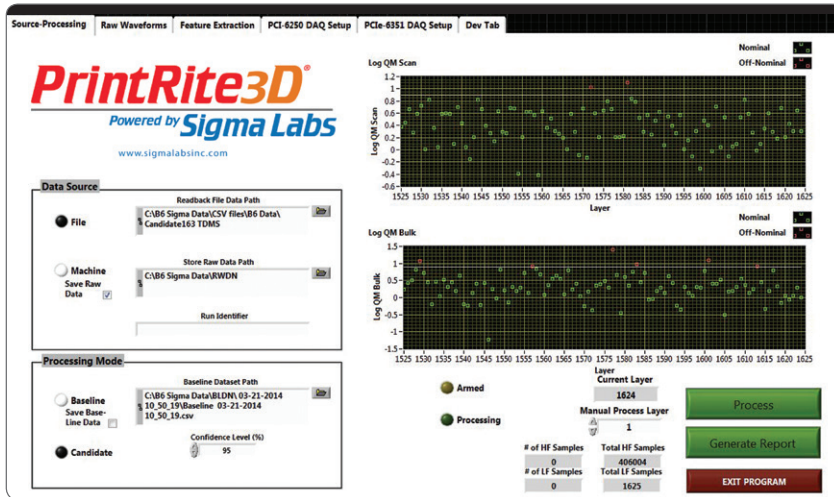


PrintRite3D[®] INSPECT[™]

Process Control and Quality Assurance Software for Additive Manufacturing



Software for in-process inspection of metallurgical properties

- ▶ Uses sensor data and establishes in-process metrics for each metal or alloy during the process.
- ▶ Provides manufacturing engineers with part quality report based on rigorous statistical analysis of manufacturing process data.
- ▶ Allows for interrogation of suspect part data and can be used for process improvement and optimization.

IPOS SUMMARY REPORT			
QUALIFICATION	N/A		
PRODUCTION	N/A		
REFERENCE INFORMATION			
BUILDING LAYER ID NUMBER	1529	1529	
REF LAYER ID NUMBER	1529	1529	
PRODUCTION NUMBER	1529	1529	
PART NUMBER	1529	1529	
REFERENCE CENTERLINE			
CONSTRUCTION STANDARD	N/A		
CONFIDENCE LEVEL	95 %		
RESULTS			
Layer Number	QM Process	QM Material	STATUS
1525	2.4028	1.7055	ACCEPT
1526	2.7785	2.6968	ACCEPT
1527	4.6079	3.1907	ACCEPT
1528	1.9235	6.4514	ACCEPT
1529	3.8463	11.5921	SUSPECT
1530	5.2255	5.3308	ACCEPT
1531	1.0287	2.7961	ACCEPT
1532	6.5903	0.6375	ACCEPT
1533	2.2961	2.9684	ACCEPT
1534	1.1186	1.1018	ACCEPT
1535	3.8854	3.3038	ACCEPT
1536	3.9391	2.0202	ACCEPT
1537	3.9006	2.8051	ACCEPT
1538	1.2683	1.5969	ACCEPT

REPORTING *Tabular & Graphical Representations*

- ▶ Real-time quality metric data for both material and process dynamics layer-by-layer.

RESULTS			
Layer Number	QM Process	QM Material	STATUS
	7.8140	7.8140	QM LIMIT
1525	2.4028	1.7055	ACCEPT
1526	2.7785	2.6968	ACCEPT
1527	4.6079	3.1907	ACCEPT
1528	1.9235	6.4514	ACCEPT
1529	3.8463	11.5921	SUSPECT
1530	5.2255	5.3308	ACCEPT
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1536	3.9391	2.0202	ACCEPT
1537	3.9006	2.8051	ACCEPT
1538	1.2683	1.5969	ACCEPT

FEATURES

- Provides position-related anomaly detection
- Production report with actionable results and root cause troubleshooting
- Real-time acquisition and visualization: HMI module
- Data analysis engine: multi-variate statistical based algorithms

BENEFITS

- In-process quality data is predictive of post-process physical characteristics
- Early defect detection
- Production optimization
- Risk reduction



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