Business from technology

Composite material and method

for its manufacture

New materials are now applied to address issues of thermal management of electronics. Through the use of gel-like, easily molded materials, the heat generated in electronic components can be dissipated in an effective way.

Technology / marketing sector

Pulp & paper, chemistry, environment, machinery, materials, industrial engineering, industrial systems, thermal management materials in electronics.

Summary

There is a gap between polymer and oxide coatings because of the differences in properties. New applications using pure polymer spray benefiting from composite material can fill in the gap. With composite material, proper and adequate coating can be produced. Applications using pure polymer spray benefit from this composite material; properties are drastically improved with remarkable differences. First, corrosion problems are avoided. Second, pure polymer applications are achieved for a wide scope of potential applications while increasing available properties in coating.

How the technology solves the problem

A gap between polymer and oxide coatings, vastly different in properties, is bridged with new and improved properties.

Main features of invention:

- Thermal spraying; powder-like material with the main idea to improve the characteristics of materials.
- Since nylon and polyamide are soft, adding ceramic particles to plastic coating results to higher conductivity involving mechanical properties.

Why partner with VTT?

10 reasons for technology partnering with VTT

1. Key factor in Finland's success story with a track record to prove it
2. Licensing and co-venturing opportunities
3. Portfolio of more than 1,000 patents and inventions
4. New business and product concepts based on strong IP and world class research
5. Combined experience of more than 2,000 motivated researchers in eight focused areas of technology
6. Active member in hundreds of scientific & business communities
7. Excellent track record as coordinator and partner in EU projects
8. Collaboration with TOP 50 R&D companies in Finland
9. Global R&D partnership with 50 Fortune 500 companies
10. Market driven multi-disciplinary solutions

Competitive advantage

Potential applications can be found in industries where thermal spraying is used, especially those requiring the improvement and usage of thermal polymer. In this VTT innovation, hard metals improve resistance. The main method uses a wire form or composite form to rid of flakes (plastic materials stretches or elongates).

Additional information

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