





Imperial College London

WARWICK



FETS RFQ Braze Model

13th April 2011

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FETS RFQ vacuum braze test....

Plan:

- •Prep for vacuum brazing Tecvac
- •Align Dave Wilsher @ RAL
- •Inspect Dave Wilsher @ RAL
- •Vacuum braze Tecvac
- •Re-inspect Dave Wilsher @ RAL
- •Compare Dave Wilsher @ RAL

Why?

•To learn how to assemble and align the RFQ

- •To understand what tolerances values will be required and where
- •To learn where to place datum features and alignment pieces
- •To see how much vacuum brazing distorts the copper



'Clover' profile was measured 10mm in from ends



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Alignment using slip gauges and pin gauges





Slip gauge height = 3.28mm Pin gauge diameter = 7.2mm







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Conclusions

Alignment procedure using pin gauges and slip gauges worked well (but will need new plan for real RFQ due to modulations).

Models were manufactured to close tolerances. Only problem was poor form on vane tips. Will use formed cutter for real RFQ so won't be a problem.

Vacuum brazed model to be inspected and compared to pre-brazed.

Dave will be working with me (and Jim Loughrey) to:

- define assembly sequence
- work on tolerances for engineering drawings