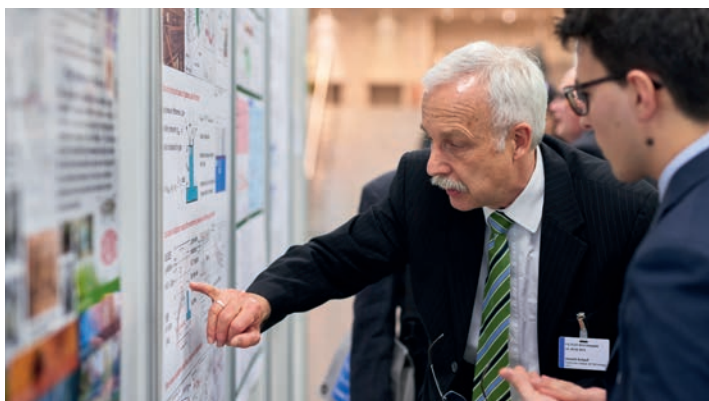


## Short Course I

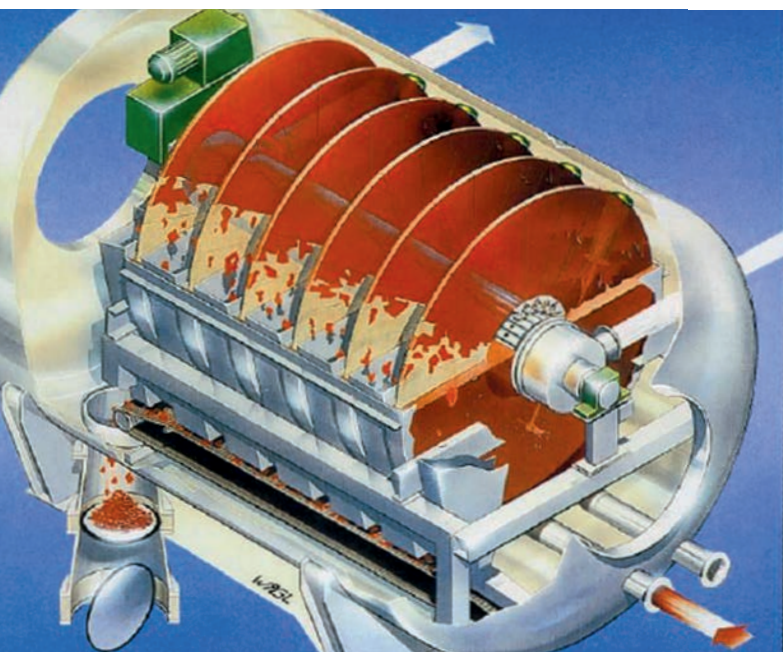
# Solid/Liquid Separation

This 1-day Course "Solid/Liquid Separation" is of interest to engineers, scientists, managers and other technical personnel involved in solid-liquid separation in the process and other industries. They will find the course informative, regardless of whether they design, purchase, research or use filtration and separation equipment. Plant engineers, technicians and operators should find the course materials directly applicable, and graduate research students will value the expert introduction to the technologies. It is a comprehensive review of the processes involved in the separation of solids from liquids, which will emphasise practical aspects and present appropriate theoretical information as necessary.



### Course Presenter

Dr.-Ing. Harald Anlauf was till March 2020 Academic Director at the Karlsruhe Institute of Technology (KIT), Institute of Mechanical Process Engineering and Mechanics and since more than 40 years active in the field of solid liquid separation technology. He earned his academic degrees as Chemical Engineer 1980 and 1985 at Karlsruhe University. 1999-2006 he was Chairman of the VDI-GVC working party „Mechanical Liquid Separation“, since 2000 Co-Chairman of the FILTECH Congress Scientific Committee. 2004-2008 he was Chairman of INDEFI and President of the 10th World Filtration Congress 2008 in Leipzig, Germany. He published more than 190 technical papers, books etc. and is internationally active in giving consultations and lectures.



### Topics:

#### Characterisation of Particles and Particle Separation

#### Density Separation - Static Thickeners and Solid Bowl Centrifuges

#### Depth, Cross Flow and Cake Filters

#### Filter Media

#### Suspension Pretreatment to Enhance Separation Properties

#### Alternative Separation Solutions & Apparatus Combinations

#### Selection Criteria for Separation Equipment

8.30 h Welcome Coffee

#### 9.00 h Introduction and Overview

Systematic survey of separation processes, apparatus examples and separation strategies

#### 10.00 h Particle Characterization

Characterization of single particles, particle collectives and particle separation.

10.45 h Coffee Break

#### 11.00 h Density Separation – Static Thickeners and Solid Bowl Centrifuges

Separation mechanisms, equipment, mode of operation, application.

#### 12.00 h Depth and Cross Flow Filtration

Separation mechanisms, equipment, mode of operation, application

12.45 h Lunch

#### 13.45 h Cake Filtration – Formation, Washing, Demounting

Separation mechanisms, consequences for practical use.

14.45 h Coffee Break

#### 15.00 h Cake Filters

Equipment, mode of operation, application

#### 16.00 h Filter Media

Overview and fields of application, influence of media properties on separation results.

#### 16.30 h Suspension Pretreatment to Enhance Separation Properties

Additional techniques for enhancing solid-liquid separation processes, physiochemical influences on slurry stability, flocculation

#### 17.00 h Apparatus Combinations, Alternative Solutions and Apparatus Selection Criteria

Strategies for process optimization & selection of suitable separation techniques.