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(54) **METHOD FOR MAKING A STRUCTURED MAGNETIC MATERIAL WITH INTEGRATED PARTICLE INSULATION**

(57) A system for forming a soft magnetic bulk material of a motor stator from a magnetic material and a source of insulating material, the system comprising: a support; a heating device; a deposition device; and an indexing mask subsystem. The support is configured to support the soft magnetic bulk material of the motor stator. The heating device is for heating the magnetic material to form particles having a softened state. The deposition device is for depositing successive layers of particles of the magnetic material in the softened state on the support. The indexing mask subsystem is configured as a first negative of an inner shape of the motor stator and a second negative of an outer shape of the motor stator. The indexing mask subsystem is located between the deposition device and the support and indexed relative to the support upon deposition of the successive layers to selectively block the successive layers of particles of the magnetic material in the softened state from being deposited on the support, thus forming the soft magnetic bulk material of the motor stator as the inner shape of the motor stator and the outer shape of the motor stator on the support. The soft magnetic bulk material has a plurality of adhered domains of magnetic material, wherein substantially all of the domains of magnetic material are separated by a predetermined layer of high resistivity insulating material.

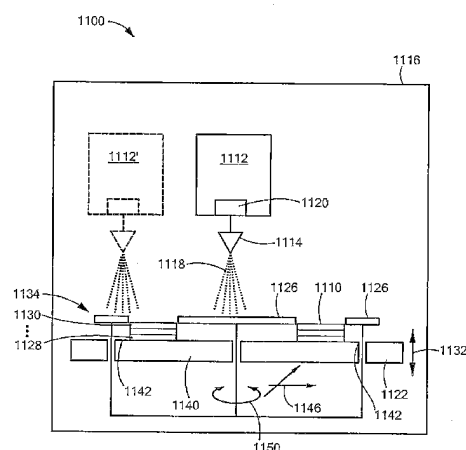


FIG. 37



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			TECHNICAL FIELDS SEARCHED (IPC)
			H01F C23C
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 8 January 2024	Examiner Primus, Jean-Louis
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