NPTEL Video Course - Chemical Engineering - NOC:Adiabatic Two-Phase Flow and Flow Boiling in Microchannel

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Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Brief Introduction to Multiphase Flow
Lecture 2 - Brief Introduction to Multiphase Flow (Continued...)
Lecture 3 - Two Phase Flow through Micro Channels
Lecture 4 - Two Phase Flow through Micro Channels (Continued...)
Lecture 5 - Criteria for Confinement for in Case of Two Phase Flow
Lecture 6 - Pertinent Dimensionless Numbers in Two Phase
Lecture 7 - Flow Pattern Maps for Milli and Micro Systems
Lecture 8 - Pattern Transition from Energy Minimisation Principle
Lecture 9 - Experimental Identification of Flow Regimes
Lecture 10 - Experimental Identification of Flow Regimes (Continued...)
Lecture 11 - Flow Regimes and Void Fraction Estimation
Lecture 12 - Influence of Operating Parameter on Flow Patterns
Lecture 13 - Influence of Operating Parameter on Flow Patterns (Continued...)
Lecture 14 - Influence of Operating Parameter on Flow Patterns (Continued...)
Lecture 15 - Influence of Operating Parameter on Flow Patterns (Continued...)
Lecture 16 - Void Fraction Characteristic Mini and Micro Channel
Lecture 17 - Void Fraction and Pressure Drop in Reduced Dimensions - Experimental results
Lecture 18 - Void Fraction and Pressure Drop in Reduced Dimensions - Experimental results (Continued...)
Lecture 19 - Theoretical Analysis of Two Phase Flow in Reduced Dimensions
Lecture 20 - Theoretical Analysis of Two Phase Flow in Reduced Dimensions (Continued...)
Lecture 21 - Flow Pattern based Analysis in Micro Systems - Drift Flux Model
Lecture 22 - Flow Pattern based Modelling - Slug Flow Model
Lecture 23 - Flow Boiling in Microchannels
Lecture 24 - Tutorial - I
Lecture 25 - Tutorial - II