
Description:
In yet another first, the author presents the first ever multi-market deep dive research study into additive manufacturing with nickel alloys utilizing powder based AM/3DP and other AM technologies. This study is complimentary to our research portfolio in metal additive manufacturing materials and related applications, and looks into the world of nickel alloys and the current and future potential for short run and serial production utilizing various AM techniques.

Nickel based additive manufacturing is centered around superalloys ranging from Inconel to Hastelloy variants, with potential for a huge amount of material customization to fit a wide range of applications where highly resistant alloys are required. Though the aerospace industry is driving the vast majority of production opportunities in nickel AM, power generation and oil and gas applications also now have parts made of nickel superalloys by laser powder bed fusion systems in full-on production worldwide. This, along with tertiary emerging opportunities in both automotive and healthcare opportunities are combining to make nickel additive manufacturing the second most demanded material for AM processes over the next decade behind the diverse steel material segment.

With electron beam melting technology now growing in its use of popular Inconel 718 alloy since it's blanket qualification for use in Arcam technology in late 2014, the landscape for driving additive manufacturing technologies in the use of nickel superalloy printing is changing. Meanwhile, supply chains for nickel alloy powder are expanding, with Alcoa/Arconic and ATI Metals both targeting production of such powders for additive manufacturing.

As a specialty study in a specific material, this report presents our latest -- and highly granular -- market forecast data as well as critical market analysis for use of nickel alloys in key industries adopting AM, as well as considerations for the future adoption and use in other applications. The primary opportunity factors related to the broader supply chain, primary providers of AM nickel powder and other forms, and analysis of the print technologies and powder production processes all combine to help business development and strategy professionals determine how to focus their efforts in nickel powder, parts, and print technologies.

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