

Dumps & Collimators

- FLUKA/EGS Energy deposition studies complete
- Design study of candidate window materials.
- Design and optimisation of geometry of window for water dump in order to minimise thermal fatigue, pressure and shock wave stresses.
Estimation of window lifetime with reference to radiation damage.
- Specification, design and participation in on-line experiments using electron beams to simulate power deposition, thermal and stress wave profiles in prototype window materials
- Design and full model of internal water circulation system within beam dump vessel using Computational Fluid Dynamic codes in order to maximise efficiency of heat transfer and minimise possibility of local boiling.
- Outline design of remote handling systems for replacement of critical components e.g. window, de-ionising system and catalytic recombination components.
- Specification of services requirements for all beam dump specific items.
- Full costing of baseline design, in accordance with GDE guidelines
- Package of documentation suitable for pre-construction regulatory agency approval