

NDT-RAM System Configurations

NDT-AUTO Fully Automated NDT-RAM System

- Ideal for in-line, automated, objective inspection
- No operator intervention needed for inspection
- 100% inspection to test every part prior to shipment
- Fast throughput - as fast as a part per second
- Customizable conveyor configurations

NDT-AUTO System includes: LanShare™ Smart Digital Controller, turn-key conveyor system (standard 6' or 8' length with 8" or 12" wide belt), industrial electric impact hammer, microphone and preamplifier, acoustic tunnel, automation accessories (photo eyes, PLC, pneumatic plunger), NDT-RAM software, cables, and industrial-grade computer with MS Excel for statistical analysis.

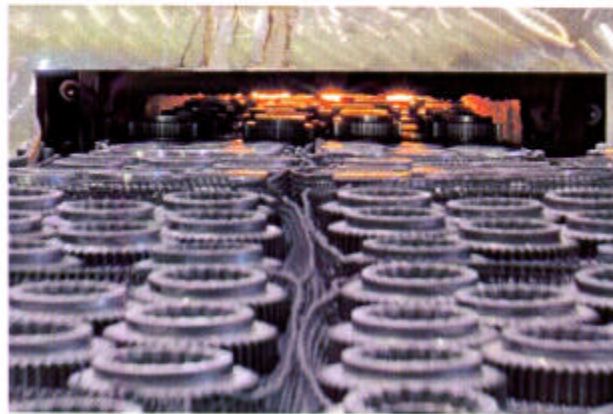
	6' configuration	8' configuration
Length	72"	96"
Floor to top of belt w/ wheels	41"	41"
Floor to top of belt w/ feet	37"	37"
Floor to top of computer	71"	71"
Width overall	41"	41"



NDT-SEMI Semi-Automated NDT-RAM System

- Ideal for adapting to existing process automation
- 100% inspection to test every part prior to shipment
- Fast throughput - as fast as a part per second

NDT-SEMI System includes: LanShare™ Smart Digital Controller, industrial electric impact hammer includes thumbswitch trigger, instrumented impact hammer, microphone and preamplifier, NDT-RAM software, cables, and industrial-packaged computer with MS Excel for statistical analysis.



NDT-MAN Manual NDT-RAM System

- Portable - fits easily inside a laptop case
- Ideal for spot checking in the field
- Ideal for new part set-up, investigation, troubleshooting

NDT-MAN System includes: LanShare™ Smart Digital Controller, instrumented impact hammer, microphone and preamplifier, NDT-RAM software, cables, and laptop computer with MS Excel for statistical analysis.

Main System Components:



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3149 E. Kemper Road
Cincinnati, Ohio
45241-1516
U.S.A.

Ph. 513-351-9919
FAX 513-458-2172
1-800-860-4867
www.modalshop.com
www.processvibration.com

Who needs NDT Resonant Inspection?

Manufacturers or users of metal parts that...

- have substantial inspection cost.
- require 100% parts inspection.
- desire to improve part quality.
- produce and/or use safety-critical parts.
- have customers demanding higher quality.
- have substantial scrap costs due to false rejects.

What does NDT Resonant Inspection detect?

- Cracks, chips, holes, and voids
- Porosity
- Out-of-tolerance dimensions
- Variations in hardness
- Residual stress
- Bonding, welding, or brazing failures
- Machining or heat-treating processes

NDT-RAM's Graphical User Interface

Provides three access levels for security

Lin/Log & Autoscaling

System Status

Individual Criteria Ranges

Time/Frequency

Test Status Indicator

Save/Recall Project

Acquisition On/Off



Investigate or Quality Assurance Modes

Running Test Summary

X and Y Data Values for each frequency range

Part Name

Production Run Number

Criteria Limits

NDT-RAM's Report Generation

Statistical analysis is just a simple click away

Allows you to fine tune criteria by using statistical data taken for each part tested.

