

Title (en)  
HIGH-STRENGTH ALUMINUM ALLOYS FOR STRUCTURAL APPLICATIONS, WHICH ARE PROCESSABLE BY ADDITIVE MANUFACTURING

Title (de)  
MITTELS ADDITIVER FERTIGUNG VERARBEITBARE HOCHFESTE ALUMINIUMLEGIERUNGEN FÜR STRUKTURANWENDUNGEN

Title (fr)  
ALLIAGES D'ALUMINIUM À HAUTE RÉSISTANCE POUR APPLICATIONS STRUCTURALES, QUI PEUVENT ÊTRE TRAVAILLÉS PAR FABRICATION ADDITIVE

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Application  
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Abstract (en)  
[origin: WO2021198231A1] The present invention relates to pulverulent aluminum alloys having Cu, Zn or Si/Mg as most relevant alloy elements, the alloy further having a content of 1 to 15 wt.% of metals selected from the group M1 comprising Mo, Nb, Zr, Fe, Ti, Ta, V, and lanthanoids. Such aluminum alloys can be used in additive manufacturing methods, such as selective laser melting for producing high-strength three-dimensional objects which are free from hot cracks. The present invention further relates to methods and devices for producing three-dimensional objects from such aluminum alloys, to methods for producing such pulverulent aluminum alloys, to three-dimensional objects which are also produced by such pulverulent aluminum alloys, and to specific aluminum alloys.

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