

ANNOUNCEMENT

Multiphase Flow and Heat Transfer : Bases and Applications in : (A) The Nuclear Power Industry ; (B) The Process Industries

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Hosted by the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

The modular courses feature a coordinated, comprehensive series of lectures by experts and are of interest to practising engineers and to researchers who wish to obtain a condensed and critical view of present basic knowledge (Part I) or information on the state of the art regarding applications in specialized industries (Parts IIA and IIB).

The courses aim at an interdisciplinary transfer of knowledge. Applications cover nuclear and chemical plant safety, steam generators, pipelines, etc. For further information contact Prof. G. Yadigaroglu, ETH-Zentrum, CH-8092 Zurich, Switzerland (Tel. : + +41-1-256.4615).

THE LECTURERS

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CONTENTS OF LECTURES

Part I. Bases

1. Introduction.
2. Basic equations I.
3. Flow regimes.
4. Measurement and correlation of void fractions.
5. Measurement and correlation of pressure gradient.
6. Two-phase flow in vertical pipes.
7. Two-phase flow in horizontal and inclined pipes.
8. Basic equations II.
9. Two-phase heat transfer I.
10. Two-phase heat transfer II.
11. Closure relationships.
12. Numerical methods.

Part IIA. Water reactor applications

- 13A. Steady-state operation.
- 14A. Large break LOCAs.
- 15A. Small break LOCAs.
- 16A. Codes for transient and accident analysis.
- 17A. Severe accidents.
- 18A. Steam generators.

Part IIB. Process and petroleum industry applications

- 13B. Multicomponent heat and mass transfer.
- 14B. Emergency relief system vent sizing.
- 15B. Process boilers and condensers.
- 16B. Relief ducting and treatment.
- 17B. Pipelines.
- 18B. Dense gas and mist dispersions.