



AMS 02 –TTCS



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# AIDC status & concern on current TTCS Program Development

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## Condenser Overview

- Condenser(2EM+1QM+4FM) schedule
  - **EM#1 and EM #2**----2007.09.18 (**Completed**)
    - 2007.09.18 completed and sent to SYSU.
  - **QM**----**2007.11.29 (TBC, needs to re-schedule)**
  - **FM**--- 2008.02.07(TBC)





## ☰ TTCS Overview-AIDC concern

- Condenser(2EM+1QM+4FM) major driven factors to schedule impact
  - New **drawings**---waiting NLR provide the drawing to manufacture the brazing plate (JIG) & bending tool. (**now delay, will be delivered by October 26**)
  - **Manifold**---waiting INFN provide the new manifold to perform the brazing test samples
  - Heater wire soldering ---waiting NLR provide the solder to perform the test
  - PS. 51 pieces INCONEL 718 tubes (OD 3.15mm, total length 287 m) have arrived AIDC.



## ☰ Heat exchanger Overview(1/2)

- Heat eXchanger (2FM+1QM)

- FM---2007.10.15 (now Delay)

- QM----2007.11.15 (will Delay)

- **Because 1<sup>st</sup> Brazing sample is not satisfied**

- Brazing test--Finished one test sample, but the result is not good. Plan to perform 2nd test sample..

- Pass He-leakage test.(1<sup>st</sup>)

- Destruction visually check is not good.(1<sup>st</sup>)

- **Need perform second test sample**

- **FM / QM Brazing parts**

- Heater exchanger plates are ready.





## ☰ Heat exchanger Overview(2/2)

- Heat eXchanger(2FM+1QM)

- Orbital welding

- Orbital welding test

- Completed orbital welding parameter set test

- Test sample will send to NASA inspection in near future

- Inconel 625 material: Waiting INFN to provide material to manufacture for housing & orbital welding test parts

- Heater wire soldering

- need to perform the soldering test





## DELIVERY SCHEDULE-TTCB

PRODUCT DESCRIPTION	QTY	ECD for shipping
<b>FM Primary Box</b>	<b>1 EA</b>	<b>Now :2008 End of March (was 2008/01/18)</b>
<b>FM Secondary Box</b>	<b>1 EA</b>	<b>Now:2008 Mid-April (was 2008/03/14)</b>
<b>QM Box</b>	<b>1 EA</b>	<b>2008/05/19</b>



## ☰ TTCB Overview(1/2)-AIDC concern

- Final Delivery re-schedule to be resolved(based on Oct 11-12 @AIDC meeting)
  - Delay is obvious but AMS shall decide the re-schedule and reveal if the target is acceptable or not
  - AIDC shall have backup window to face the new schedule
- Waiting for TTCB BOX and JIG drawings release on
  - Side plate, base plate, cover, connector panel, jigs and the ribs
  - Over the need date we planned in the beginning (**July-August**) that will impact AIDC final delivery time
  - AIDC needs these drws to prepare manufacturing, process and material evaluation in advance **by this end of October**
  - **AIDC needs these formal final drw delivery no later than the end of November**



## ☰ TTCB Overview(2/2) -AIDC concern

- One of major troublesome issues we face now >> **Orbital tube welding** <<
  - Up-to-date, not any 2D detail drawings to show the physical tube routing inside the box. These drws shall be submitted to AIDC by **August in original plan** (We do have 3D layout for the tube routing but not enough for production)
  - AIDC needs these drawings to build the fixture accessories before the actual welding process start.
  - Moreover, NASA requests that we need to do 13 trial welding sample tubes for their analysis, but it is not schedule yet nor any parts appear in AIDC.
- Lack of firm delivery schedule for raw material supplement from AMS