

INSTALLATION OF AN INSTRUMENT

IKON 15

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Topics for Discussion

- Preparation
- Storage space
- Installation
- Dealing with change
- Snagging List

Preparation

- Mark out the profile of instrument. Generate beam centre and sample point.
- Survey the floor for level.
- For the profile of the instrument cave and shielding only.
- You know how much shielding packing you will need.
- This helps manage your build space.
- Visualise your build.



Preparation

- You can never have enough nuts, bolts, washers, drills, taps, temporary lighting etc.
- Core drills and core drill bits
- Specialist contractors local to ESS
- Specialist tools – CMA Hydraulic tapping machine. Taps up to M45 in Stainless (wish list).
- Paint shielding before or after installation??
- Meet with the installation team regularly to get a “buy in” to the project.



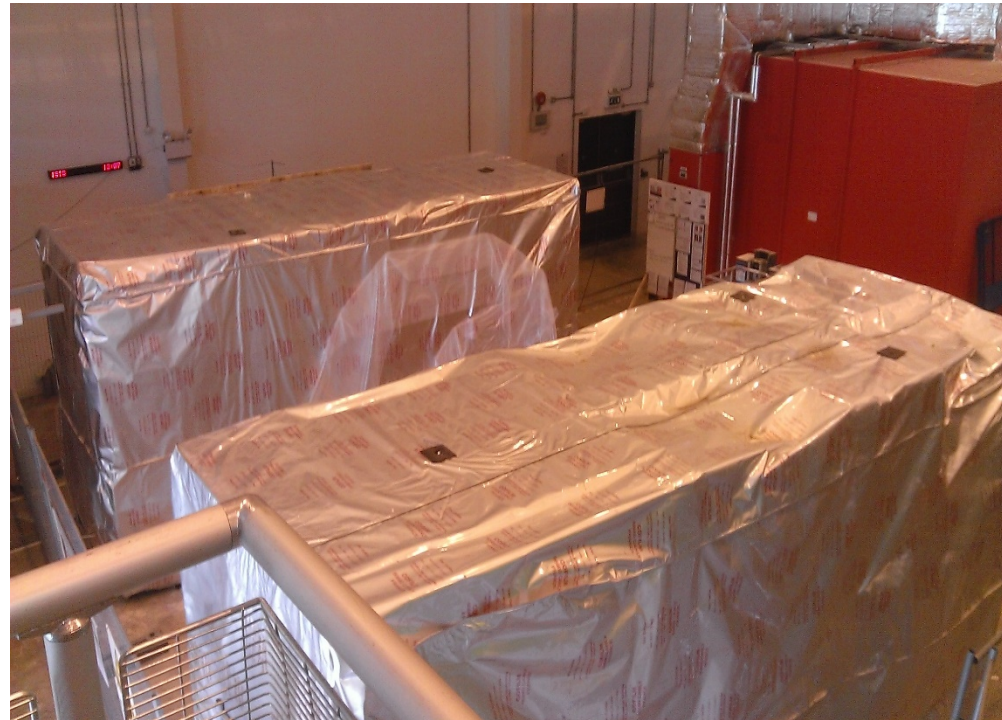
Storage space

- This amount of raw stock steel will make shielding for 2-3 small instruments at ISIS. Occupies approximately 200m².
- Finished shielding won't arrive all at the same time but keep an eye on the drg numbers.....
- Try and avoid storing finished shielding outside.
- Sometimes space is better left as space



Storage space

- Each instrument should have its own storage space.
- Mark out your on instrument storage space. Should be 100-150m² and preferably part of the build area.
- Should be secure/fenced and form part of the instrument build area.
- Needs to have appropriate crane/forklift access.

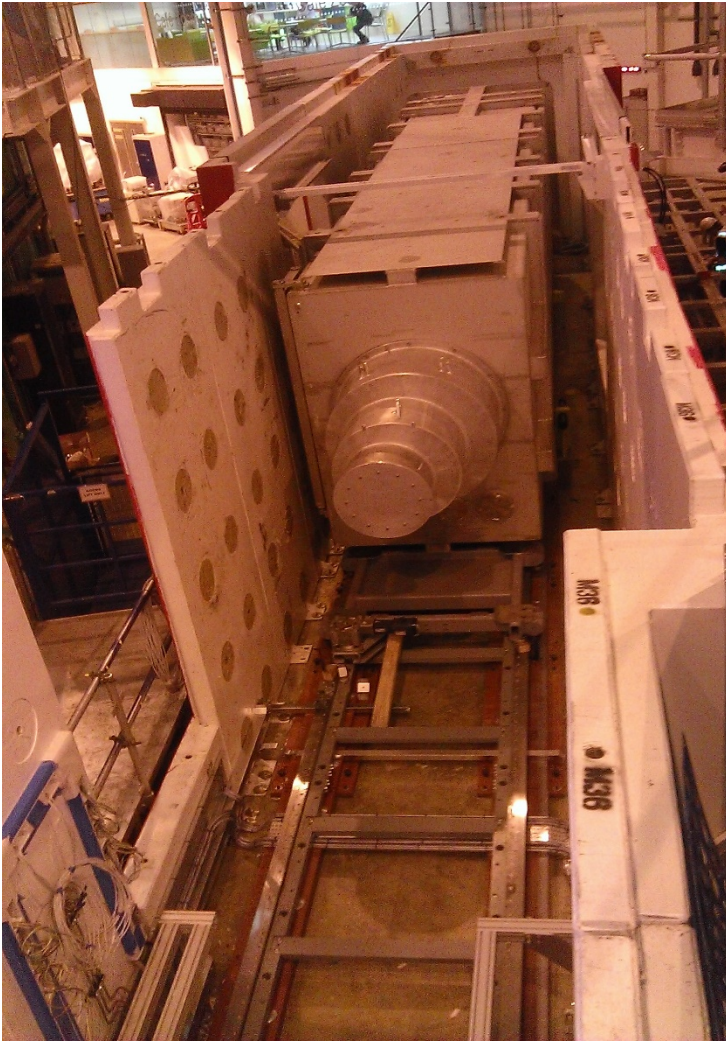


Installation

- Don't over crowd the build.
- Sometimes it's best to do one thing at a time
- Communicate your quality standards before work starts
- Encourage good housekeeping
- Expect and be prepared for conflict
- A sense of humour goes a long way



