



## Visual and Advanced Remote Visual Inspection Course

Presented by Olympus Industrial America and T.E.S.T. NDT, Inc. at the Customer Training center at the Olympus Industrial America Orangeburg, New York facility.

Dates: May 9<sup>th</sup> – 13<sup>th</sup>, 2005 & September 12<sup>th</sup> – 16<sup>th</sup>, 2005

## Visual and Advanced Remote Visual Inspection Course Outline

### 1.0 Introduction

- Personnel Certification Requirements – ASNT and FAA certification requirements
- Introduction to Visual Testing
  - Eye
  - Perception
  - Lighting
  - Lighting - Measurement
  - Inverse Square Law
  - Lambert Cosine Law
  - Lighting - Recommended Levels
  - Lighting - Techniques
- Terminology

### 2.0 Overview of Manufacturing

- Production of Raw Materials
  - Iron
  - Steel
  - Cast Iron
  - Aluminum and non ferrous
- Processing Stages
  - Rolling
  - Rolling Discontinuities
  - Forging
  - Forging Discontinuities
  - Casting
  - Casting Discontinuities
  - Welding

- Welding Discontinuities
- Machining
- Machining Discontinuities
- In-Service Discontinuities

### **3.0 Inspection Tools and Techniques**

- Lighting
- Mirrors
- Magnification
- Surface Finish Measurement
- Metrology (Measurement) Instruments
- Optical Comparators
- Borescopes
- Fiberscopes
- C.C.D. Videoscopes
- Weld inspection Gages

### **4.0 Other Considerations**

- Inspection Procedures
- Recording V.T. Results
- Sampling Plans

### **5.0 Visual Inspection For Aircraft (Separate attachment)**

- (FAA Advisory Circular Visual Inspection for Aircraft #43-204)

*The course will also cover the following:*

Remote Visual Inspection (RVI) – understanding optics and opto-digital technology.

- Rigid and flexible borescopes – types and uses.
- How to improve the quality of video and digital imaging.

Hands-on session – how to get the most out of your RVI equipment.

- Equipment care and maintenance – extending equipment life
- Introduction to equipment repair.

RVI applications – additional applications for greater equipment utilization.

Measurement technologies in RVI.

RVI computer software.

Emerging technologies in RVI.

**Final End of Course Test and review.**