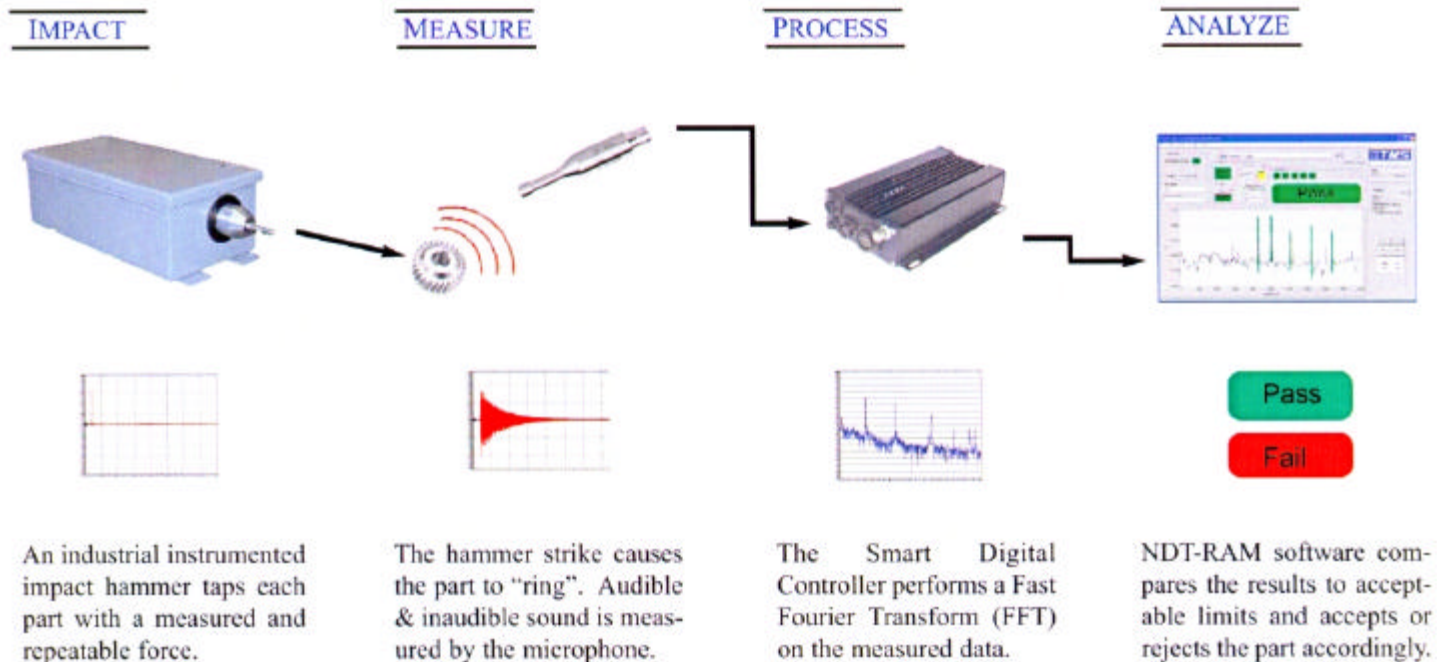
Date	Time	STATUS	CRITERIA #1	CRITERIA #2	CRITERIA #3	CRITERIA #4
26-Sep-04	12:09:32	PASSED	P 10102	1.0071	F 20303	0.2775
26-Sep-04	12:09:34	PASSED	P 10103	1.0148	F 20805	0.4403
26-Sep-04	12:09:37	PASSED	P 10102	1.0709	F 20303	0.4106
26-Sep-04	12:09:38	PASSED	P 10102	0.8048	F 20885	0.1195
26-Sep-04	12:09:40	PASSED	P 10102	0.4363	F 20953	0.2684
26-Sep-04	12:09:50	FAILED	F 10125	0.2425	F 20377	0.1665
26-Sep-04	12:10:03	FAILED	F 9991	1.0859	F 20494	0.2785
26-Sep-04	12:10:07	FAILED	F 9991	1.2375	F 20742	0.9112
26-Sep-04	12:10:11	FAILED	F 9991	2.7080	F 20484	0.1862
26-Sep-04	12:10:13	FAILED	F 9997	1.2891	F 20404	1.2729
Total Passed:		6	6	6	6	6
Average Passed:		00.00%	10102.0	1.0410	20002.0	0.46
Std Dev Passed:			12.2	1.0380	0	0.359
Total Failed:		5	4	5	5	4
Average Failed:		9994.9	1.9967	20548.4	0.725	20403.9
Std Dev Failed:			11	0.7269	190.1	0.4209
Total:		10	10	10	10	10

NDT-RAM is simple, objective, reliable and affordable.

