Science & Technology Facilities Council
Technology

AFC Status

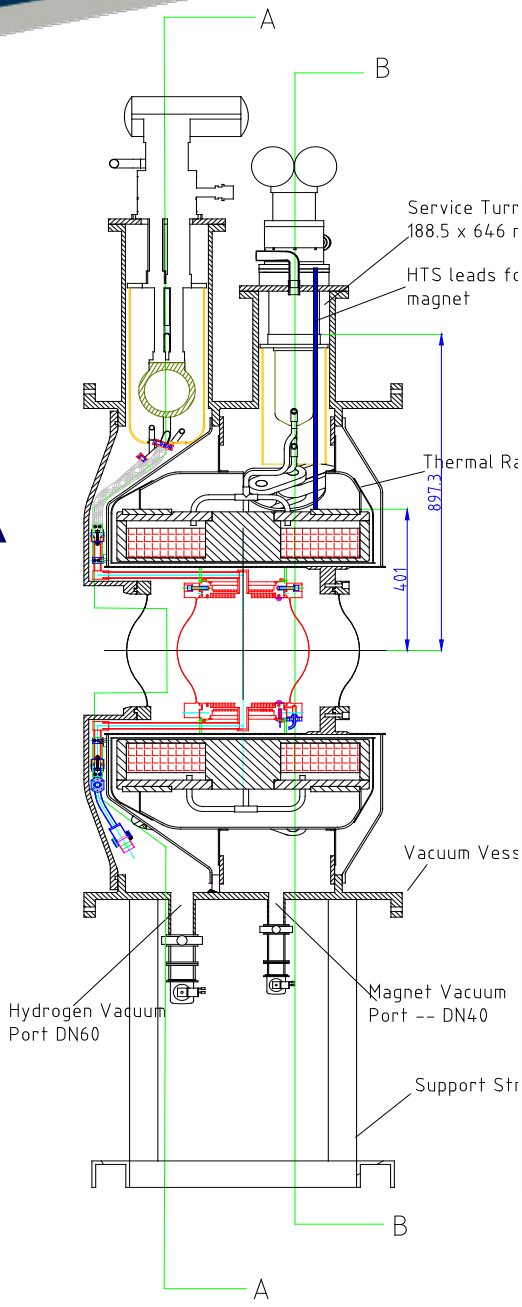
MICE VideoConference Meeting 19th January 2012

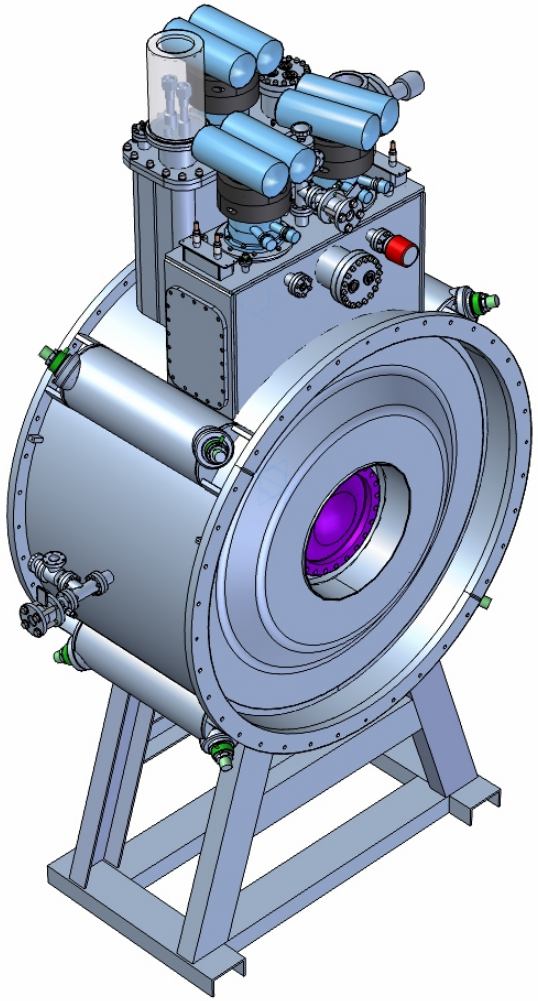
Tom Bradshaw
Elwyn Baynham
John Cobb
Mike Courthold
Wing Lau
Victoria Bayliss
Matt Hills

