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| Nota di contenuto | High Performance Turning of High Temperature Alloys on Multi-Tasking Machine Tools -- Impact of clamping technology on horizontal and vertical process chain performance -- Simulation of the NC Milling Process for the Prediction and Prevention of Chatter -- Improved quality of drilled holes in laminated carbon fiber reinforced plastics via laser-preprocessing -- Flexible Production of Small Lot Sizes by Incremental Sheet Metal Forming with Two Moving Tools -- Dedicated Machine Tool Development for Blisk milling -- Surface characterization of components subjected to deep rolling for cyclic loading applications -- Small-scaled Modular Design for Aircraft Wings -- Development of Machining Strategies for Aerospace Components, using Virtual Machining Tools -- Influence of 5-axes-kinematics geometrical accuracy in riblet manufacturing processes -- Hölscher New technology for high speed cutting of titanium alloys -- Cutting Lightweight Materials with Surface Modified Tools -- Process force and stability prediction of end mills with unequal helix angles -- High Rate Production of laminar Wing Covers- With modular “Shoe Box” tooling -- Simulation of Residual Stress Related Part Distortion -- Increasing Accuracy of Industrial Robots in Machining of Carbon Fiber Reinforced Plastics -- Brecher Production of customized hybrid fiber-reinforced thermoplastic composite components using laser-assisted tape placement -- Efficient production of CFRP lightweight structures on the |

basis of manufacturing considerations at an early design stage -- Influence of the Fiber Cutting Angle on Work Piece Temperature in Drilling of Unidirectional CFRP -- Increase of process stability with innovative spindle drives -- Towards a CAx-Framework for adaptive programming using Generic Process Blocks for Manufacturing -- The initial analysis of Ethernet bus for monitoring HSM process in Aerospace Industry -- Producing better turbines by using process monitoring and documentation technologies -- From Fuzzy Maintenance, Repair and Overhaul Data to Reliable Capacity Planning -- Machine tool thermal errors reduction for 5-axis machining of aircraft parts -- Recycling of aluminum chips by hot extrusion.

Sommario/riassunto

This contributed volume contains the research results presented at the 4th Machining Innovations Conference, Hannover, September 2013. The topic of the conference are new production technologies in aerospace industry and the focus is on energy efficient machine tools as well as sustainable process planning. The target audience primarily comprises researchers and experts in the field but the book may also be beneficial for graduate students.