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(54) Title: METHODS AND SYSTEMS FOR FORMING STELLARATOR COILS AND SUPERCONDUCTING TAPES

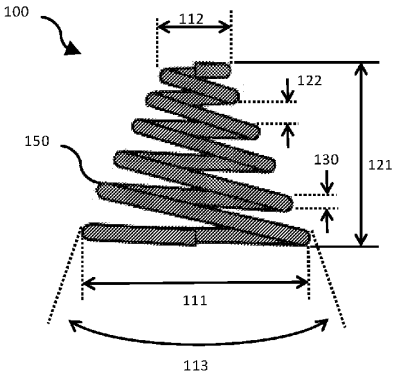


FIG. 1A

(57) Abstract: Provided herein are systems, methods, and techniques disclosed herein to help overcome certain challenges associated with superconducting tape shrinkage in stellarators. Provided herein are methods of forming a stellarator coil with improved volume utilization percentages from a cable bent into a tapered helical shape. Provided herein are methods and systems for generating a coil. Provided herein are methods and systems used for stabilizing high-temperature superconducting (HTS) tapes, including using a structure composed of a thin spine and struts to suspend the HTS tapes. Provided herein are insulations materials for high temperature superconductors. Provided herein are systems, methods, and techniques for using independent bobbins for dispending each layer of superconducting tape to a stellarator coil.

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