

**National Compact Stellarator Experiment (NCSX) SubC# S005243-F
Vacuum Vessel Sub Assembly Production**

Weekly Status Report 01/06/05 thru 01/12/05

Project Management

- The monthly status report submitted last week showed a delay in some portions of the schedule. There are three types of bars that layout the contracted, progress and planned dates. The bar for the planned dates, details the projected completions for tasks that are running over contracted time.
- The majority of schedule delays are a result of an issue that seems to be getting bigger each week: The understanding between MTM and PPPL was that the profile would change only slightly (no more than 3/4 of an inch). Some areas have changed more than 6 and 7 inches. See following pages showing the changes.
- The first set back was learning that ten dies would be needed when our original plan had nine dies. This was learned when laying out the segmentation scheme. We tried many different schemes but the more dramatic shape forced the need for another panel so that the panels would be more balanced, not too big and not too highly shaped.
- The dramatic change in shape played a part in the decision from our fabrication team to make the entire vessel over nominal during the initial fabrication process. The topic created many meetings within MTM resulting in the question we presented to PPPL, "which would be a greater risk; having the part over sized on the majority of vessel wall surfaces or excepting some sucking-in around the port areas"?
- Even though the question of nominal or oversized was answered quickly by PPPL the entire panel scheme and the fixture plan took six weeks longer than originally planned. This has had a ripple effect on the schedule with no change in the contracted deliveries.
- The latest delay is evolving; we are trying to fit the new die geometry into the prototype die geometry without much success. The extent and impact of not being able to reuse the old dies is not yet known. The following pages show the prototype die geometry and new geometry.

Process Engineering

- Working on die and fixture designs and detailing.

VVSA Fabrication

- None

Quality Control & Drawings

- Continuing with Procedure Writing and Structuring

Initial Concept of 60 deg Fixture

60 Degree Section concept was reviewed by the team at MTM and some changes were requested to aid in the fabrication and machining. The final design will be ready soon.

The following pages are pictures showing the prototype model laid in with the current model and some of the new dies laid in the old dyes.















