Power System Analysis
供電=用電

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負載
- 被動 (不會改變freq; i(線性) → 用疊加定理)
  - R: $V=iR$
  - C: $i=C\frac{dv}{dt}$
  - L: $V=L\frac{di}{dt}$
- 主動 (非線性)

交流	直流
要接在一起要 { 同freq. / 同电压. / 同phase.	要接在一起要 { freq=0 / phase=0 / Voltage相等.

電
- 直流 (0Hz)
- 交流 (60Hz + 50Hz). (台 / 日)

①平面，空間正交

② Fourier，直流和交流正交
　sinωt，cosωt 正交，
　sinhωt，coshωt 正交，

③ 多項式，1，x，x²… 正交

電路學 ①直流電路分析：V，i，Power.
　　②交流電路分析：V，i，Power { 實功 / 虛功 }，頻寬.

電力工程：電能傳送.

電力電子：電能轉換
- 直流 0Hz
- 交流 60Hz

① AC→DC
② DC→DC
③ DC→AC
④ AC→AC (ex: 60Hz→50Hz)

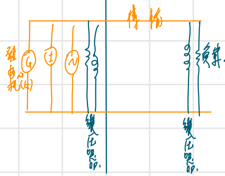
電子學：二支腳 ① 開，② 關（不可控）.
　　三支腳 ① 開，② 關（可控），③ 線性放大（比例）

直流電力 0Hz (可儲存ex:電池)	交流電力 60Hz (無法儲存).

DC ← AC

DC —太陽能→ AC

(風力發电)
DC (0Hz) ←① AC (not 60Hz) → ∵轉速不同.
②→ AC (60Hz).



供电 = 用电.

*考試只考講義的範例，只會改數字.

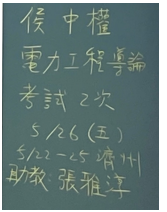
*電機機械：利用磁場轉換能量.

① 發电机(G)：機械 → 電

② 馬達：電 → 機械

③ 變壓器：電 → 電.

目錄(Contents)



1.前言(Background)

1.0簡介(Introduction)

1.1電能(Electric Energy)

1.2化石燃料電廠(Fossil-Fuel Plant)

1.3核能電廠(Nuclear Power Plant)

1.4水力電廠(Hydroelectric Power Plant)

1.5其他能源(Other Energy Sources)

1.6輸電與配電系統(Transmission and Distribution Systems)

(The Deregulated Electric Power Industry)

2.基本原理(Basic Principles)

2.0簡介(Introduction)

2.1供應單埠的複數功率(Complex Power Supplied to a One-Port)

2.2複數功率守恆(Conservation of Complex Power)

2.3平衡三相(Balanced Three-Phase)

2.4單相分析(Per Phase Analysis)

2.5平衡三相功率(Balanced Three-Phase Power)

2.6複數功率傳輸(短程)(Complex Power Transmission: Short Line)

2.7複數功率傳輸(輻射線路)(Complex Power Transmission: Radial Line)

2.8結論與習題(Summary)

3.輸電線參數(Transmission-Line Parameters)

3.0簡介(Introduction)

3.1磁學回顧(Review of Magnetics)

3.2無限長直電線的磁通鏈(Flux Linkages of Infinite Straight Wire)

3.3多導體情況下的磁通鏈(Flux Linkages of Multi-Conductors)

3.4捆束導體(Conductor Bundling)

3.5移位(Transposition)

3.6電場回顧(Review of Electric Fields)

3.7線路電容(Line Capacitance)

3.8典型參數值(Typical Parameter Values)

3.9結論與習題(Summary)

4.輸電線模型(Transmission-Line Modeling)

4.0簡介(Introduction)
4.1端點處V,I關係的推導(Derivation of Terminal V,I Relations)
4.2輸電線上的電波(Waves on Transmission Lines)
4.3傳輸矩陣(Transmission Matrix)
4.4等效集總電路(Lumped-Circuit Equivalent)
4.5簡化模型(Simplified Models)
4.6複數功率傳輸(長程或中程線路)(Complex Power Transmission: Long or Medium Lines)
4.7線路的功率處理容量(Power-Handling Capability of Lines)
4.8結論與習題(Summary)

5.變壓器模型與標么系統(Transformer Modeling and The Per Unit System)

5.0簡介(Introduction)
5.1單相變壓器模型(Single-Phase Transformer Model)
5.2三相變壓器接法(Three-Phase Transformer Connections)
5.3單相分析(Per Phase Analysis)
5.4正規系統(Normal Systems)
5.5標么正規化(Per Unit Normalization)
5.6三相標么物理量(Per Unit Three-Phase Quantities)
5.7基準的改變(Change of Base)
5.8正規系統的標么分析(Per Unit Analysis of Normal System)
5.9電壓與相角控制用的調節變壓器(Regulating Transformers for Voltage and Phase Angle Control)
5.10輸電線與變壓器(Transmission Line and Transformer)
5.11結論與習題(Summary)

