October 1, 2004

NCSX Procurement update

Vacuum vessel: the subcontract with Major Tool was signed on Sept. 24 2004.

Modular coil winding forms: the EIO team is planning a kickoff meeting for the production program on Oct. 11-12. Project representatives will also participate.

The EIO team reported progress on the pattern design and flow solidification modeling for the first casting, which has been started under the manufacturing development contract. They forecast that the first winding form will be delivered on schedule.

Modular coil conductor: a subcontract for the production order was signed with New England Wire Technologies, Inc., of Lisbon, NH, on Sept. 30.

NCSX Weekly Highlight (H. Neilson)

The Laboratory awarded a subcontract to New England Electric Wire Technologies of Lisbon, NH, to manufacture the conductor for the NCSX modular coils. The order consists of 48,000 feet of insulated copper rope, compacted to meet NCSX dimensional specifications and achieve a high copper fraction. The conductor design is supported by the results of the project's manufacturing development program, which resolved issues associated with fabricating the conductor and with controlling its behavior during the coil winding process.

The NCSX project has accomplished its objectives for testing and refurbishment of neutral beam heating equipment. The work was led by Tim Stevenson. The beamlines, which were formerly used on the PBX-M project, were removed to the ESAT building for evaluation and storage during NCSX construction. Two were leak-checked and brought to operating vacuum. Cryopanels and sources were leak-checked. The AC power system received needed maintenance, including breakers, cabling, transformers, and insulation. The AC system was tested and then energized up to and including the rectifiers. The rectifiers were exercised using the existing phase controls. The ignitron rectifiers were cleaned and hi-potted individually prior to system testing, in which they pulsed properly into an open circuit. To accomplish this stage of testing, the local rectifier water system was reassembled, tested and operated. The modulator cabinets were investigated and pressurized with de-ionized water. All of the high voltage switch tubes were checked and the systems were high voltage tested.