Introduction

Talk will cover

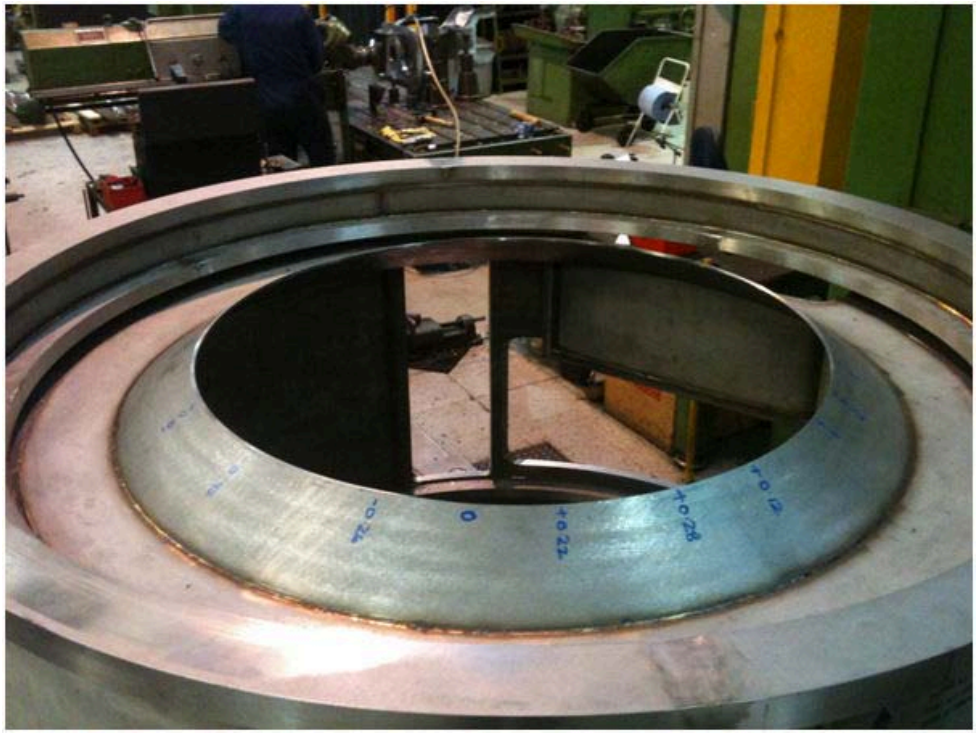
- Recent progress at TESLA
- Cryocooler testing
- Testing in R9
- Schedule





Recent Progress and Status

Assembly is progressing quite quickly – they are a further on than these pictures show (taken 20-12-2011)



On Monday 9th January they were machining the final "shoe-box" flange

Recent Progress and Status

OVC is being machined at Mid-Kent Engineering at Sittingbourne.

Company has a large number of large machines for milling.

Tesla welder attends for welding activities

Hydrogen turret being welded in place

Cryocoolers

One of the poorer performing Cryomech coolers was returned to the factory in the US and was re-tested there. Performance shortfall was verified ...

	Cryomech New Performance Data Sheet	Customer Test # 1	Customer Test # 2	Return Tested As Is
Min Temp.	36.8 / 2.8	36.8 / 2.9	35.2 / 2.6	38.6 / 2.4
Heat Load	45W @ 45K / 1.5W @ 4.2K	40W @ 50K / 1.5W @ 4.4K	40W @ 49K / 1.5W @ 4.4K	35W @ 45K / 1.5W @ 4.2K

They will put a residual gas analyser on the cold head then disassemble if necessary.

Schedule

- Short term schedule is as shown in the table
- Expected delivery to RAL by end of February 2012
- There is at least 1 month of assembly at Tesla
- Controls on schedule to be delivered mid Februrary
- Power supply "on order"

Mon 9th January	Machining final pockets for "shoe boxes"
Stage 2 machining	
Wed 11th January	Weld turrets in place
Thur 12th January	Hand back to MKE
Fri 13th January	Machine Hydrogen turret
	Weld flange on He turret
By 18th January	Final welding of flanges and shoeboxes – note that the preparatory machining of the O ring flanges is being finished at Tesla they will then be sent to MKE.
18th January	Final machining of flanges (will take about 1 week)
	Leak tests
27th January	OVC back to Tesla

Schedules

- Module 1 should be with us end Feb/early March
- Plans for reception in R9 advanced
- Looks as though performance and field mapping tests will take place in March/April
- At the moment it looks as though MKE would be able to start on machining the second module in early March. It is possible that this could be done at Tesla as their large machine may be available by then but given the experience of the job at MKE it is more likely to be done there.

END