

Course Syllabus

Improving the Effectiveness of Visual Inspection



Course Code S-2-001	CEUs 1.1 CEUs
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Course Introduction

Human visual inspection is the most common method to confirm the quality of work, whether in manufacturing or service industries. Yet it is very common to assume not much can be done about the generally low reliability of visual inspection – to err is human!

For people interested in improving visual inspection practice, few resources have been available – until now. The course “Improving the Effectiveness of Visual Inspection” provides you with the information needed to understand the factors of influence on the human task of visual inspection, permitting true quality engineering of this critical operation. The course is based on Ted Schorn’s 2018 book of the same name (provided with the course) that summarizes the research into visual inspection through hands-on learning and interaction with the author.

Learning Outcomes:

- Identify the elements of the inspection process
- Explain the key metrics for visual effectiveness and be able to apply them
- Recognize the key human factors associated with inspector capability
- Discuss the factors of influence in visual search and their importance
- Discuss the factors of influence in inspection decision making
- Perform assessments of visual performance
- Apply effective visual inspection techniques
- Describe effective training programs for inspectors
- Assess the potential effectiveness of multiple visual inspections

Lesson Outline:

- Module 1: Introduction
- Module 2: Introduction to Human Visual Inspection
- Module 3: A Model of Human Visual Inspection
- Module 4: The Human as an Inspection Device
- Module 5: Factors of Influence on Visual Search
- Module 6: Factors of Influence on Decision Making
- Module 7: Training Visual Inspectors
- Module 8: Inspection Exercise
- Module 9: Attribute MSA Group Exercise
- Module 10: Understanding and Managing Multiple Inspections
- Module 11: Maintaining Visual Inspection Effectiveness
- Module 12: Final Case Study: Designing a Complete Inspection Routine
- Module 13: Conclusion

Instructional Methods:

- Instructor-led discussion and questions
- Group discussions
- Group activities
- Individual exercises
- Case studies
- Shared experience discussions

<ul style="list-style-type: none"> • Q & A sessions
<p>Assessment Methods</p> <p>No formal assessment will take place in this course; however, attendees will participate in informal activities such as knowledge check and Q&A sessions with the facilitators to verify that learning outcomes are being met. Assessment of successful achievement of learning outcomes must be included throughout the course to meet the ANSI/IACET 1-2013 standard for continuing education programs and for CEUs to be awarded.</p>
<p>Course Prerequisites:</p> <p>None</p>
<p>Pre-course Activities:</p> <p>None</p>
<p>Texts, Books or other Resources Included in the Registration Fee:</p> <ul style="list-style-type: none"> • “Improving the Effectiveness of Visual Inspection” by Ted J. Schorn. Further information can be found here, https://hub.afsinc.org/NC_Product?id=a2Z1a000000YdEZEAO
<p>Attendee Requirements to Earn CEUs:</p> <ol style="list-style-type: none"> 1. Present at least 10.5 hrs. of the total 11.5 hrs. of instructional time (90%), which does not include meals or breaks. 2. Active participation (can include asking questions, communicating with other attendees during and taking part in group activities, providing responses during whole class or group discussions). 3. Successful achievement of all learning outcomes.
<p>Who Should Attend?</p> <ul style="list-style-type: none"> • Engineers – industrial, process, project, manufacturing, material • Shop personnel, especially in cleaning rooms and involved with core inspection • Quality Control personnel • Management responsible for production or quality functions • Anyone that needs to understand the role and effectiveness of human visual inspection