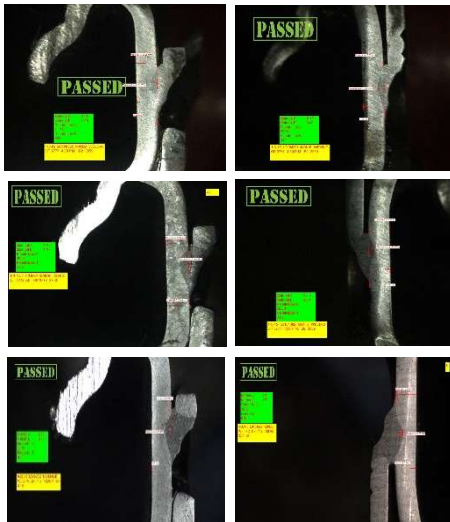


DJH WELD INSPECTION SYSTEM

A dedicated inspection system for weld seam measurements consisting of an overhead or inverted microscope and Weld Penetration System (WPS) software that is totally dedicated to weld seam analysis and measurement.



KEY FEATURES

- ✓ DJH Microscope available in many different configurations including overhead and inverted
- ✓ Standalone or Multi user SQL Database versions.
- ✓ Multiuser licensing: A typical system configuration consists of one capture/measurement station and three measurements only work stations.
- ✓ Multi user software package, where one or more such systems are connected to a common, plant level database.
- ✓ On demand reporting by region, country, plant, product, weld, weld characteristic, weld cell, fixture and inspection date range.
- ✓ Weld inspection detail with image of weld cross section and superimposed measurements and annotations.
- ✓ Summary of weld inspection results for a specified date range.
- ✓ Weld inspection statistics.
- ✓ Individual and Moving Range SPC charts.

DJH OVERVIEW

DJH Designs' cut and etch measurement system highlights

Our unique modular system approach gives clients the greatest flexibility possible in designing a system to meet their throughput demands. With our modular approach, there is no need to buy costly microscope hardware for each measurement station. One capture station can collect and supply images for up to 4 workstations. The capture station can also be used as a workstation once all the image records have been created and captured. Need to increase throughput? Add another capture station, then add the required number of workstations to your system. Multiple capture stations, and workstations can be added to the system to meet the productivity capabilities of the lab.

The SQL system database has independent calibration control for each capture station in the system. Each saved image record contains within the record its own unique calibration profile so regardless of it being opened on a different workstation the image can be accurately measured or remeasured on any workstation.

Microscope types can even be mixed and matched. For example, if there are very large weld segments that need to be analyzed you can have one microscope on the system for your typical weld types, and a second one with a much larger field of view dedicated to analysis of large weld segments that you would not normally be able to measure on the other microscope. Any of the welds from the differing systems can be measured by any work station without any special considerations or modifications.

MEASUREMENT TOOLS AND REPORTS

Full collection of measurement tools, line segments, parallel line tools, radial tools, etc., as well as a full range of annotation tools to allow for unlimited markup of the images.

Data export utility. Any data can be sorted and exported to multiple formats to use in Excel, Minitab or a number of other statistical analysis programs.

A standalone Report Manager Module can be licensed independently to the program. Supervisors, managers can license report manager to be installed on any PC (Desktop or Laptops) to be able generate reports from anywhere for all data in the system.

Corporate report Manager allows for generation of reports, or the export of any data from any plant anywhere in the world.

Weld Inspection Detail

Inspection Date	Inspection Time	Shift	Sample type	OEM Program ID	Inspector name
February 01, 2017	07:00AM	1	Production	026	Robert Jennings

Product No.	Product name	Weld cell	Fixture	Serial No.	Product Spec.
L0220614	Power reactor FSR	B	B	A217033007036	10-ES-11A-17081010-B_X_Laser-00

Weld Number	Q1
02	

Characteristic	Target	Minimum	Maximum	Actual	Result
Penetration	50.00	30.00	115.00	90.41	PASS
Cap	0.16	0.29			FAIL
Weld Surface	100.00	90.00	300.00	162.14	PASS
Weld Surface Width	150.00	90.00	500.00	141.13	PASS
Weld Undercut		15.00		26.23	FAIL
Porosity					PASS
Weld Spatter				34.00	

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Weld Undercut		15.00		26.23	FAIL
Porosity					PASS
Weld Spatter				34.00	

