

An overview of the Remote Handling solutions and equipment at JRC Karlsruhe's Hot Cells facilities

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At the Joint Research Centre's (JRC) Karlsruhe site, the Waste Management unit has under its mandate the operation of the entire hot cell suite, which constitutes the hub at JRC for (i) PIE of conventional and advanced fuel and (ii) the R&D on the back end of the fuel cycle. Therein, the 'Alpha-Gamma' intervention team within the unit develops, adapts and operates various Remote Handling technologies with the highest care with respect to contamination monitoring and radioprotection regulations. In total we operate and maintain about 90 Master Slave Manipulators (MSM) of various sizes and types together with several Robot arms for heavy duty or complex operations. These tasks range from operation of scientific instruments to the maintenance of large process equipment, with all operations requiring dexterous manipulations. Most of them are unstructured and require real-time human intervention.

This presentation shall give an overview of our range of articulated and telescopic manipulators with various load capacities and size, both mechanical and electrically assisted models, for work in the different types of hot cells, together with some developments for innovative solutions for manipulators, booting and grippers