### **Body Shop Management**

Integrating your assembly and inspection technologies



- > Consolidated master and measurement data
- > Automated convergence of graphics and data
- > Significant inspection cost reduction

www.asidatamyte.com/solutions



### **Joining Joint Technologies**

ASI DATAMYTE's Body Shop Management Solution integrates assembly operations with inspection technologies to optimize BIW (body-in-white) quality and throughput from a single system, a single point of control.

In sync with the respected Japanese principle of "jidoka", the solution establishes and leverages visual control to detect problems as soon as they occur, and move quickly to correct. These methods facilitate rapid elimination of root causes and have an immediate impact on quality, yielding a higher rate of defect-free first runs. There are substantial savings on data processing and production operations, and an enormous decrease in rework costs. Efficient and precise fault correction significantly reduces the number of tests that need to be performed. The net result is a nice boost to your net profits.

The **QDA** software suite forms the nucleus of the solution. It interfaces and interoperates with a full range of assembly and measurement systems, including those for spot weld, laser weld, clinching, laser cutting, drilling, ultrasonic measuring, destructive test, gap, flush, seal gap, and, thermography **QDA** interacts with all of these, exchanging product and process related master data, measurement data and processing parameters. It imports data from auto body build databases and robot operated assembly systems, integrates it with measurement inputs and feeds it back in order to drive efficiency, cost and quality optimization.

The Body Shop Management Solution uses actual process data to automatically create inspection plans for specific test technologies. Focused tests are applied to valid production needs, resulting in improved quality, more efficient resource utilization, reduced measurement time and reduced costs.

### **Visualization, Inspection and MIBA**

With the MIBA technology it is possible to automatically locate the 3D location of weld spots or weld bolts on a 2D picture. This enables immediate visualization of the product and process data on a single view allowing fast interpretation. Any missing or defective welds can be tracked for fast and effective root-cause analysis and problem resolution.

## Improve quality, use resources more efficiently, reduce measurement time and reduce costs

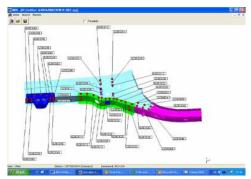
▶ QDA includes software developed to meet the specific quality and assembly needs of each key joint technology area. It integrates measurement, evaluation, testing and tracking software and provides specialized features for:

**Bolts** · This module receives data regarding corrections and forwards master data and images to production planning. It incorporates data from systems and other body shop sources as it builds a centralized database of process data. Sophisticated evaluations based on the integrated data are effective in identifying and eliminating specific failures.

**Spot Welds** · The spot weld module builds a database of process data for welds, enabling centralized evaluations and trend analysis. It's designed to detect degradation in the welding process before faulty joints, defects and scrap are produced.

Taking the proactive approach and heading off scrap and rework saves enormous sums of money. Weld issues can be ranked and presented in a prioritized format, listing, for example, the top 10 problem areas. Weld lists can be built, filtered, grouped and sorted to meet specific needs.

**Ultrasonic Tests** · The ultrasonic test component gathers weld data (thickness, flaws, adherence to standards, etc.) and automatically builds dynamic inspection plans for SPC and other quality analyses. It also severs as a centralized point from which to administer inspection plans and evaluate the results of their implementation.



MIBA illustrates weld status with 3D image and parameter data converted to 2D and displayed on a standard PC.

**Destructive Tests** · Failure points along any number of relevant factors for a given product are collected, stored and made available for incorporation into inspection plans, analyses, investigations, etc. Flagging and ranking important findings allow managers to focus on mission critical issues.

# The benefits are felt at each prototyping and production phase, raising quality and reducing time to market

Laser Welding · Data is captured from Laser Welding systems and test systems and incorporates it into inspection plans. As with other Body Shop Management components, this one provides a central point for management of data, provides sophisticated evaluations using integrated data and pinpoints important concerns.

### **Solution provider integration**

Since **QDA** integrates process data from different technologies, it is possible to detect and monitor interaction effects that may occur between them, and see how one process or technology may influence another. The process of integrating them also provides an opportunity to check data consistency as it is imported or migrated over to the common database. This ensures that data is complete and of known integrity from the very beginning, ensuring all processes that utilize it start out right.

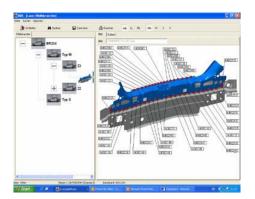
The benefits are felt at each prototyping and production phase, raising quality and reducing time to market. The Body Shop Management Solution can also be hosted and

accessed through the web by the assembly systems solutions providers, extending the reach of a solid quality foundation.

#### **Administration and Reporting**

Evaluations and inspection plans are easy to configure and use. They can incorporate data from any number of production lines, the entire plant or enterprise. User groups that you define can be given authorization to access specific evaluations on a selective basis. The system can automatically create inspection plans for nondestructive tests based on a top 10 pareto of problem welds as found by the weld systems. This allows you to focus your inspections there where they are needed, eliminating inspection and resources costs dramatically. Even more you can very selectively do the destructive tests out of the results of the non-destructive tests, taking out all the guess work on where and when to do them.

The solution exploits the use graphical tree views, making it a quantum leap easier to locate an item of interest such as a bolt, weld or seal. This capability enables rapid creation of sound inspection plans and failure analyses.



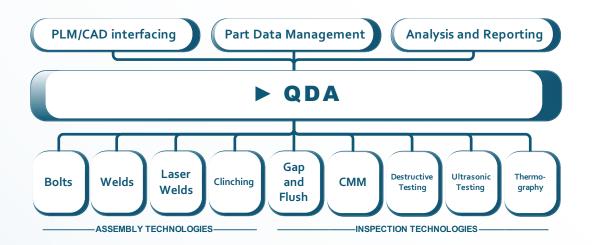
Laser welding data is easily located from the software's graphical tree structure, is clearly visualized and analyzed

Customizable reports pull in data from all areas and present information in a clear intuitive format. The page editor lets you create custom screens to control the type of graphics you would like the operator to see. All measurements are color coded to easily determine the status of the part, for example, green for accept or red for reject.

Data filtering empowers decisive identification of root causes so that corrective action can be taken before parts become scrap.

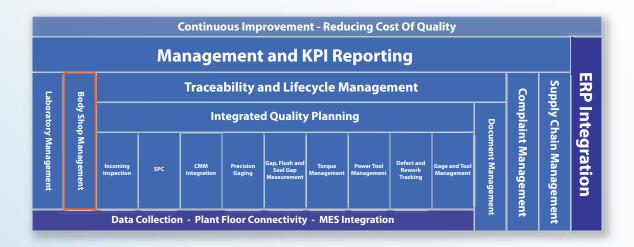
### ASI DATAMYTE SOLUTIONS

ASI DATAMYTE's Body Shop Management Solution improves first time quality and drives down costs by bringing inspection technologies to the assembly line. It integrates different assembly and inspection technologies, allowing you to visualize and analyze process data aggregated with quality data. This in turn enables pinpoint root cause analysis in one system, regardless from any of the sources.



### Major solution benefits and key features

- > Consolidated master and measurement data
- > Automated convergence of graphics and data
- > Significant inspection cost reduction
- > Integration into dimensional quality workflow
- > Interaction with welding robots
- > Support assembly systems suppliers in prototype phase
- > Dynamic test planning from process data



USA · Belgium · Brazil · Canada · China · Denmark · Germany · Italy · Singapore · UK

