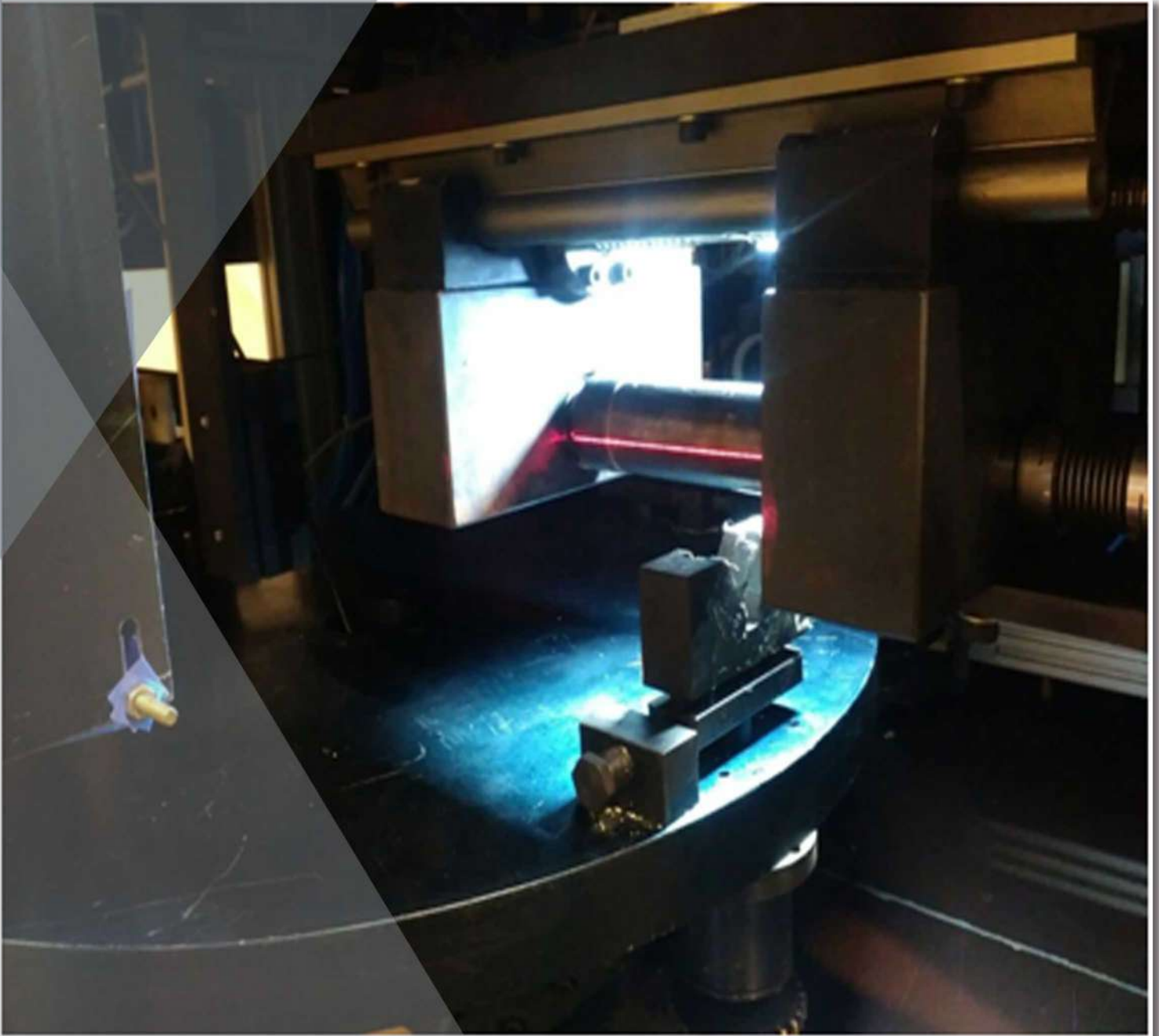




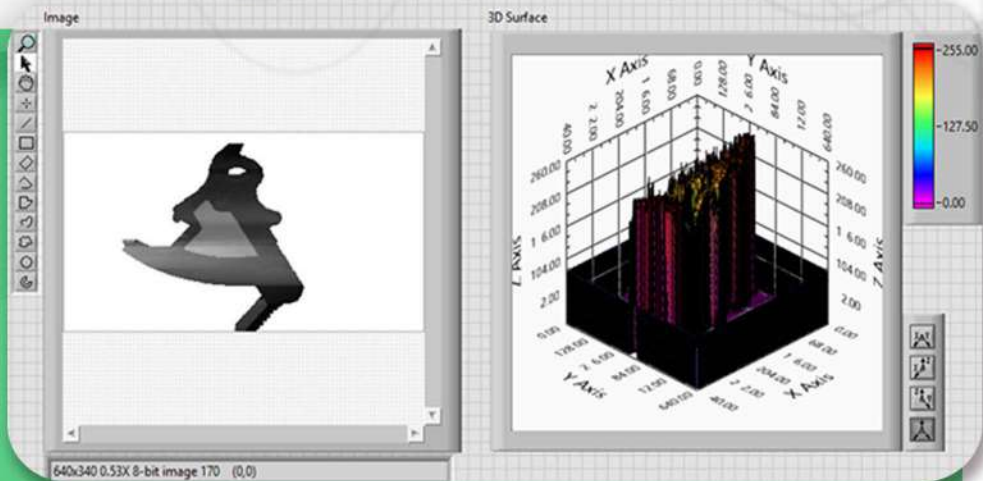
# SurfacePRO



Alliance  
Partner

# Machine Vision System

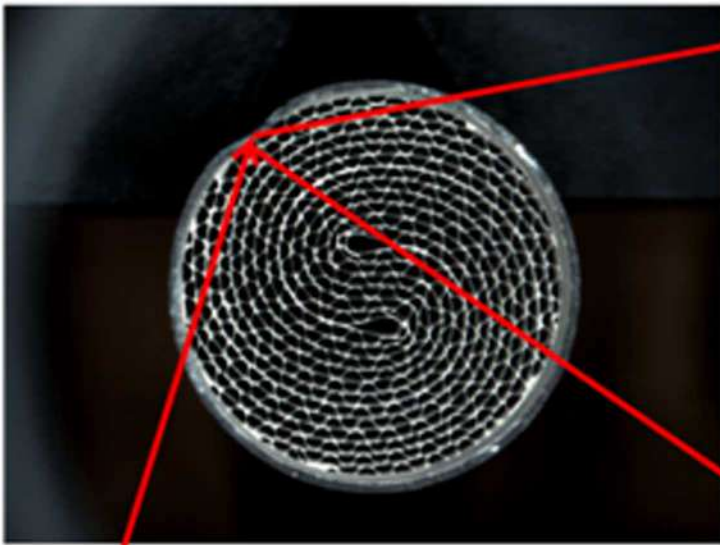
The Machine Vision system SurfacePRO for automated surface inspection captures material and production induced defects on flat and cylindrical parts. It can detect even the smallest surface defects upto +/- 30 microns for scratches, dents and pores.



3D Depth information from LASER has been plotted

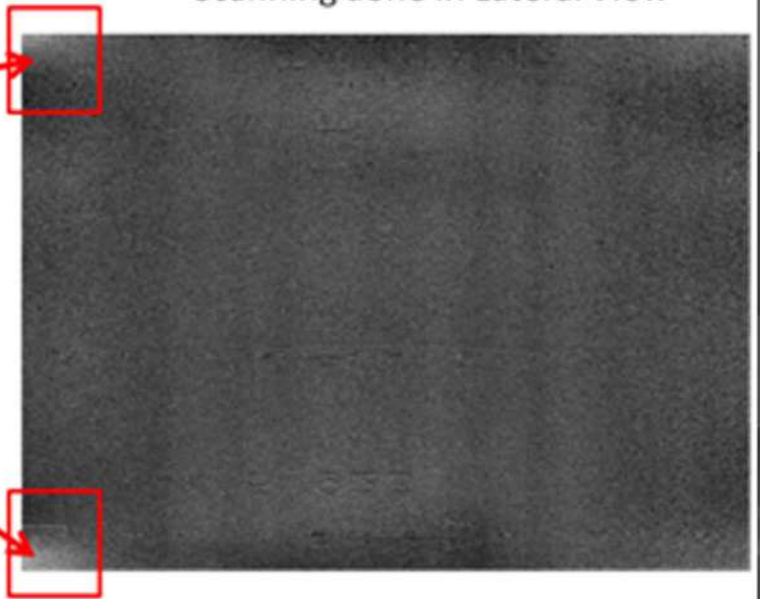
SurfacePRO is also capable of inspecting geometric and dimensional accuracy. Traditional camera based approach will not work to achieve high accuracy because of lack of 3D depth information, so we are using both LASER based and Camera based inspection to parameters like scratches, dents, color, rust and other geometrical measurement. A huge point cloud of data is generated and mathematical models are applied to identify dents and scratches. Below figure shows how data from laser converted into an Image showing dents as bright spots.

