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PD/P8-06: ITER Central Solenoid - Design and Analysis of Support Structure and Interfaces

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The ITER Central Solenoid (CS) is comprised of six independent coils held together by a pre-compression support structure. The solenoid is supported from the bottom of the toroidal field (TF) coil casing in both the vertical radial directions by a unique vertical flex plate design. This design provides the needed radial flexibility, as the two systems move with respect to one another, while maintaining structural integrity for the most severe category IV vertical loading. The lower support is connected to the CS coil using large mechanical fastening methods utilizing Superbolt® technology. It is connected to the lower TF flange using a bearing ledge and fastening bolts.

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Country or International Organization of Primary Author

USA

Primary author: Mr FREUDENBERG, Kevin (Oak Ridge National Laboratory)

Presenter: Mr FREUDENBERG, Kevin (Oak Ridge National Laboratory)

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