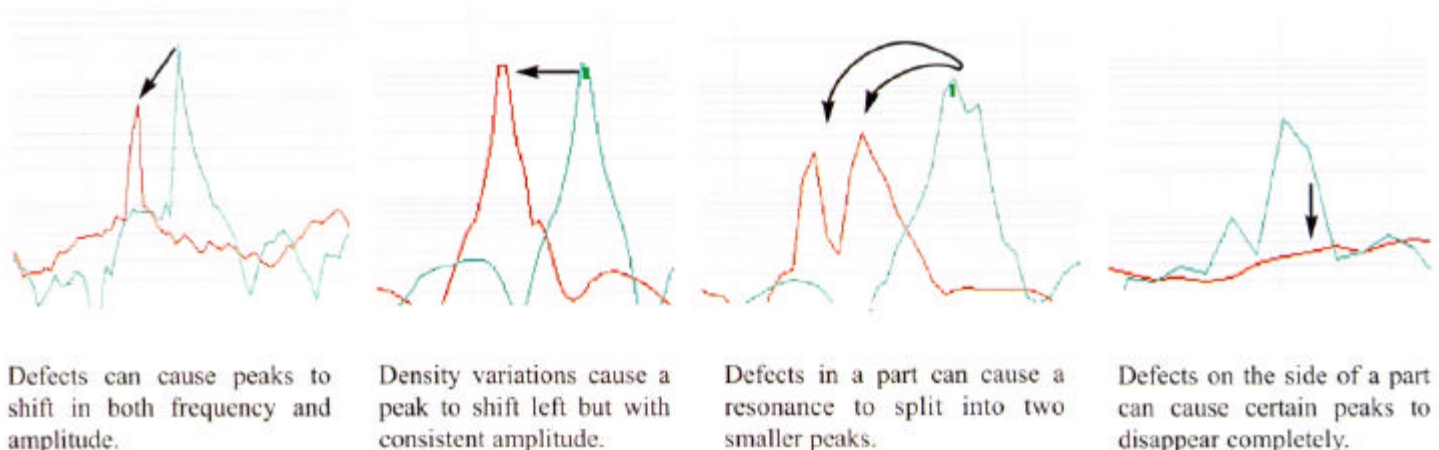
The principle of resonant inspection is simple: every part has a unique resonant signature or pattern that reflects its structural integrity. A deviation from the expected signature or pattern can indicate the presence of a flaw. For example, a bell with a crack no longer has a clear ring or the ability to hold its tone.

The resonances of a structure are defined by its mass, stiffness and damping. These can be measured in most rigid materials including metals, ceramics, and composites. NDT-RAM detects imperfections such as variances in dimension, geometry, weight, voids, cracks, density, bonding and manufacturing processes.

How It Works



Sample Defects



Part Quality Inspection Application: NDT - Resonant Acoustic Method

NDT-RAM™



- Confidence
- Ease of use
- Peace of mind

In the world of manufacturing today, the potential liability of shipping a defective part can be catastrophic for you, your customer, and the consumer. The NDT-Resonant Acoustic Method (NDT-RAM) system is designed to help you deliver fully inspected parts, economically and on time, giving you and your customer confidence in the quality of your parts.



TYPICAL USES:

- Production - In-Line Inspection
- Field Service - Troubleshooting
- Quality Control - Spot Checking
- Engineering - Development

SUCCESSFUL APPLICATIONS:

- Powdered Metal
- Iron Castings
- Forgings
- Metal Stampings
- Aluminum Foundry
- Ductile Metals
- Ceramics
- Composites

BENEFITS:

- 100% inspection - ensures the confidence that every part is tested and approved parts are defect free
- No part preparation required
- High throughput - parts are fully inspected in seconds
- Simple to learn and use application software
- Scrap costs are reduced with elimination of false rejects
- Generates statistical analysis reports
- Industrial package - NEMA4 enclosure allows factory floor operation.
- Contact or non-contact testing methods available
- Same system can test many different parts
- Easy financial justification - ROI typically >300%
- Short payback period typically < 15 months
- Helps eliminate quality recall/containment costs

Call for free parts evaluation and test report



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