Installation

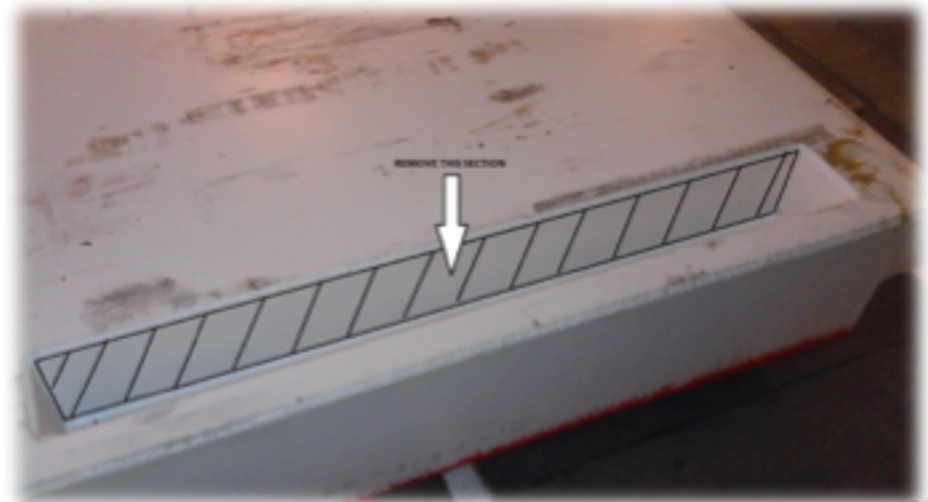


- Know your service routes well and make sure your contractors do to.



Dealing with change

- Be prepared for last minute changes and things not fitting.
- Solutions don't always need to be fancy but they do need recording.
- With shielding allow for tolerance stack modifications.
- Make sure you can modify large shielding locally.



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Dealing with change

- There may be major change during the build. Scientists change their minds ☺
- Understand and communicate the impact.
- If it benefits the science.....
- It's better to deliver a world class instrument late.....
- Think of the people who will use it.

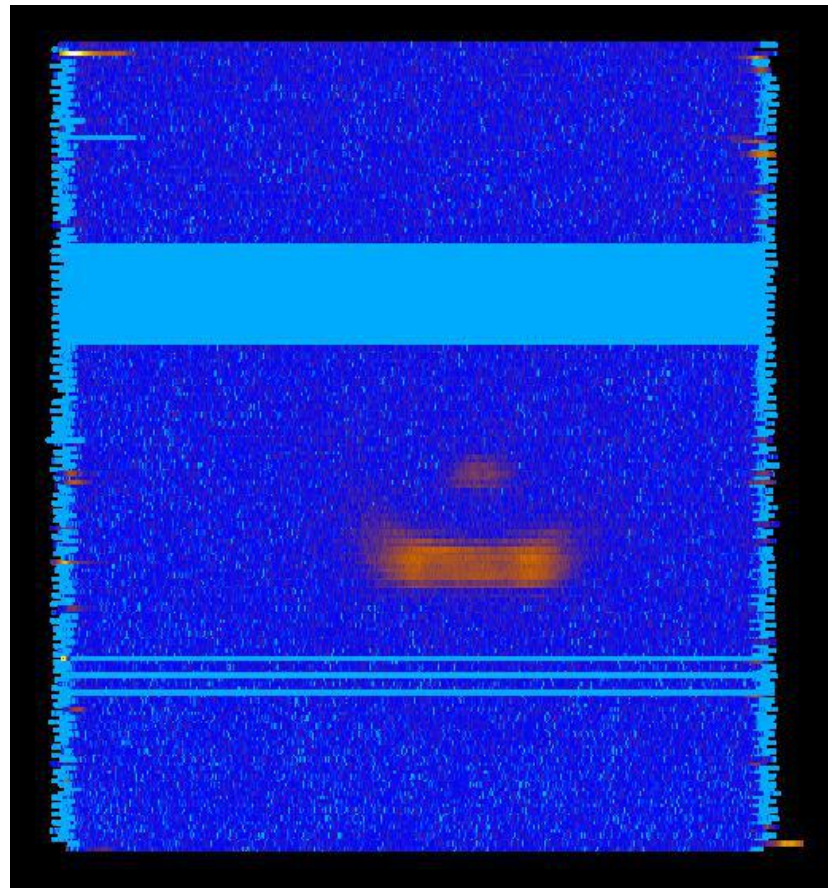


Snagging

- You end up with a snagging list that just keeps getting longer.
- This is the difference between a good instrument and an excellent instrument.
- Mechanical and electrical services can get overlooked.
- Motion control.....
- Sample environment.....
- Detectors.....



Expect the Unexpected!



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Thanks for listening



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