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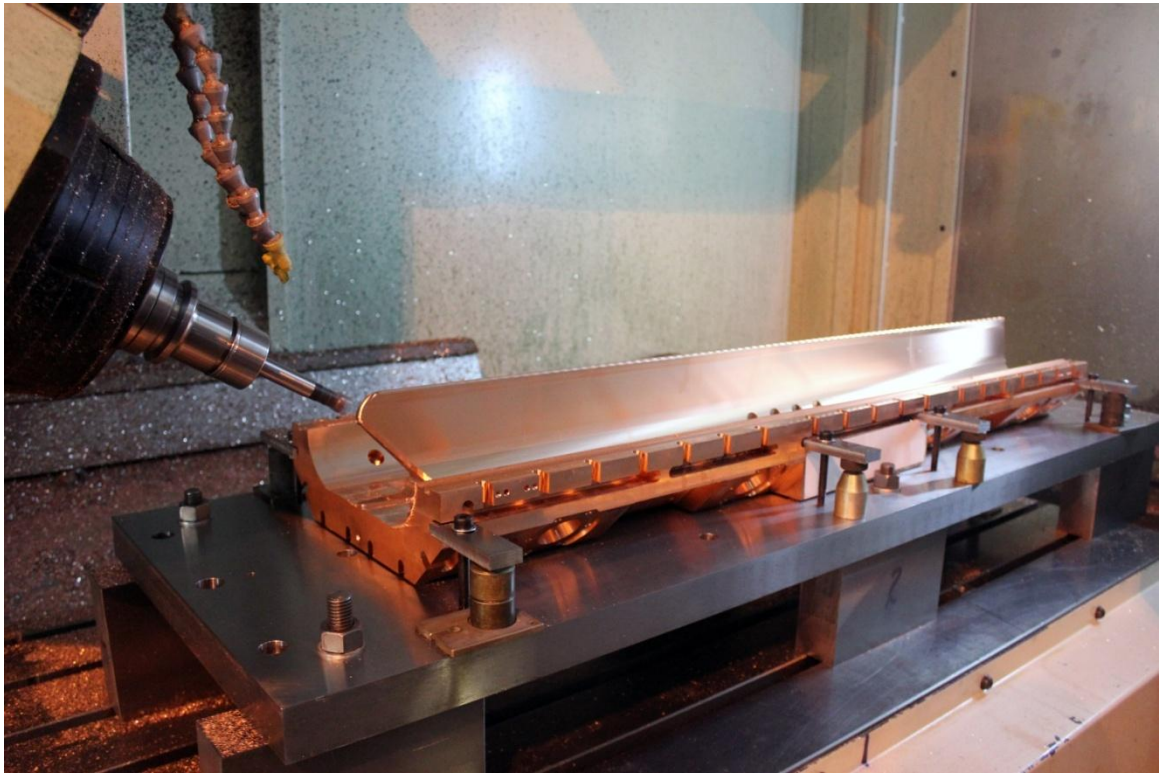
RFQ Update

