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## **M1Or3F-04: Nb<sub>3</sub>Sn conductors with high specific heat**

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It is very desirable to reduce the long training for Nb<sub>3</sub>Sn magnets. Increasing the specific heat ( $C_p$ ) of Nb<sub>3</sub>Sn conductors can significantly increase their energy margin, and thus may be a promising approach to reduce the magnet training. We developed a design to add high- $C_p$  materials into Nb<sub>3</sub>Sn strands in 2017, which is compatible with standard Nb<sub>3</sub>Sn wire production process, and this design does not affect Nb<sub>3</sub>Sn conductor  $J_e$ . Here we report our recent progress in the development of such high- $C_p$  Nb<sub>3</sub>Sn strands toward magnet-grade conductors. By optimizing strand design (e.g., positioning of the high- $C_p$  filaments in the strands, recipe of the high- $C_p$  filaments, and selection of the high- $C_p$  materials), presently strands with excellent drawability and significant  $C_p$  increase can be routinely produced. Long-length high- $C_p$  wires are being fabricated. Finally the plan to build model coils using such conductors to investigate the effect on magnet training will be discussed.

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