



# 科學與工程之數位圖書館 – Begell House Digital



Begell House 在 1981 年由 Dr. Williams Begell 所創立， Begell 博士是一位在化學工程、核子科學等方面長期享有盛名的工程師、科學家及傳播者。其發行了紙本與電子版的 Book 和 Journal，逐漸發展了數十種高學術威望的工程和生物醫學期刊，以及數百種基礎教學課本、研究書籍和參考工具書。

特別推薦優質專輯如下：**THERMOPEDIA 熱百科資料庫**

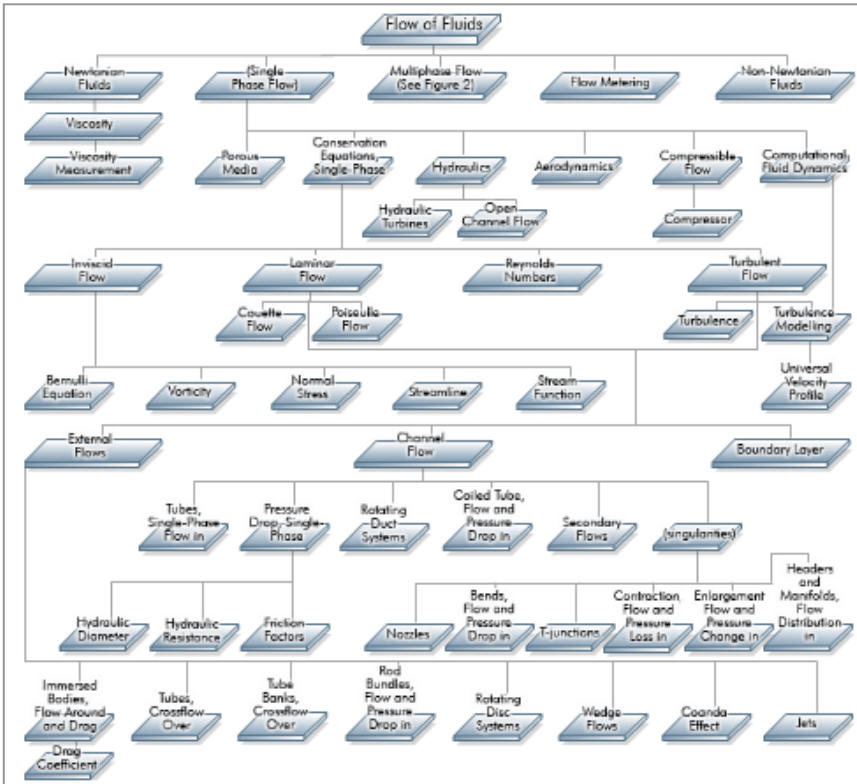
## 熱百科資料庫

### A-Z 指南：熱力學、熱傳導及流體工程學、電子資源指引入口

- 線上 HTML 全文內容，包含有 3D 動畫 及影像資料 、實驗數據等，資訊呈現豐富且多元化
- MAP 主題樹狀圖，利用圖像階層圖示法讓使用者對熱百科有概略的認識
- Index 索引；可用主題或作者所引來瀏覽
- 超過 300 位以上作者，數千篇以上全文內容
- 適用領域：化學 / 土木 / 工業 / 機械 / 核能 / 石油 / 動力等

Basic → Foundation → Experimental → Application

### MAP 主題樹狀圖



### 線上 demo

<http://www.thermopedia.com/presentation.html>

### Open Access Article

[http://www.thermopedia.com/toc/chapt\\_g/GAS-LIQUID\\_FLOW.html](http://www.thermopedia.com/toc/chapt_g/GAS-LIQUID_FLOW.html)

### GAS-LIQUID FLOW

G. F. Hewitt

Following from: Two-phase flow overview

Leading to: Annular flow, Bubble flow, Dispersed flow, Drops, Falling film flow, Flooding and flow reversal, Instability, two-phase, interfaces, Plug flow, Plunging liquid jets, Pressure drop, two-phase, Slug flow, Stratified flow, Wispy annular flow

RelatesLink: eResource Articles, HEDH-Online, ICHMT

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Of the four type of Two-Phase Flow (Gas-Liquid, Gas-Solid, Liquid-Liquid and Liquid-Solid), gas-liquid flows are the most complex, since they combine the characteristics of a deformable interface and the compressibility of one of the phases. For given flows of the two phases in a given channel, the gas-liquid interfacial distribution can take any of an infinite number of possible forms. However, these forms can be classified into types of interfacial distribution, commonly called flow regimes or flow patterns. Detailed discussions of these patterns are given by Hewitt (1982), Whalley (1987) and Dukler and Taitel (1986). The regimes encountered in vertical flows are illustrated in Figure 1. They include Bubble Flow, where the liquid is continuous, and there is a dispersion of bubbles within the liquid; Slug or Plug Flow where the bubbles have coalesced to make larger bubbles which approach the diameter of the tube; Churn Flow where the slug flow bubbles have broken down to give oscillating churn regime; Annular Flow where the liquid flows on the wall of the tube as a film (with some liquid entrained in the core) and the gas flows in the centre; and Wispy Annular Flow where, as the liquid flow rate is increased, the concentration of drops in the gas core increases, leading to the formation of large lumps or streaks (wisps) of liquid.

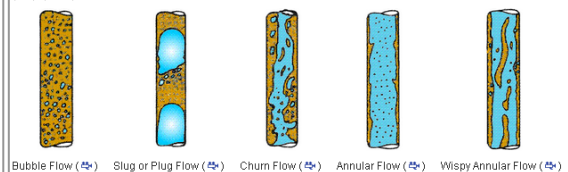


Figure 1. Flow patterns in vertical flow (All Flows).

加入 Begell House...

讓您擁有在工程與科學領域上的全方位觀點及基礎應用。如：工程設計、實驗過程、參考文獻、實驗數據、實驗方法與結果外還提供突破性的發展研究。

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