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60 Tesla Pulse Coil Design and Manufacturing Facility

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The pulse magnet program located at Los Alamos National Laboratory (LANL) has partnered with the National High Magnetic Field Laboratory (NHMFL) in developing a new winding facility for the revised design of the 60T pulse coil. The NHMFL has been contracted to manufacture coils 3, 4, and 7 for the 60T coil assembly. The new winding facility has upgrades that include a new payoff machine, automated taping machine, pitch guided rollers, upgraded winding machine, and improved epoxy impregnation. In addition to the new winding facility several design modifications were implicated into the coils to reduce operation stresses and ease in manufacturability. Details on specific design changes, tooling upgrades, manufacturing processes, and quality control are presented.

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