Top VIEW



Dent on original part

Scanning done in Lateral View



LASER scan on the entire surface

# Applications / Usage



Inspection of visible, sealing and functional surfaces on automotive parts, such as

1. Inspection of Catalytic Converter.
2. Surface and contour inspection of gaskets.
3. Surface inspections and quality sorting for automobile rear mirrors.
4. Quality inspection of forged parts (connecting rods).
5. Inspection of printed electronic boards.

SurfacePRO at a Glance:

1. Automatic 100% quality inspection of surfaces.
2. Application-specific machine vision, customized for the relevant defect.
3. Objects with different diameter and height can be easily configured.
4. LASER and Camera in a single machine.
5. Capable to detect multiple defects, such as color, rust, etc.
6. Report Generation module integrate with database tools to store and retrieve configuration.

ATSTeKs Technologies

Station 1  Station 2  Station 3  Station 4  Serial Number  Run/Stop

**STATION 1**  
LOAD NEW PART

**STATION 2**  
PART SCANNING

**STATION 3**  
RUNNING BLOCKAGE INSPECTION

**STATION 4**  
REJECTING PART

Inspection	Inspection Parameter	Master Value	Actual Value	Result
Dent Inspection	Depth	0.1 mm	0.5	PASS
	Length	1 mm	5.1	PASS
Scratch Inspection	Depth	0.5 mm	0.5	FAIL
	Length	2 mm	5.1	FAIL
Dimension Inspection	Hieght	110 mm	110.5	PASS
	Diameter	40 mm	40	PASS
Label Inspection	Arrow	800	815	PASS
	Laser Mark	K15923	K15923	PASS
Color Inspection	Face 1	105-115	106	PASS
	Face 2	105-115	110	PASS
Area Inspection	Face 1	500-900	810	PASS
	Face 2	500-900	678	PASS
Cell Inspection	Face 1	700 +/- 1%	701	PASS
	Face 2	700 +/- 1%	704	PASS
Blockage Inspection	Face 1	0	3	FAIL
	Face 2	0	0	PASS

FACE 2 PASS COMPONENTS  FAIL COMPONENTS

# About Us

Automated Test Systems Technologies Pvt Ltd is an Alliance Partner of National Instruments based in Chennai, India. We are experts in design and development of automated test systems for engineering validation and End of Line production testing. We help our clients to optimize productivity and quality in the production of goods and delivery of services. We take pride in providing complete turnkey solutions, Data Acquisition and Measurement systems, Hardware-in-Loop testers, Vision inspection and Real time systems for manufacturing industry.

## Our Products



Data Acquisition System



Vision Inspection System



Test Rigs



ATE

## Our Expertise

- ✓ End of Line Tester
- ✓ Performance Tester
- ✓ Endurance Tester
- ✓ Machine Vision System
- ✓ LASER Inspection System
- ✓ In circuit Tester
- ✓ Functional Tester
- ✓ HIL Tester
- ✓ Scratch / Dent Inspection System
- ✓ Thickness Measurement System
- ✓ Motor Testing System
- ✓ In-Vehicle Data Logger
- ✓ Structural Health Monitoring System

## Contact Us

### REGISTERED OFFICE :

L-49, Post Office Road, Ambattur Industrial Estate,  
Chennai 600058, India  
Landline : 044 - 42144180  
Mobile : +91-9884760329, +91-8939889607  
Email : nathan@atstek.com, admin@atstek.com



## Our Services



Teststand



AMC



Integration

## Our Clients

