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Findings on Materials Science Discussed by Investigators at UTBM

By a News Reporter-Staff News Editor at Journal of Technology -- Investigators discuss new findings in Materials Science. According to news reporting from Belfort, France, by VerticalNews journalists, research stated, "TiC reinforced FeAl intermetallic matrix composite parts were successfully fabricated by selective laser melting using mechanically blended powders. Top surface and cross-sectional microstructure of FeAl/TiC and pure FeAl parts were observed by scanning electron microscopy and optical microscopy."

The news correspondents obtained a quote from the research from UTBM, "The microhardness and modulus of elasticity were compared. The wear resistance of the melted parts was investigated, and the wear mechanisms were discussed based on worn surfaces and wear debris examinations. TiC reinforced FeAl intermetallic matrix composite bulk parts present a relatively smooth and dense melted microstructure, and there are two phases in the composite part. Unmelted TiC reinforcements uniformly dispersed in the matrix."

According to the news reporters, the research concluded: "Compared with the pure FeAl parts, FeAl/TiC composite parts have a higher microhardness, an enhanced modulus of elasticity and a much better wear resistance, displaying much lower wear rate."

For more information on this research see: Characterisations of TiC particle reinforced FeAl composite part fabricated by selective laser melting. *Materials Research Innovations*, 2014;18(1):50-56. *Materials Research Innovations* can be contacted at: Maney Publishing, Ste 1C, Josephs Well, Hanover Walk, Leeds LS3 1AB, W Yorks, England. (Springer - www.springer.com; Materials Research Innovations - www.springerlink.com/content/1432-8917/)

Our news journalists report that additional information may be obtained by contacting B. Song, UTBM, IRTES LERMPS, F-90010 Belfort, France. Additional authors for this research include S. Dong, H. Liao and C. Coddet.

Keywords for this news article include: France, Europe, Belfort, Materials Science

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