



ENG-033 - CDRS - CDR SUMMARY

TF Inner Bundle Laser Twist CDR Summary

NSTXU_1-7-3-4-5_CDRS_100

Work Planning #:
Effective Date: **02/28/2020**
Prepared By: **George D. Loesser**

Reviewed By	George D. Loesser, Design Review Chair	02/28/2020 10:06:25 AM
Reviewed By	Yusi Cao, Cognizant Individual	02/28/2020 10:03:10 AM
Approved By	Brentley C. Stratton, Responsible Engineer	02/28/2020 11:12:52 AM



Title: INNER TF BUNDLE TWIST LASER MEASUREMENT

CAT: ☐ A1 ☒ A2 ☐ A3

Type of Review: ☐ Peer ☐ CDR ☐ PDR ☐ FDR

Cognizant Individual: Austin Cao Date of Review: OCT 4th 2019

Review Board Members:

D. Loesser Design Review Chair and ME TA
P. Titus TA, Analysis
M. Cropper SME, Operations
T. Stevenson Operations
A. Khodak, Analysis
P. Dugan Systems Engineering
N. Gerrish or H. Wetzel ES&H
A. Castaneda QA Representative
R. Ellis COG, Diagnostics
Y. Zhai NSTX-U Project Engineer

Invited Attendees:

A. Cao
B. Stratton
S. Gerhardt
R. Hawryluk
L. Hill
J. King - DOE PPPL QA
S Horst
R. Bell

Conceptual Design Review:

Charge Letter and Review Panel confirmations	X
Minutes of underlying peer reviews	N/A
Chit closure report underlying peer reviews	N/A
Requirements	X
Interfaces	X
Design Review Results	After

SUMMARY OF RESULTS:

The TF inner bundle will twist under imposed EM load during operations. A combination of strain gauges and external measurements will be used to monitor the twist. For the external measurement, it is proposed to install a laser reflector system to assess the twist at the top of the bundle in both the laminated and delaminated coil states. A proposal to mount a laser, a reflector, and a detector in a configuration that provides suitable sensitivity for comparison to expected twist values.

(6) CHITS were generated and dispositioned.

The review was deemed to be successful and a wavier to proceed to FDR skipping PDR was rejected.

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



Review Chair Person _____ Date: _____

Cognizant Individual Acceptance _____ Date: _____

Distribution: Review Board Members, Operations Center, Responsible Engineer (RE), Cognizant Individuals, Project Manager, Project Director, relevant Technical Authorities (TAs), Chief Engineer (CE), Fire Protection Engineer, Attendees, QA, ES&H, Security, Requesting & Performing Dept. Head

Revised 9/12/19