

71. Title: Electro-conductive fabric

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Keywords: Electro-conductive textiles

Domain: Textiles

Summary: A system for polymerization of inherently conducting monomers onto fabrics is developed. The system comprises a power supply, a multimeter, a reaction chamber, and a round bottom flask. The fabric is coated with an oxidant solution before placing it in the reaction chamber. The power supply is configured for applying a constant voltage across the fabric using a set of wires, where the set of wires are coupled to the fabric for transferring the charge. The system increases the amount of polymer formation and deposition over the surface of fabric.

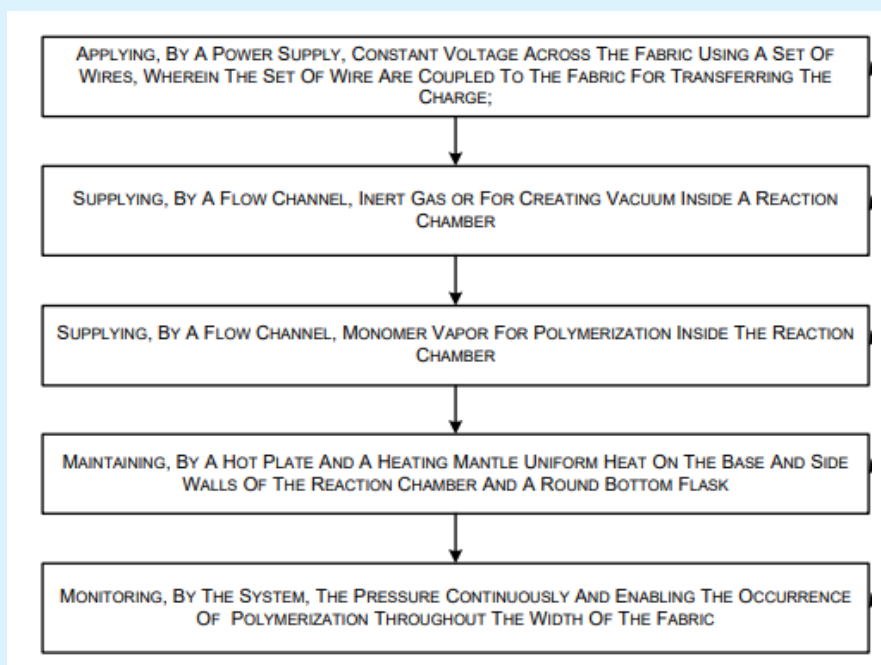


Diagram: Representative image of the process

Advantages:

- » Flexible and non-metallic electro-conductive fabric can be made
- » Conductivity of the electro-conductive textile materials improves

Applications: Textile, electromagnetic shielding, Heating pad, Gas sensor, Moisture sensor, Temperature sensor

Scale of Development: Optimized the technology of manufacturing electro-conductive fabric and validated at laboratory level.

Technology Readiness Level: 4

IP status: Indian Patent Application 202111042564