

MATERIALS AND STRUCTURES SYMPOSIUM (C2)
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ADDITIVE MANUFACTURING: A GROWING PARADIGM FOR ADVANCING SPACE MATERIALS

Abstract

Considered as an enabling technology for future missions, electron beam additive manufacturing (EBAM) deposits metallic materials, using a wire feedstock through a layer by layer process to form near net shape components, within a vacuum operational environment that resembles in-space conditions. Specific advantages of the EBAM process are the relatively large build envelop – that becomes infinite for in-space production – combined with the high material efficiency (nearly 100