Direct simulation studies of flame stabilization processes - ii

Fact Sheet

Project Information

Grant agreement ID: FMBI950093

Project closed

Start date
15 January 1996

End date
14 January 1997

Funded under
Specific research and technological development programme in the field of the training and mobility of researchers, 1994-1998

Total cost
No data

EU contribution
No data

Coordinated by
École Centrale des Arts et Manufactures
France

Objective

The project is part of a large scale research program initiated to stud combustion problems using direct numerical simulation (DNS).
The present project will focus on the flame stabilization problem. This question IS of fundamental interest and it is also of technical importance in the design of gaseous. Liquid fuel (turbo-jet engines) or solid fuel (pulverized coal) combustion.
We propose to study a simplified flow pattern (triple layer: 3 coflowin streams of fuel.

oxidizer and hot combustion products) representative of the typical flow structure prevailing in the stabilisation regions of many combustion devices used in industrial applications (continuous burners for boilers and furnaces).
Our objective is to identify the parameters governing the flame ignitio and stabilization. DNS offers very detailed description of the flame zone and is therefore a perfectly-well suited tool to investigate flame characteristics. It is planned to derive a simplified model based on DNS analysis and basic physical considerations. At last, we are interested in transferring our results to our industrial partners (implementation of the model into an engineering combustion code).

Fields of science (EuroSciVoc)

engineering and technology > environmental engineering > energy and fuels > **liquid fuels**

engineering and technology > environmental engineering > energy and fuels > fossil energy > **coal**

Programme(s)

FP4-TMR - Specific research and technological development programme in the field of the training and mobility of researchers, 1994-1998

Topic(s)

0302 - Post-doctoral research training grants

TI02 - Transport Engineering

Call for proposal

Data not available

Funding Scheme

RGI - Research grants (individual fellowships)

Coordinator

École Centrale des Arts et Manufactures

EU contribution

No data

Total cost

No data

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Participants (1)

Not available

Belgium

EU contribution

No data

Address

Total cost

No data

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