L0220614: Weld Process Capability Ratios

From Date	To Date	OEM Program
02-Jan-2017	23-Jan-2017	CHWYSER

Weld: C1	Target	Specified values			Actual values			Process Statistics		
		LBL	UBL	Max	Min	Mean	Cap	Cpk	Pp	Ppk
Cap	1.00	0.81	0.02	0.07	112	4.42	4.42	3.44	3.44	
Leg 1	100.00	575.89	1.86	254.99	117	0.56	0.56	0.47	0.47	
Leg 2	100.00	825.59	132.43	388.56	115	0.88	0.88	0.84	0.84	
Penetration 1	20.00	134.72	1.68	73.35	117	0.69	0.69	0.60	0.60	
Penetration 2	20.00	129.84	14.42	61.59	116	0.70	0.70	0.71	0.71	
Root Penetration	0.00	70.70	1.64	7.87	111	0.30	0.30	0.22	0.22	
Throat	70.00	296.18	147.51	249.66	114	2.73	2.73	2.51	2.51	

Weld: C10	Target	Specified values			Actual values			Process Statistics		
		LBL	UBL	Max	Min	Mean	Cap	Cpk	Pp	Ppk
Cap	1.00	0.60	0.01	0.21	116	1.67	1.67	1.54	1.54	
Leg 1	100.00	214.51	0.57	130.20	117	0.29	0.29	0.29	0.29	
Leg 2	100.00	129.48	29.55	111.25	116	0.45	0.45	0.38	0.38	
Penetration 1	20.00	48.67	9.68	26.09	117	0.30	0.30	0.27	0.27	
Penetration 2	20.00	65.16	20.13	36.75	116	0.62	0.62	0.63	0.63	
Throat	70.00	233.03	76.95	100.53	116	0.81	0.81	0.63	0.63	

Weld: C2	Target	Specified values			Actual values			Process Statistics		
		LBL	UBL	Max	Min	Mean	Cap	Cpk	Pp	Ppk
Cap	1.00	0.81	0.01	0.08	119	3.40	3.40	2.79	2.79	
Leg 1	100.00	592.31	2.21	328.74	119	0.65	0.65	0.64	0.64	
Leg 2	100.00	597.88	144.32	457.51	119	1.37	1.37	1.27	1.27	
Penetration 1	20.00	120.74	2.21	76.47	120	0.51	0.51	0.60	0.60	
Penetration 2	20.00	228.68	33.33	77.24	118	0.75	0.75	0.65	0.65	
Root Penetration	0.00	66.49	1.28	7.12	113	0.30	0.30	0.22	0.22	
Throat	70.00	323.88	173.97	238.87	119	2.21	2.21	2.06	2.06	

SOFTWARE DETAILS

- ✓ The Weld Penetration System (WPS) provides data export ability that allows export to Excel, CSV and PDF formats.
- ✓ WPS includes an Inspection Plan module, which allows to monitor inspection frequency compliance.
- ✓ Measurement System Analysis Module enables you to keep track of your welding process over time. It is a real SPC Tool where you can see all of the key process data: Cp, Cpk, CpL, CpU, etc...
- ✓ Annual licensing and technical support plans. This ensures that the client always has access to technical support. More importantly, all program updates/upgrades are included in the plan. This ensures that all the plants are always up to date and running the latest program version with all the new features and enhancements.

SYSTEM SPECIFICATIONS

Flexible optical system options

Standard or inverted configurations: Standard zoom system with wide FOV means that the same optical system is capable of handling all welding types. Different configurations are available for a wide range of Weld types.

- ✓ Applications: Automotive, MIG, MAG, Spot and Laser welding
- ✓ Magnification: 2.5x to 50x
- ✓ Field of view: 80 to 4.5mm

Recommended PC system specs for capture and workstations

- ✓ Processor: I5 Quadcore or better
- ✓ Windows 10 Pro
- ✓ Ram: 8GB or better
- ✓ Storage: 500GB
- ✓ Must have USB2 and USB3 ports

Server Requirements

- ✓ SQL Server 2016, VM installations are acceptable
- ✓ System Ram: min 32GB
- ✓ Storage capacity requirements will vary depending on the size of the installation. Typical installation will require approximately 5TB of storage space for the images and database

For more information visit our website or contact our Sales Team:

