The Macrogram

January 14, 2014
Topic: Advanced Diagnostics Techniques for Thermal/Cold Spray processes: Fundamentals & Applications
Speaker: Luc Pouliot, Eng., M.Sc.A.
Chief Operating Officer
Tecnar Automation Ltd.
St-Bruno, Quebec (www.tecnar.com)

Directions: Directions: The Adams Mill, 165 Adams Street, Manchester, CT 06042, Ph: 860-646-4039 (www.theadamsmill.com/directions.htm)
I 84 Take exit 62, from west turn right onto Buckland Street, continue straight for less than a mile (Buckland Street turns into Adams Street by the Manchester Honda Dealership), From east turn right at end of exit and right at light onto Buckland and follow directions above. The restaurant is on the left, a brick building set back off the road.

Agenda:
Cocktails: 5:30-6:30 PM  Program Charges:
Dinner: 6:30-7:30 PM  Regular Members - $28
Program: 7:30-8:30 PM  Young Professionals - $20
Entrées must be pre-Ordered
- Chicken Adams
- Roast Prime Rib of Beef
- Fresh Oven Roasted Salmon Fillet
- Vegetarian

Technical Chairperson: Joe Kubinski
Reservations: Call Linda at Service Steel Aerospace 203-906-6381 or thomas@ssa-corp.com by noon January 10th

Abstract:
Thermal/Cold spray processes (Plasma, Flame, HVOF, Wire-arc & ColdSpray) are used for several decades now in order to apply functional coatings on various substrates/parts. Around the mid 80’s, the thermal spray community recognized that in order to bring thermal spray processes to the next level, there was a need for sensors able to provide real-time, in-flight particles information just before impingement on the part. Various researchers around the world started to develop such sensors. In the case of thermal spray, the particles are very hot so they emit IR radiation. That radiation is used to actually “see” the particles & in turn characterize them (temperature, velocity, size, flux, trajectory). In the case of ColdSpray however, the approach consists of shining light on them and looking at the scattered light. TECNAR is THE leader in the field of diagnostics sensors for thermal/cold spray processes control with more than 350x sensors out in the field all around the world. During this talk, fundamentals & challenges intrinsic to in-flight particle characterization will be discussed, as well as practical use of such sensors on the production floor.

Bio:
In 1994, after completing his graduate studies in Engineering Physics at Montreal’s Ecole Polytechnique, Luc Pouliot pursued his career as a researcher in the field of micro-sensors and actuators. During that period, he was deeply involved with the development of gas sensors (CO₂, SO₂, NOₓ) for domotic applications as well as with the development of high-speed transistors based on III-V semiconductors. He then moved on from the academic to the private sector and joined TECNAR where he pioneered the commercialization of the DPV-2000, the first particle sensor for thermal spraying and still the reference in the thermal spray research community. He was appointed director of TECNAR’s new Thermal Spray Division in 1999. In the following years, he grew the business and diversified its product portfolio to consolidate TECNAR’s worldwide leadership in the field. The Accuraspray is now TECNAR’s Thermal Spray Division flagship with more than 250 units sold in 30 different countries around the world. In May 2008, as TECNAR was going through a period of restructuring and accelerated growth, Mr. Pouliot took on the challenge of overseeing the operations of all of the company’s four divisions. As Chief Operating Officer, Luc Pouliot’s main focus is to maintain an efficient JIT supply chain, to ensure that the company’s four divisions deliver high-quality products that meet international & local standards, to lead TECNAR towards ISO qualification and to further grow & maintain an already very efficient service organization. Mr. Pouliot also remains in charge of TECNAR’S Thermal Spray division, and as acting President of the ASM’s Thermal Spray Society (http://tss.asminternational.org/portal/site/tss ), he is still deeply involved in that community.