Decontamination Techniques and Applications

This 2 ½ course and will enable participants to distinguish various types of decontamination methods available and determine which method is best used for a specific application.

The trainee will be able to:
- Determine the different types of contaminants
- Describe how contamination occurs
- Describe the different types of decontamination methods available
- Determine which decontamination method is best used
- Describe the advantages of decontamination
- Explain the theory of operation behind each decontamination method
- Understand proper vs. improper techniques for each method
- Describe the commonly used materials for each process
- Understand the training required for each method
- Explain the effectiveness of the various methods

TOPICS

INTRODUCTION
- Objective of Class

HISTORY
- Types of contaminants
- How contamination occurs
- Factors in determining proper decontamination method
- Advantages of decontamination

METHODS OF DECONTAMINATION

MECHANICAL

Wiping
- Theory of operation
- Proper & improper techniques
- Common materials used
- Training required
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

Hand Held Abrasion Devices
Grinders, Needle guns, Nibblers, Scabblers, and other hand held devices, discuss the following for each:
- Theory of operation
- Proper & improper techniques
- Common materials used
- Training required
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages and disadvantages

Abrasive Blasting
Grit, Steel Pellets, Glass Beads, Plastic Pellets, Natural Products, and CO2 (Dry Ice); discuss the following for each:
- Theory of operation
- Equipment overview
- Training required
- Types of grit
- Applications
Abrasive Blasting (Con’t)

- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

Sponge Blasting

- Theory of operation
- Equipment overview
- Training required
- Types of sponge
- Applications
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

Hydrolase/Water Blasting

- Theory of operation
- Equipment overview
- Training required
- Applications
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

UltraSonic

- Theory of operation
- Equipment overview
- Training required
- Liquids used
- Applications
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

Strippable Coatings

- Theory of operation
- Equipment overview
- Training required
- Materials used
- Applications
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

CHEMICAL

- Theory of operation
- Chemical agents used (discuss most commonly used agents in use today)
- Applications
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

ELECTROCHEMICAL

- Theory of operation
- Equipment overview
- Training required
- Materials used
- Applications
- Effectiveness
- Safety precautions
- Waste generation & disposal
- Advantages & disadvantages

OTHER METHODS

Discuss new technologies and other methods which have shown positive results but are still under development.
- Biological
- Laser & Heat Sublimation

REVIEW & OPEN DISCUSSION

Brief review of decontamination methods discussed along with recap of advantages and disadvantages. Open the floor for general discussion and possibly address individual needs of attendees if desired.