

S1-G Modules assembly status (20100323)

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S1-G Module-C assembly status

(Completed jobs: Mar. 10~Mar. 20)

- **Mar. 10~11**
 1. Wrapping the SI around the 80K shields.
 2. Inserting the cold mass into the vacuum vessel.
- **Mar. 12~13**
 1. Checking the signal wires.
 2. Moving the Module-C into the STF tunnel and setting the Module-C on the stand.
- **Mar. 15~20**
 1. Welding the cooling pipes between the 2K cold box and the Module-C
 2. Pre-assembly of the thermal shields between the 2K cold box and the Module-C
 3. Making the terminals of signal wires for the feed-throughs
 4. Preparation of Module-A assembly

- March 12~13

1. Wrapping the SI around the 80K shields.
2. Inserting the cold mass into the vacuum vessel.



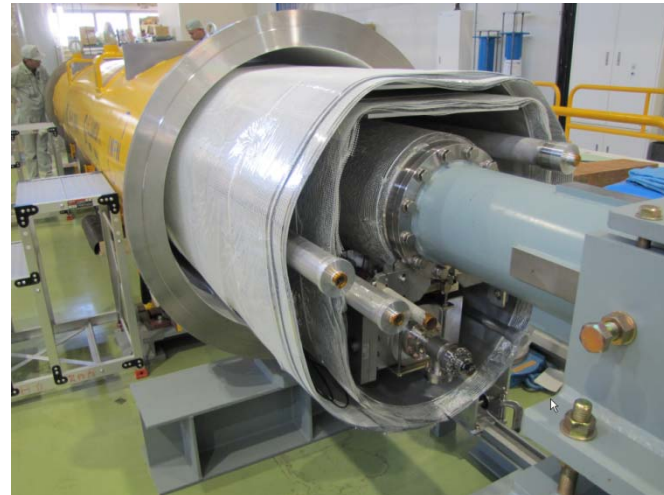
Wrapping the SI around the 80K shield



Moving the cold mass to the insertion area



Setting the cold mass on the equipment



Inserting the cold mass into the vacuum vessel

- **March 12~13**

1. Checking the signal wires.
2. Moving the Module-C into the STF tunnel and setting the Module-C on the stand.



Assembled Module-C



Moving the Module-C into the STF tunnel



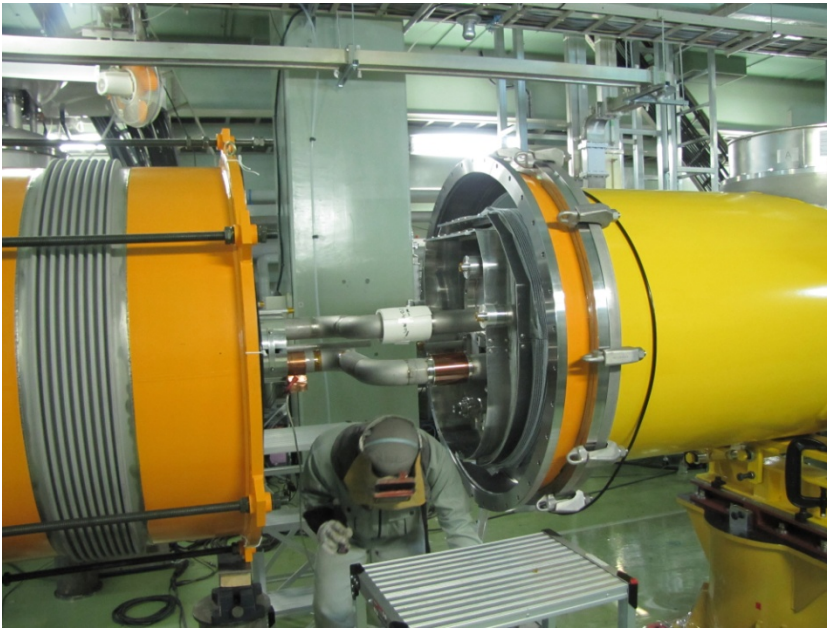
Moving the Module-C into the STF tunnel



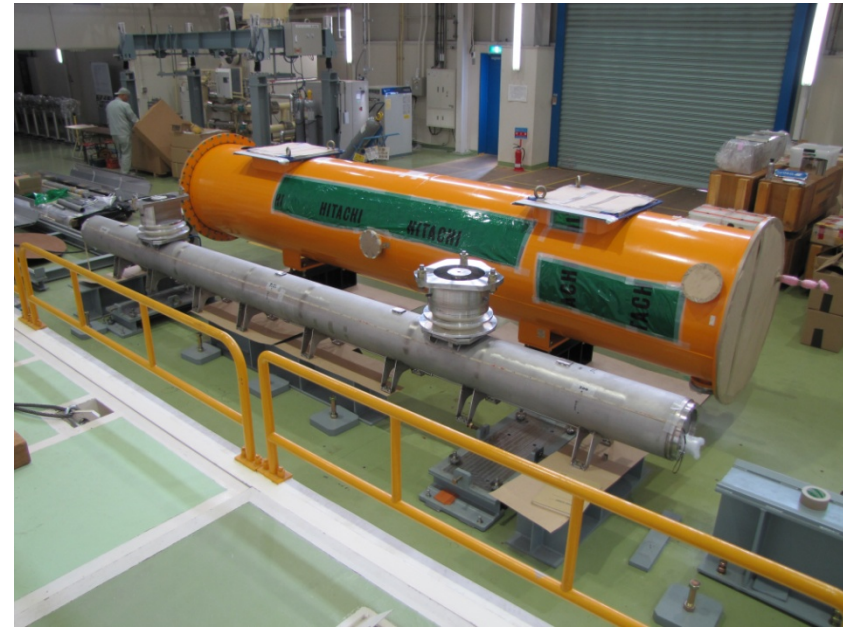
Setting the Module-C on the support stand in the STF tunnel.

