



71-980224-CLN-01

TO: DISTRIBUTION
FROM: C NEUMEYER
SUBJECT: HEATING/COOLING INTERFACES

There are many unresolved interface issues related to the heating and cooling of the vacuum vessel and internal hardware, which need to be resolved ASAP. A meeting has been scheduled for Friday, 27 February, 2:00 pm, in the NSTX Conference Room to discuss same. Please plan to attend and to address the issues as identified in the following table. It would be highly desirable if the cog individuals identified in the table could do some thinking in advance of the meeting so as to have information and proposals, etc., available at the time of the meeting.

| Parameter | Bakeout | Ops | Issue(s) | Cog(s) |
|--|------------|------------|---|---|
| Heating/Cooling System Heat Flow | 50kW | -100kW | | |
| Non-Center Stack PFC Surface Temperature | 350C | 50C | 1) What Dowtherm supply temperature req'd to ensure 350C temperature at PFC surface? 2) Where is the interface between the Heating/Cooling System and the PFCs? | 1) A Brooks/HM Fan 2) R Parsells/G Barnes/B Nelson |
| Center Stack PFC Surface Temperature | 350C | 600C | 1) What is the plan for the bakeout ohmic heating power supply? 2) How are the connections for the power supply made? | 1) R Parsells/S Ramakrishnan 2) M Viola/G Barnes/S Ramakrishnan |
| VV Domes | don't care | don't care | Can the temperature float? | HM Fan |
| VV Cylinder | 150C? | 50C? | 1) Should these temperatures be fixed, or can they float? Is the 50C crucial for CS radiative cooling? Assuming active cooling is req'd... 2) Heat load 3) Cooling circuit(s) layout, flow, ΔP , ΔT 4) Where is the interface between the Heating/Cooling System and the VV? | 1) A Brooks/HM Fan/M Viola 2) HM Fan 3) R Parsells/M Viola 4) R Parsells/M Viola |
| VV Ports | 150C | 50C | Same as 2),3),4) above | Same as 2),3),4) above |
| VV Port Covers | TBD | TBD | 1) Which ports will need to be held at what temperatures 2) Same as 2),3),4) above | 1) R Kaita/D Johnson 2) Same as 2),3),4) above |

cc:

G Barnes

A Brooks
J Chrzanowski
L Dudek
HM Fan
P Heitzenroeder
D Johnson
R Kaita
M Kalish
M Ono
R Parsells
S Ramakrishnan
M Viola
M Williams

NSTX File