

Special Issue on Thermal Spray Technology

CALL FOR PAPERS

Thermal spray is a surface modification technique where solid, semimolten, or molten feedstock powders from metals to ceramics are propelled towards and deposit onto the target surface to form the coating. So far, a variety of thermal spray processes (e.g., HVOF, plasma spray, flame spray, wire arc spray, and cold spray) have been developed and widely applied in a broad range of industries including aerospace, automatic, energy, medical, and marine industries. The thermal sprayed coatings provide effective protection against high temperature, corrosion, erosion, oxidation, wear, chemicals, bacteria, and so on. Particularly, certain thermal spray processes can be utilized as an additive manufacturing technique to fabricate standing-free parts or restore damaged components. Given the aforementioned advantages and great potentials, investigations regarding thermal spray processes are always a focal subject and attracting great attentions from both scientific and industrial communities.

The objective of this special issue is to provide contributions from a variety of topics relating to the fundamental study and application of thermal spray technology and to highlight the most recent advances in all related subjects. We encourage the submissions of original research articles and review papers on this subject.

Potential topics include but are not limited to the following:

- ▶ HVOF, plasma spray, flame spray, wire arc spray, and cold spray
- ▶ Powder technology
- ▶ Gas flow, particle motion, and heat transfer
- ▶ Stress and strain analysis
- ▶ Coating deposition mechanism
- ▶ Single particle deposition and solidification upon impact
- ▶ Coating mechanical and thermal properties
- ▶ Coating microstructures and phase transformation
- ▶ Functional coatings
- ▶ Torch design and optimization
- ▶ New thermal spray technology
- ▶ Robotic programming and kinematic analysis
- ▶ Torch trajectory definition and optimization
- ▶ Novel applications of thermal spray coating
- ▶ Mathematical and theoretical analysis on related subjects
- ▶ Finite Element Analysis on related subjects
- ▶ Computational Fluid Dynamics modelling on related subjects

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/amse/tst/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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