Our experience with a mobile shielded remote handling system for Impact testing of radioactive samples

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• Accelerated Irradiation Experiment of Miniature Charpy V-Notch (MCVN) Impact Samples of SS316L(N) and SS304L(N) material
• Irradiation carried out at FBTR reactor in the range of 2-5dpa to simulate low dose irradiation of permanent structural components of reactor for a life of 40+ years
• Non availability of Impact testing machine inside RML hot cells required building of temporary facility to test the irradiated MCVN samples
• Impact testing behind the hot cells in a temporary facility

Challenges of mobile shielded remote handling system for impact testing
• Temporary facility with optimum shielding capacity and size
• Specimen transfer from cell to impact machine and back without cross contamination
• Alignment of MCVN specimen – within ±0.25mm
• Minimum dose expenditure

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