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| **WPPWIE Deliverables Status Report** | | | | | **Date:** | | | 01-Aug-2022 | | |
| **Subproject:** | SPA / Particle & Heat Load Studies in preparation of the exploitation of ITER and DEMO | | | | **Deliverable ID** | | | PWIE-SP A.2.T-T002-D002 | | |
| **Deliverable owner:** | M. Balden | | | | **Deliverable due date** | | | 31-12-2022 | | |
| **WP Leader:**  **SP Coordinator:** | S. Brezinsek (FZJ)  J.W. Coenen (FZJ) | | | |  | | |  | | |
| **Task title:** | SP A.2 High Particle Fluence Exposures of Plasma-Facing Components for ITER | | | | | | | | | |
| **Deliverable title:** | Pre- and post-characterization of samples (MPG) | | | | | | | | | |
| **Status:** |  | **Completed** |  | **Partially completed** | |  | **Delayed** | |  | **Cancelled** |
| Please write a short status report (max. ½ pages) here.  Please check the status of the deliverable(s) with a “x” in the row above.  If the deliverable(s) are delayed, please also indicate an estimated completion date in the report text.  If the deliverable(s) include machine time, please indicate the number of days that have been used for the deliverable(s) in the report text.  For reference, the specification of this task from the PMP is given below. | | | | | | | | | | |
| **Reference from PMP:** | | | | | | | | | | |
| This task is envisioned to utilize existing high fluence devices such as MAGNUM-PSI, but also in future e.g. machines under construction to allow extrapolation of data from existing materials studies towards the effect of high flux and fluence on materials and components. Particular this includes W PFUs for ITER and their use in WEST, but also studies related to pre-damaged (e.g. self-damage, cracking etc.) materials for exposure. The task includes pre- and post-exposure analysis in collaboration with SP B.  Where appropriate this will link with WPTE in order to give access to relevant tokamak exposures and experiments. Strong links to other SP A tasks. | | | | | | | | | | |
| **Inputs required:**   * W components produced e.g. by ENEA via WPDIV * PFUs and similar | | | | | | | | | | |
| **Tasks to be performed:**   * Recrystallization behavior of DEMO tungsten grades under high flux/fluence plasma loading with impurity seeded deuterium plasmas (DIFFER) * Pre- and post-analysis of materials and components (MPG) * Further analysis linked to facilities and staffing in SP B | | | | | | | | | | |
| **Deliverables:**   |  |  | | --- | --- | | **Deliverable ID** | **Deliverable Title** | | D001 | Influence of plasma on Rx under slow transient loading (DIFFER) | | D002 | Pre- and post-characterization of samples (MPG) | | | | | | | | | | | |
| **Management Information**  **Human Resources (2022)**:   |  |  |  |  | | --- | --- | --- | --- | | **Deliverable Owner** | **Beneficiary** | **PM** | **Deliverable (Team)** | | T. Morgan | DIFFER | 7 | D001 | | M. Balden | MPG | 2 | D002 (S. Elgeti) | | **Total** |  | 9 |  |   **Machine Resources (2022):**   |  |  |  |  | | --- | --- | --- | --- | | **Device** | **Beneficiary** | **Days** | **Related Deliverable** | | MAGNUM-PSI | DIFFER | 10 | D001 |   **Other resources:**    **Collaborations:**   * WPDIV, WPMAT in FTD   **Other information:**   * Connected to TSVVs associated with WPPWIE | | | | | | | | | | |