PELlets versus GRanulates: Irradiation, Manufacturing & Modelling

Fact Sheet

Project Information

**PELGRIMM**
Grant agreement ID: 295664

**Funded under**
FP7-EURATOM-FISSION

**Overall budget**
€ 7 338 360,20

**EU contribution**
€ 2 999 999

**Coordinated by**
COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

France

Start date
1 January 2012

End date
30 June 2017

Objective

PELGRIMM is a 4 year project, addressing Minor-Actinide (MA) bearing fuel developments for Generation IV Fast Reactor Systems to support the Strategic Research Agenda (SRA) of the European Sustainable Nuclear Energy –Technology Platform (SNE-TP). Both options, MA homogeneous recycle in driver fuels with MA content at a few percent, and heterogeneous recycle on UO2 fuels bearing high MA contents, located in the radial core blanket, are considered. Two fuel forms (pellet and spherepac) will be investigated. Indeed, spherepac technology (that leads to production of beads that can be directly loaded in pins) is attractive regarding MA-bearing fuels as it would lead to a significant simplification of the fabrication process and to a better accommodation of solid swelling (compared to pellets) under irradiation. These developments extend Europe’s leading role in this area.
A total of 12 partners from research institutions, education establishments and industries will collaborate to share and leverage their skills, progress and achievements, covering a comprehensive set of investigations: fuel fabrication, fuel behaviour under irradiation through an irradiation test and the execution of Post Irradiation Examinations, modelling and simulation of fuel behaviour and performance under irradiation, from normal operating conditions to severe accidents, and finally by providing unique education and training possibilities. Finally, synergies will be sought with other ongoing European projects. Furthermore, the PELGRIMM project will contribute actively to the EURATOM’s contribution to Generation IV International Forum (especially SFR).

**Fields of science**

> > >

**Programme(s)**

**Topic(s)**

**Call for proposal**

FP7-Fission-2011

**Funding Scheme**

CP-FP - Small or medium-scale focused research project

**Coordinator**

COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

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<td>Rue Leblanc 25</td>
<td>Research Organisations</td>
<td>€ 626 850</td>
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<td>75015 Paris 15</td>
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Website [](#)  
Contact the organisation [](#)

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Fabienne Delage (Dr.)
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<th>Country</th>
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<td>€ 44 999</td>
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<td>AGenzia Nazionale per le Nuove Tecnologie, l’Energia e lo Sviluppo Economico Sostenibile</td>
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RESEAU EUROPEEN POUR L ENSEIGNEMENT DES SCIENCES NUCLEAIRES

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