By Peter Savage

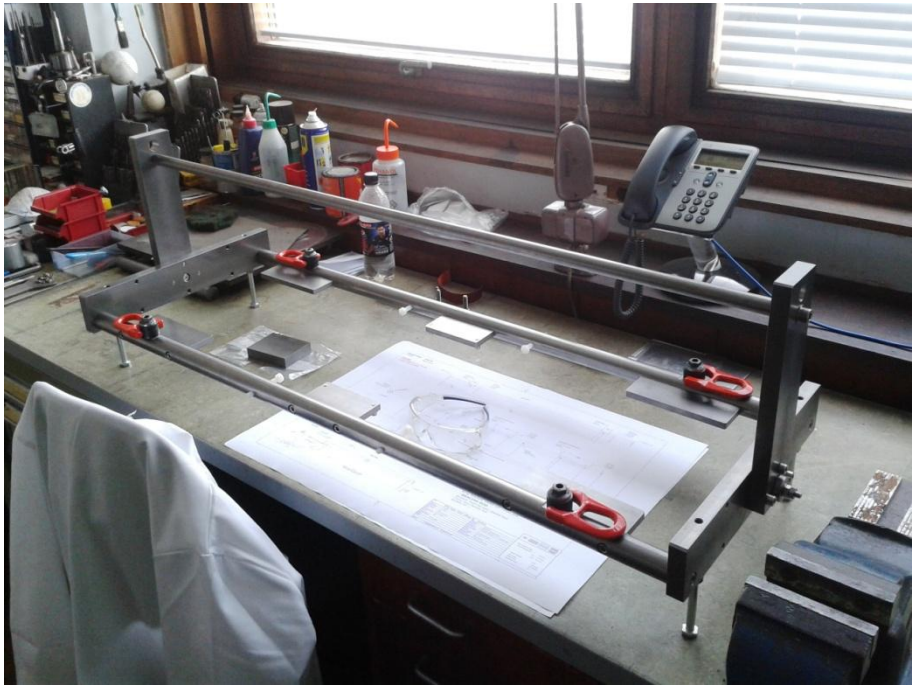
14th November 2012

RFQ Manufacturing



One major vane has been completed and awaits inspection before proceeding to finish the remaining pieces of RFQ section 1. The CMM is now fully operational and the inspection document is complete. The document allows measurements to be cross-referenced back to the original vane modulations spreadsheet. In the meantime the machining of RFQ section 2 has progressed.

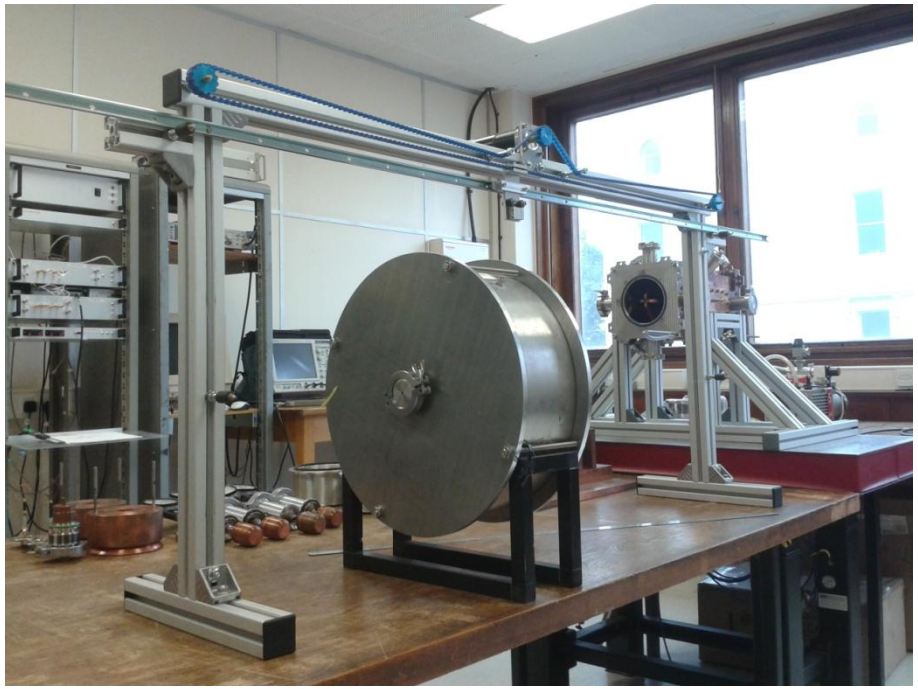
RFQ Lifting and Handling



The RFQ lifting frame has been successfully used by the manufacturers. Once tested it will be included into the RAL lifting safety system.

In addition the four RFQ cradles will need to be registered as lifting frames. This will be done when the supporting calculations have been made.

