

# Engineering Summary

- Agenda:
- Clarification of cooling channel tolerances – Tim
- Open issues with absorber integration – Andy/Wing

# Tolerances

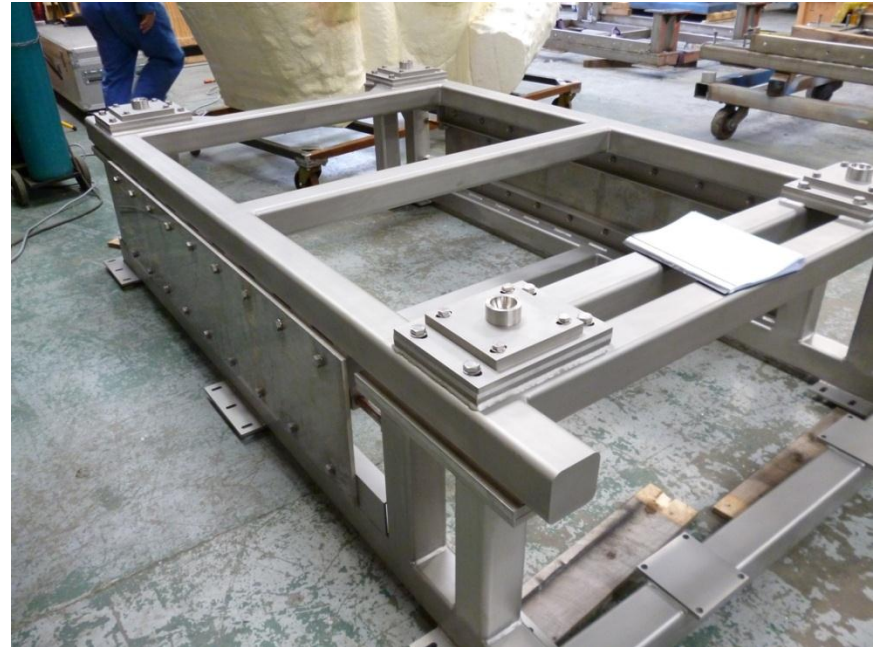
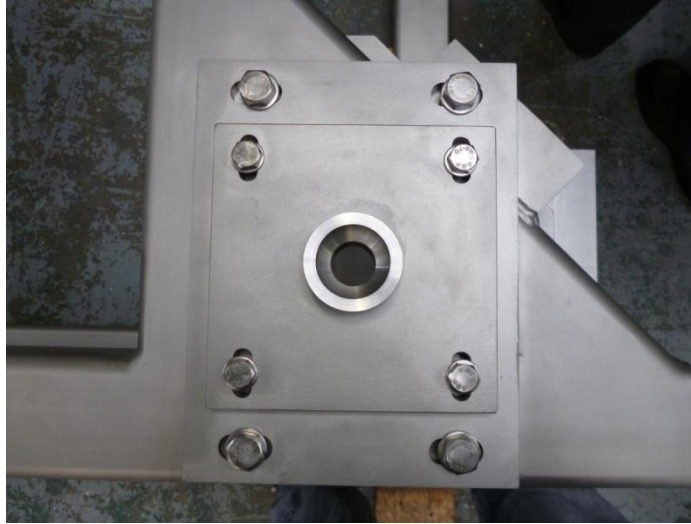
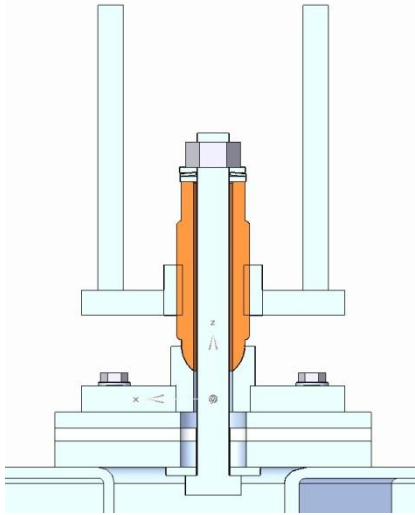
- Tolerances confirmed from MICE notes and tabulated
- It will be a challenge to meet them
- But we are in a position to make a practical try-out:
  - we have the SS support frames, with actual adjustments, and will shortly have the FC support frame in R5.2
  - we will shortly have a full size dummy SS, on which we can simulate fiducials, etc
  - Suggest we meet in R5.2 with RAL metrology to make a proper trial

# Table of positional tolerances

Component	Positional tolerance zone of the magnetic axis with respect to the nominal axis	The positional tolerance of the magnet centre longitudinally with respect to the nominal centre	Comments
Virostek plates	5mm	$\pm 3\text{mm}$	
Spectrometer Solenoid	1mm	$\pm 0.5\text{mm}$	
AFC	1mm	$\pm 0.5\text{mm}$	
RFCC	1mm	$\pm 0.5\text{mm}$	

Potential to relax and split the tolerance zone into tilt and traverse tolerances?

# Adjustments for SS, FC similar



# Absorber/window integration

- This year we need to integrate the liquid absorber/windows/LH2 system/FC for real, that is for Step IV
- we probably need a history lesson, what has already been done?
- what needs to be done, who can do it and when
- Believe there are some open engineering issues, for example:
  - location and fixing of absorber in FC
  - resistance to quench (and other) forces
  - acceptance of windows; metrology, pressure testing, x-raying, shipment
  - window fixings and seals
  - EU declaration of conformity for absorber
  - services arrangement over magnet face
  - Do any assembly/installation drawings exist?
  - any requirements for cleaning, baking, etc?
  - Installation tooling for absorber
  - are we clear over the exact interface with the LH2 system?

# Absorber/window integration

- open issues, Continued:
  - MLI, is it complete?
  - How is the indium seal (?) kept under tension
  - surface treatment and torque figures for seal bolts
  - pressure test of complete assembly, is stored energy <250 bar.litres?
  - if yes, how do we do it, gas, liquid?
- we would like to be getting on with things when the FC Hall field mapping is complete
- Another meeting probably required, hopefully where we can talk around an assembly drawing

# Absorber/window integration

- Useful discussion; Wing provided link with history, going back to 2003!
- all points now have answers or actions