

Lab Name: Thermal Spray Systems Lab – Combustion Wire Systems and Coatings

Lab Duration: 1 Day

Lab Outline: System Components & Set Up

Overview of the initial setup of your combustion wire system and associated components and the purpose of each piece. Topics are location of components, regulators, flowmeters, hoses, gases, operator safety, facility needs, troubleshooting and common mistakes.

Combustion Wire Coatings

A discussion of the fundamentals of substrate preparation, material selection, bonding and various finishing methods for successful combustion wire thermal sprayed coatings.

Combustion Wire Systems

Detailed, hands-on workshop covering the gun parts, system components, lighting and operation of a typical combustion wire system. Students also learn the basics of spray parameters, equipment maintenance, recognizing coating quality and signs of equipment fatigue or part wear and problem resolution.

Summary: Attendees will learn a basic working knowledge of Combustion Wire system operation and an understanding of the parts, components and requirements needed to begin using and maintaining these systems for their intended purpose. It is not a fully comprehensive thermal spray operator course and is solely intended to familiarize attendees with the system and its use and performance.

Lab content is geared specifically to the use of the Thermal Spray systems outlined above. It is not intended to cover complete safety, safe handling of gases, Federal, State or Local laws or any regulations regarding operation/use/disposal of controlled, regulated, hazardous or dangerous materials or by-products.

It is imperative that all Thermal Spray Operators follow manufacturer's instructions on the safe operation of their respective equipment and fully understand all of the associated literature, risks, requirements and regulations regarding equipment and materials used.