

Methods of Work

Expert Groups & Task Forces

Proposal for interactions with EG and TFs

- Each task force meet separately twice a year
 - 1 – 1.5 days, intermediate meetings through e-mails, etc..
- TFs meet with EG twice a year
 - 1 day for status and discussion of overlapping issues

Proposal for deliverables produced by TF

- On-line access to working files with status of development by all members
- Final deliverables distributed to all members

Establish synergies with related NEA activities

- Periodic presentations on status to other activities
- Status report to NSC
- Rely on NEA staff to coordinate

Regular Presentations to National ATF Programs

- Status meetings would be valuable
- Proper credit to contributors if specific technologies or assessments are discussed

Expected Outcomes of the Meeting

Activities

- Establishment of the Task Forces
 - Selection of chairs
- Agreement on mandate/charter and deliverables of the task forces
 - Discussions on contents and schedule for the deliverables to be formalized by next meeting
- Agreement on meetings structure

Deliverables

- 1 to 3 Reports
 1. Metrics and TRL Definitions
 2. Systems & Fuel Performance Codes
 3. Illustrative Scenario Definitions
 1. Simplified Scenarios to highlight the attributes of the concepts

1 & 2 may be combined
- Schedule to be developed by the task force

Metrics

- Report by Shannon-Bragg Sitton

Illustrative Scenarios

- Group Discussion

Systems Codes

- Group Discussion

Methods of Work

- Task Force to meet twice a year
 - 1 – 1.5 days/meeting
 - In between, work is coordinated by the chair through e-mail and or direct interactions with members
- Schedule and annotated outline of deliverables by next expert group meeting
 - Including chapter/section leads identification
- Task Force to meet with Experts Group twice a year
 - 1 day meeting
 - Coordination with other task forces and overall status reports

Proposed Activities for TF: Cladding/Core Materials

Activities

- Identification of Candidate Concepts –
 - Main attributes to qualify as a ATF cladding candidate
 - Impact on fuel options and designs
- Development of Fundamental Properties
- Results of small-scale testing, including PCI
 - Fabrication methods and characterization
 - Out-of-pile testing and characterization
 - Steady-state and transient irradiation testing and post-irradiation exam
- Assessment of TRL for each concept
- Assessment on economics
- Assessment of implications on normal operations
- Assessment against illustrative scenarios (jointly with TF1)
 - Identification of modeling needs (jointly with TF1)
- Identification of Data Gaps
- Identification of gaps in testing infrastructure

Deliverables

- State of the art report for a set of technologies
 - Summary of knowledge & gaps
 - TRL assessment
 - Economics
 - Evaluation results for normal operations and illustrative scenarios (in comparison with UO₂-Zr fuels)
 - Connections to the state of the art report on fuels
 - Recommendations and priorities for additional development activities

Presentations

- Coated Zr based alloys
- SiC
- FeCrAl
- Mo
- Control Rod

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Proposed Activities for TF: Fuel Concepts

Activities

- Identification of Candidate Concepts
 - Main attributes to qualify as an ATF candidate
 - Impact on cladding options and designs
- Development of Fundamental Properties
- Results of small-scale testing, including PCI
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Presentations

- Enhanced UO₂
- FCM
- High-density fuels

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