

Tipo di tesi: Laurea Magistrale

Corso di Laurea: Area dell'Ingegneria Industriale

Tipologia: Sperimentale

Titolo della tesi: Laser treatment design and testing to reduce the optical reflectivity of copper alloys, molybdenum, and tungsten

Proponente: M. Dalla Palma

Relatore Accademico: L. Giudicotti

Capogruppo: M. Dalla Palma (Gruppo Ingegneria del Plasma)

Argomento della tesi: The student will contribute to the design and testing of a laser surface treatment conceived to roughen the surfaces and, as a consequence, to reduce the optical reflectivity of materials. The laser will be used to treat samples of calorimeter dumping surfaces made of copper alloys, molybdenum, or tungsten that should provide reduced reflectivity to be observed with thermal imaging cameras. Surface morphology and material continuity will be examined (SEM) together with chemical composition and crystalline configuration (TEM) in particular for the effects on the mechanical strength. A thermal imaging camera and a thermocouple will be integrated in the system to evaluate the effectiveness of the treatment.

Data della proposta: 13/11/2019

Stato: non assegnata

Laureando/a: ---