MAX-PLANCK-INSTITUT
FÜR PLASMAPHYSIK

TESPEL Commissioning for OP2

WP-SA-OP Task Monitoring Meeting

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EUROfusion

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TESPEL commissioning for OP2
- Brief explanation of the background to this activity

- **The Tracer-Encapsulated Solid Pellet (TESPEL) technique was developed and further advanced by me while I was affiliated with the National Institute for Fusion Science (NIFS) in Japan.**
- Since I moved to the Max Planck Institute for Plasma Physics in Germany, **there is currently no one in Japan who is able to fabricate TESPELs**.
- In order to carry out tungsten transport studies in JT-60SA before the installation of the tungsten divertor, **operation of the TESPEL injection system in JT-60SA is essential**.
- **Therefore, it is necessary to transfer the TESPEL fabrication technique to the personnel in charge at the QST Naka.**
- However, whether they will be able to fabricate TESPELs independently in a short period of time will depend on their level of technical skill. For this reason, **it would be preferable for me to fabricate the TESPELs required for the upcoming OP2 campaign myself**.

TESPEL commissioning for OP2 - Overview

Goal

- To provide technical guidance to QST Naka-institute personnel on the fabrication of Tracer-Encapsulated Solid Pellet (TESPEL) and manufacture the TESPELs required for OP2

Possible Deliverable

- Technical instruction on TESPEL fabrication procedures is provided to the responsible personnel at the Naka institute.
- In addition, the TESPELs required for OP2 are fabricated.

TESPEL commissioning for OP2
- Planned activities: On-site activities are mandatory

Duration of stay at the QST Naka: Approx. Dec 14, 2026 – Dec. 28, 2026 (subject to change based on budget)

Preparation Status

- Preparations required for the activities (such as the procurement of equipments (see below) needed to fabricate TESPEL) are primarily being handled by personnel (Dr. M. Akimitsu, R. Wada) at the QST Naka
- Preparations will be complete by the time of my visit.

Ref.: NIFS TESPEL fabrication lab (a similar setup is currently being prepared at the QST Naka)



