system from SI or integrated with various other hardware & software applications.

DATABASE TO GRAPHICS

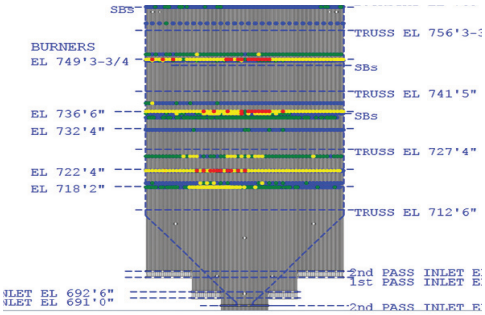
PlantTrack drawings/images are interactive, and displayed records can be color-coded based on any record field.

Examples for HEP/Piping applications:

- Weld/hanger inspection findings
- Risk scores from prioritization
- Stress calculation results
- Asbestos insulation locations
- Hardness measurements
- Scheduled inspection locations, etc.

For boiler/HRSG applications:

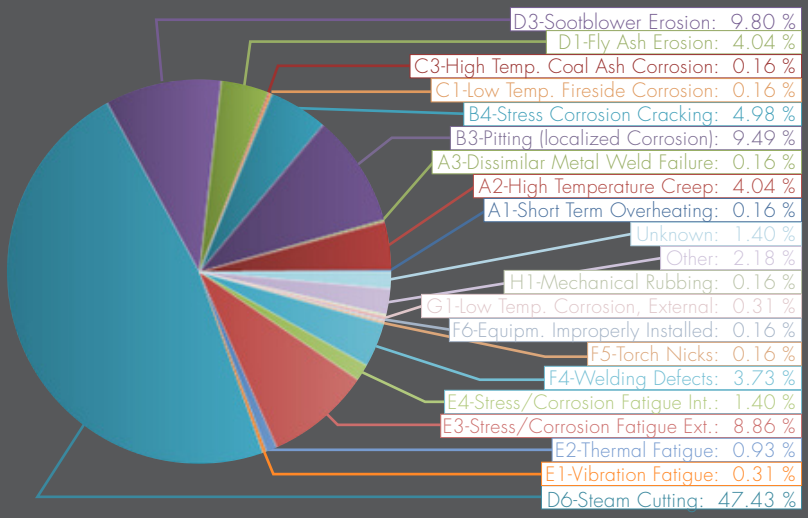
- Tube failures color-coded based on failure mechanism
- Tube repair methods
- Tube materials (material type, outside diameter, wall thickness)
- Wall/Oxide thickness readings, etc.

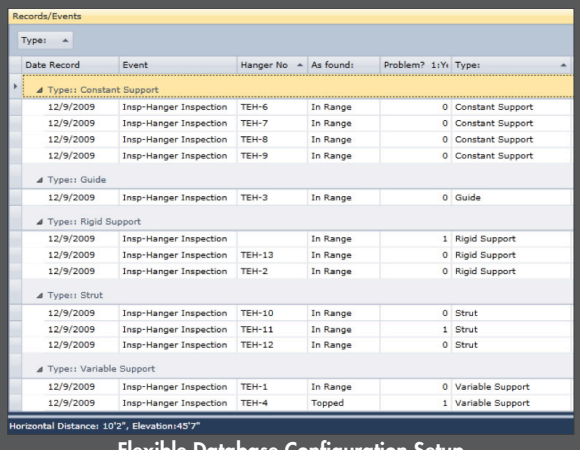


Sample waterwall drawing with NDE wall thickness readings

REPORTING FEATURES

PlantTrack is based on SQL database with advanced sorting, filtering, and data mining capabilities. Quick List and Chart features allow users to quickly design filters and create lists and charts:





Flexible Database Configuration Setup

Authorized users can edit and add new record types, as well as fields associated with records.

EXPANDED RESOURCES AND LONG-TERM SUPPORT

- Helpline, web-based forums, FAQs, User community
- Easy access to add-on modules and services
- Engineering Modules: Vindex, PGTLA, Header
- Services: Inspection and testing (with information upload)