

DESIGN REVIEW DOCUMENTATION – RESULTS

Title: Twisted Racetrack Winding and Asm Peer Review _____ **WP#:** _____ (ENG-032)

Type of Review: Peer CDR PDR FDR

Cog Individual: D. Williamson _____ **Date of Review:** ___ April 16, 2004 _____

Review Board Members:

Invited attendees :

Chairperson L. Dudek _____	QA J. Malsbury _____	S. Raftopoulos _____
B. Nelson (ORNL) _____	M. Cole (ORNL) _____	H. Neilson _____
P. Miller (ORNL) _____	D. Williamson (ORNL) _____	G. Gettelfinger _____
K. Freudenberg (ORNL) _____	J. Chrzanowski _____	P. Heitzenroeder _____
P. Goranson (ORNL) _____	T. Brown _____	_____
Regulatory Compliance _____		

Items Reviewed:	Sat.	Unsat.	Comments
Appropriate requirements identified	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Development plans and schedules	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Regulatory compliance including USQD and NEPA	<input type="checkbox"/>	<input type="checkbox"/>	Not Presented _____
Disposition of CHITS from previous reviews	<input type="checkbox"/>	<input type="checkbox"/>	NA _____
Cost objectives	<input type="checkbox"/>	<input type="checkbox"/>	Not Presented _____
Other review objectives addressed (attachment 4 of ENG-033)	<input type="checkbox"/>	<input type="checkbox"/>	_____

SUMMARY OF RESULTS: Eleven (11) Chits were generated and dispositioned at the review. Five of the chits concerned issues surrounding the chill plates. There is still considerable uncertainty surrounding the manufacturability of the chill plates. The design requires the plates be formed in complex shapes by hand, this may result in either extended fabrication time (cost) or parts that won't meet tolerances. The twisted racetrack coil will serve to prove or disprove the validity of the chill plates design and provide information on how to proceed from this point.

There is also a chit concerning the analysis requiring a review of the analysis for non-linearity induced by the large deflections (reformulation of the stiffness matrix).

After resolution of the chits, the design presented does represent the desired features of the prototype and production modular coils. The design meets the requirement of a pre- prototype article inspection, measurement, diagnostic, and testing. Drawings are ready for fabrication. For the most part this design is in good shape, the exception being the chill plates.

Disposition: [check one]

_____ **Acceptable**

Acceptable pending resolution of concerns- CHITS identified above must be resolved prior to installation.

_____ **Incomplete** - Additional design work is required prior to another design review.

Chairperson Signature: _____ **Date:** _____

Distribution: Review Board Members, Operations Center, Cognizant Design Engineer, System Engineer(s), Attendees, QA, ES&H