Bead-pull test

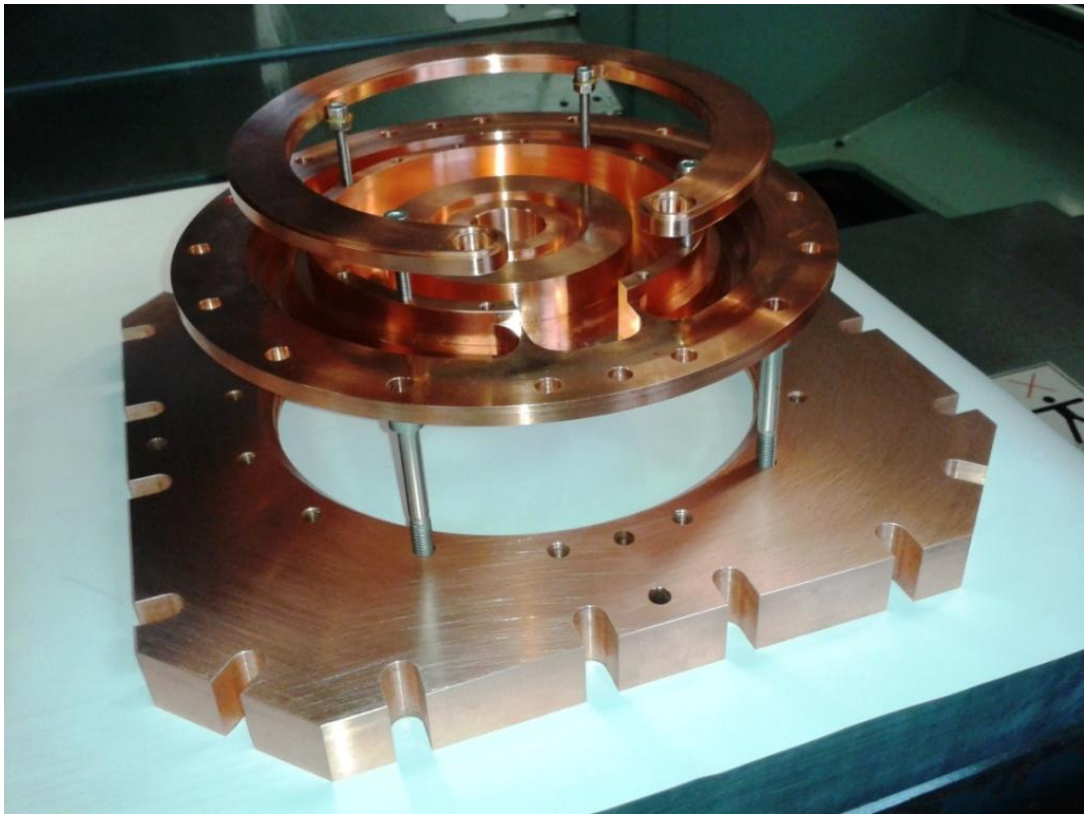


The bead-pull apparatus has been extended to cover one RFQ section and the end flange assemblies for the flat vane RFQ regions are complete. The bead-pull system will be tested inside the pill-box cavity and will then be ready for transport to RAL.

RFQ Tuners

Sixteen tuners for RFQ section 1 have returned from the vacuum brazing company and have been vacuum tested to 10^{-3} mbar. Vacuum components are on order to allow testing to 10^{-6} mbar.

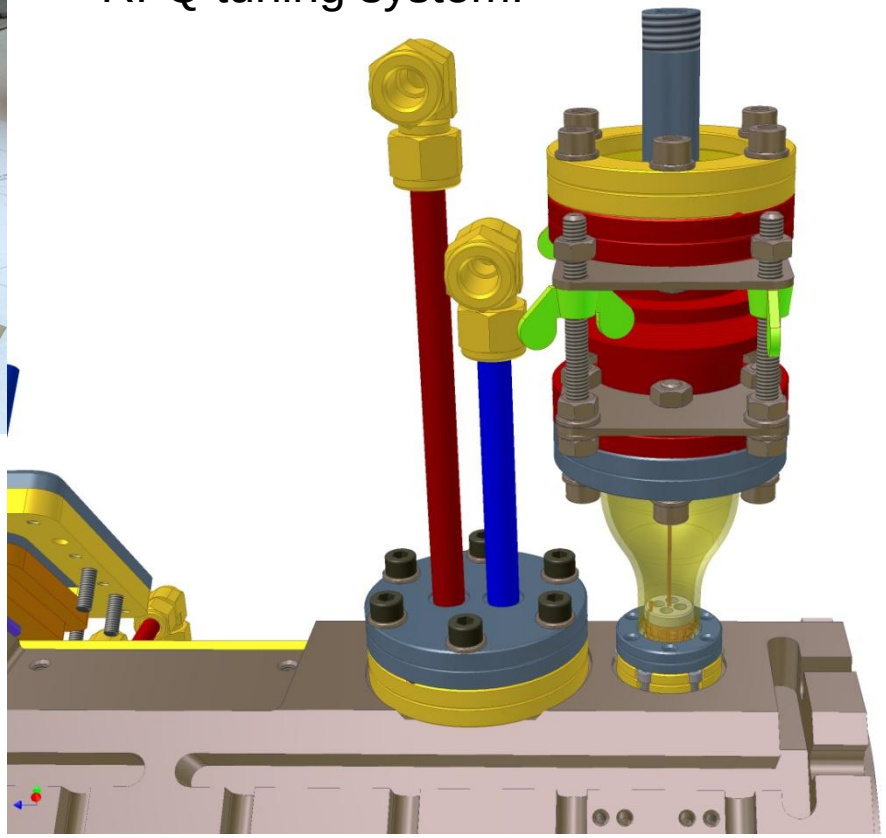
RFQ End Flanges



Both end flange assemblies have also been vacuum brazed, and have been tested for water leaks and vacuum leaks. They, along with the tuners are awaiting vacuum testing to 10^{-6} mbar.

RFQ Pick-ups

Four RFQ pick-ups have been built that will be used during the bead-pull tests and for feedback to the RFQ tuning system.



The next steps are:

1. Test them in the RFQ cold model.
2. Add bellows to allow the loop length to be adjusted without breaking vacuum. The bellows are on order.

END