- March 15~20

1. Welding the cooling pipes between the 2K cold box and the Module-C
2. Pre-assembly of the thermal shields between the 2K cold box and the Module-C
3. Making the terminals of signal wires for the feed-throughs
4. Preparation of Module-A assembly



Welding the cooling pipes between the 2K cold box and the Module-C



Cryostat of Module-A and the gas return pipe

Assembly Schedule of Module-C (completed)

	2010												
	January				Feb				March				
	4	11	18	25	1	8	15	22	1	8	15	22	29
FNAL/DESY cavity string in the clean room	←→												
Preparation Class 10/1000 assembly work	←→												
FNAL/DESY cavity-string outside of the clean room		←→		←→									
KEK cavity string in the clean room								←→					
Preparation Class 10/1000 assembly work								←→		←→			
KEK cavity string outside of the clean room and assembling tuners										←→		←→	
Module-C assembly	←→												
Checking the item and number of assembly components by the company personnel		←→											
Placing the GRP cold mass under assembly stand			←→										
Preparation for welding liquid helium supply pipe				←→									
Verifying the distance between couplers and cavities					←→								
Welding liquid helium supply pipe and LT						←→							
Clamping 4 Cu straps on the liquid helium supply pipe for one cavity							←→						
Mounting T-sensors on the cavity jackets													
Wrapping SI on the cavity jackets													
Assembling magnetic shieldings and tuner components							←→						
Checking and tuning RF characteristics of cavities and HOM couplers								←→					
Mounting the cavity-string to GRP with C cramps and roller bearing													
Connecting Cu straps to HOM couplers and HOM antenna													
Mounting T-sensors on HOM couplers and Pin-diode													
Connecting RF cables and signal cables to cavities													
Welding flanges to GRP ends													
Wrapping SI on LHe supply pipe													
Installing the cool down and warm up pipe and connecting flanges to jackets													
Assembling temporary support brackets for cold couplers													
Alignment of cavities (measurement of cavity location)													
Locking cavity jackets to Invar rod													
Assembling thermal shield for cold couplers													
Assembling the magnetic shields at the cavity-ends													
Routing the cables and wires from cavities													
Assembly of 5K shields (welding work)													
Connecting heat intercepts of input coupler to 5K shield													
Sensors and wirings on 5K shield													
Checking sensors and wiring, and mounting SI on 5K shield													
Assembly of 80K shields (welding work)													
Sensors and wirings on 80K shields													
Checking sensors and wiring, and mounting SI on 80K shields													
Connecting wires to feed-throughs													
Inserting the cold mass into vacuum vessel													
Fixing the cavity-string axis on the vacuum vessel													
Installing the Module-C in the tunnel													
Connecting cooling pipes of Module-C and 2K Cold Box													
PT and LT of Module-C cooling pipes													
TTF-3 warm coupler installation													

Assembly Schedule of Module-A

	2010					March					April				May			
	1	8	15	22	29	5	12	19	26	3	10	17	24					
KEK cavity string in the clean room	←		→															
Preparation	←		→															
Class 10/1000 assembly work	←		→															
KEK cavity string outside of the clean room and assembling tuners			↔															
Module-A assembly					→													
Attaching T-sensors and Pin-diodes on the cavity string					↔													
Mounting the KEK cavity-string to GRP					↔													
Welding LHe supply pipe and cool-down pipes						↔												
PT and LT of cooling pipes						↔												
Mounting sensors on pipes and wiring for sensors on cavity string and pipes							↔											
SI on LHe supply pipe and GRP							↔											
Assembling 5K shield								↔										
Attaching and wiring sensors on the 5K shield								↔										
SI on 5K shield								↔										
Assembling 80K shield								↔										
Attaching and wiring sensors on the 80K shield								↔										
SI on 80K shield								↔										
Checking sensors								↔										
Inserting the cold mass into V.V.								↔										
Installing Module-A in the tunnel								↔										
Intermediate area between Modules and 2K cold box										↔								
Welding pipes between Module-C and Module-A										↔								
Welding pipes in the Module-A end and PT, LT of cooling pipes										↔								
Assembling thermal shields/SI/Wiring										↔								
STF-2 warm coupler installation											↔							
Closing Modules/Vacuum pumping Modules/Final vacuum LT												↔						

Module-A assembly will start from March 29.

The KEK cavity string will be supported from the GRP at April 1.