



MT/RT Film Interpretation Course

**An Overview of Nondestructive
Surface and Volumetric Testing Methods**



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Why: Pipeline Owner/Operators:

There is a general lack of clarity and specificity regarding Nondestructive Testing methods and their application in the Operator Qualification rules 49 CFR §192(N) and 49 CFR §195(G) that requires all personnel performing inspections and evaluations of the pipe be properly trained and qualified in each task. Nondestructive Testing (NDT) and specifically Magnetic Particle and Radiographic Film Interpretation play a significant role in the assessment of pipeline integrity. This course is designed to acquaint pipeline management and operating field personnel who are not familiar with these methods to properly oversee and direct the activity of the NDT technician or contractor in the performance of these technologies when used during any phase of pipeline inspection. Lecture and discussion will address the general issues concerning qualification and certification including the Written Practice and proper administration of an NDT program, proper application and reporting techniques, potential pitfalls, and applicable industry standards of these important procedures and techniques.

Process Plant Facility Personnel:

Process Plants were confronted with a similar situation close to a decade ago with 29 CFR 1910.119. NDT, once again, played a significant role in optimizing the ability of process plants to comply with the safety standards set out by OSHA. Facility management personnel have found this course to be extremely beneficial in preparing them to successfully oversee NDT programs in general and supervise the service companies and individuals who perform the actual testing. The same focus is applied to those in the Process Plant environment as the Pipeline Owner/Operator, i.e., general issues concerning qualification and certification including the Written Practice and proper administration of an NDT program, proper application and reporting techniques, potential pitfalls, and applicable industry standards of Magnetic Particle Testing and Radiographic Film Interpretation.

What: A high-impact, 24-hour combination course designed specifically for Pipeline or Process Plant technicians, engineers or management personnel who desire training in the proper utilization of surface (magnetic particle testing) and volumetric (interpretation of weld radiographs) inspection methods.

The Film Interpretation segment concludes with General, Specific and Practical tests. If your company's written practice outlines certification in this method, the training and examinations from this course comply with recommendations from ASNT's SNT-TC-1A for qualification in RT Film Interpretation. If successfully completed, certification from your company would be possible. Also, the hours from this course are applicable to continuing education units should you.



Terms and Conditions:

One registration is required per person. Upon receipt of your registration an invoice will be generated for payment. Payment is due 30 days from receipt. ½ of the course fee will be refunded provided written cancellation is received within 48 hours of the course start.



Instructor's Biography

Paul Marks is the President/Director of NDT Training and Placement Center and Co-Founder/President of Ultrasonic Specialists, Inc. both in Houston, Texas.

Paul is a nationally certified American Society of Nondestructive Testing Level III (among the 1st 300 certified to Level III status by the ASNT in

1976) and has 30 years of experience in the specific testing regimens of Ultrasonics, Radiography, Liquid Penetrant and Magnetic Particle Inspection. He was the author and instructor of the first college level NDT course to be offered in the Houston area in 1979 at San Jacinto College.

Published articles include several dealing with inspection of offshore platforms, refinery piping and vessel corrosion, and non-invasive measurement of sludge deposits in crude oil storage tanks. Most recent articles appear in The Inspectioneering Journal (dealing with technician certification) and the National Association of Corrosion Engineers (NACE) periodical, Materials Technology. Paul has authored seven Distance Learning NDT courses, five textbooks that are in current use for classroom training courses within the NDT Industry, and the Classroom Training Handbook for Ultrasonic Testing (scheduled for publication by the American Society for Nondestructive Testing [ASNT] by mid 2006). He is currently a columnist for The Inspectioneering Journal reporting on emerging technologies in NDT.

AGENDA

1st Day

- :
- 8:00 Student Sign-In / Distribute Course Package (Book & Name Badge)

 - 8:30 NDT Applications: MAGNETIC PARTICLE INSPECTION
 - History
 - Essential Steps of Effective Application
 - Explanation of various MT techniques and machines

 - 10:00 Break
 - Discussion of advantages of one technique vs. another

 - 11:30 Lunch Break

 - 1:00 Evaluation of the quality of NDT work performed by testing service companies
 - About 'Certifications' - How are they properly achieved?
 - Is a Level II Certificate proof of skill and integrity?
 - Steps to assuring that the NDT applied on your project meets your needs

 - 1:30 Demonstration of recommended techniques for pipeline application

 - 2:15 Break

 - 3:30 Open discussion
 - Summary Comments
 - Final Test (applicable for those interested in accruing CEUs)

 - 4:30 Conclusion of first day

2nd Day:

- 8:00 Course Overview
- 9:00 Film Interpretation Challenge 8 radiographs to grade and review
- 10:00 The Making of a Radiograph
The Radiographer
The Equipment
The Film
Role of the Interpreter
- 10:45 Break
- 11:00 Film Interpretation Exercise
Interpretation of 10 radiographs
- 11:30 Lunch Break
- 12:30 Understanding 'the Territory'
the Test Specimen
Materials, Joints,
Welding Processes
- 1:30 Break
- 1:45 Understanding 'the Territory'
The Test Method
RT Techniques
Codes and Specifications
- 2:30 Break
- 2:45 Facts and Artifacts
Film Quality Issues (What to accept, What to re-shoot)
Slides to illustrate film artifacts and their causes
- 3:30 Open discussion of questions and observations
- 4:30 Conclusion of second day

3rd Day:

- 8:00 Open discussion of questions and observations
- 8:30 Welding 101 "Knowing the Territory"
- 9:00 Welding Flaws their cause & what they look like on film
- 10:00 Break
- 10:15 Welding Flaws their cause & what they look like on film
- 10:45 Break
- 11:00 The film viewing facility
- 11:30 Lunch Break
- 12:30 Level II Film Interpreter's Test
General Test
- 1:15 Break
- 1:30 Level II Film Interpreter's Test
Specific Test
- 2:15 Break
- 2:30 Level II Film Interpreter's Test
Practical Test
- 3:15 Break
- 3:30 Open discussion of questions and observations
- 4:00 Presentation of Certificates of Completion

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Please complete the attached form and fax to TTI at 713-630-0560

Course Date: _____ Course Cost: **\$1,495.00**

Name/Title _____

Company _____

Address _____

Address _____

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* By signing above I commit to paying the course fee when invoiced

Technical Toolboxes
3801 Kirby Drive, Suite 520
Houston, TX 77098
Tel: 713-630-0505
Fax: 713-630-0560
Email: training@ttoolboxes.com

