HSO - SPIRE & PACS Sorption Coolers - February 2001 Progress Report

Bonjour,

GENERAL

- The general design of the SPIRE and PACS sorption coolers is done. A subcontractor has been selected for the detailed drawings and is currently working on them. Drawings are expected to be available end of march.

- Reliability analysis (FMECA) : Draft version is now available (done by LGM Consultant). We are currently reviewing the document.

- Quality assurance : "Bureau Veritas" (BV) has been selected to support SBT for these tasks. Patrick Dupont (from BV) has been appointed Cooler PA manager - Francoise Loubere from CEA-SAp is the overal PA manager. In addition decision has been made at CEA-SBT level to also develop an in-house PA skill: Didier Guillaume (CEA-SBT) has been appoined PA "correspondant" and will participate to the cooler project.

COOLER DESIGN

- The overal design of the cooler is done.

- Numerical modeling of the overal cooler still in progress

ACTIONS LIST

- None

VARIOUS

- Kevlar creep : first set stopped after 5 months of creep (behaviour as expected - analysis to be performed). A new set will be initiated with the same cord after being baked out at 80°C.

- Tensiometer : to be done

DOCUMENTS STATUS

These are the documents which were written specifically for SPIRE/PACS.

* CEA-SBT

* Title : "SPIRE SORPTION COOLER DEVELOPMENT PLAN"

PL/SBT/SPIRE/2000-01 Issue : 2 - Revision : 1

modification : none

* Title : "SPIRE SORPTION COOLER SPECIFICATIONS"

GS/SBT/SPIRE/2000-01 Issue : 2 - Revision : 5

modification : none

TECHNICAL NOTES SERIES

* Title : "THERMAL COUPLING OF THE SORPTION PUMP TO THE COLD HEAT SINK. HEAT SWITCH VERSUS PASSIVE LINK"

TNS1 Issue : 1 - Revision : 1

modification : none

* Title : "DISCUSSION ON 4 LITERS VERSUS 6 LITERS UNIT & ULTIMATE TEMPERATURE IMPROVEMENT"

TNS2 Issue : 1 - Revision : 0

modification : none

* Title : "TEMPERATURE REGULATION"

TNS3 Issue : 0 - Revision : 0

modification : none

* MSSL + CEA-SBT

* Title : "ICD 1.1/1.3 STRUCTURE/COOLER"

SPIRE-MSS-PRJ-000331 Issue : 0 - Revision : 2

modification : none