6.電力潮流分析(Power Flow Analysis)

6.0簡介(Introduction)
6.1電力潮流方程式(Power Flow Equations)
6.2電力潮流問題(The Power Flow Problem)
6.3利用高斯疊代法求解(Solution by Gauss Iteration)
6.4通用疊代法(More General Iteration Scheme)
6.5牛頓-拉夫生疊代法(Newton-Raphson Iteration)
6.6應用於電力潮流方程式(Application to Power Flow Equations)
6.7分解電力潮流(Decoupled Power Flow)
6.8控制上的含意(Control Implications)
6.9結論與習題(Summary)

7.電力系統的經濟操作
(Economic Operation of Power System)

7.0簡介(Introduction)

7.1經濟調度問題的形成)(Formulation of the Economic Dispatch Problem)

7.2古典經濟調度(忽略線路損失) (Classical Economic Dispatch (Line Losses Neglected))

7.3考慮發電機極限(Generator Limits Included)

7.4考慮線路損失(Line Losses Considered)

7.5償罰因數的計算(方法1)(Calculation of Penalty Factors: Method I)

7.6償罰因數的計算(方法2)(Calculation of Penalty Factors:Method II)

7.7結論與習題(Summary)

8.發電機模型I (機械觀點)(Generator Modeling I: Machine Viewpoint)

8.0簡介(Introduction)

8.1古典機械描述(Classical Machine Description)

8.2電壓的產生(Voltage Generation)

8.3開路電壓(Open-Circuit Voltage)

8.4電樞反應(Armature Reaction)

8.5端電壓(Terminal Voltage)

8.6發電機送出的功率(Power Delivered by Generator)

8.7使發電機同步於無限滙流排(Synchronizing Generator to an Infinite Bus)

8.8同步電容器(Synchronous Condensor)

8.9結論與習題(Summary)

Role of Synchronous Machine Excitation in Controlling Reactive Power

9.電力系統穩定度(Power System Stability)

9.0簡介(Introduction)

9.1模型(Model)

9.2能量平衡(Energy Balance)

9.3搖擺方程式的線性化(Linearization of Swing Equation)

9.4非線性搖擺方程式的解(Solution of Nonlinear Swing Equation)

9.5其他應用(Other Applications)

9.6擴展至兩個電機的情形(Extension to Two-Machine Case)

9.7多電機應用(Multi-Machine Application)

9.8結論與習題(Summary)

(Multi-Machine Stability Studies)

10.發電機模型II (電路觀點)(Generator Modeling II: Circuit Viewpoint)

11.電壓控制系統(Voltage Control System)

11.0簡介(Introduction)
11.1激磁器系統方塊圖(Exciter System Block Diagram)
11.2發電機模型(Generator Models)
11.3激磁系統的穩定度(Stability of Excitation System)
11.4電壓調整(Voltage Regulation)
11.5發電機接至無限滙流排(Generator Connected to Infinite Bus)
11.6結論與習題(Summary)

12.電力控制系統(Power Control System)

12.0簡介(Introduction)

12.1電力控制系統模型(Power Control System Modeling)

12.2應用於單電機-無限滙流排系統(Application to Single Machine-Infinite Bus System)

12.3功率控制系統的簡化分析(Simplified Analysis of Power Control System)

12.4功率控制-多發電機的情形(Power Control, Multigenerator Case)

12.5特例:兩個發電機組(Special Case: Two Generating Units)

12.6將電力系統分成控制區域(Division of Power Into Control Area)

12.7結論與習題(Summary)

13.不均衡系統操作(Unbalanced System Operation)

13.0簡介(Introduction)
13.1對稱分量(Symmetrical Components)
13.2使用對稱分量做故障分析(Use of Symmetrical Components for Fault Analysis)
13.3單線接地故障的序網路連接(Single Line-ground Fault Sequence Networks)
13.4使用角形網路做故障計算
13.5零序網路(Zero Sequence Networks)
13.6雙線接地故障的序網路連接(Double Line-ground Fault Sequence Networks)
13.7線間故障的序網路連接(Sequence Networks Connections for Line-line Fault)
13.8一般故障電路分析(More General Fault Circuit Analysis)
13.9序變數的功率(Power from Sequence Variables)
13.10序網路的發電機模型(Generator Models for Sequence Networks)
13.11序網路的變壓器模型(Transformer Models for Sequence Networks)
13.12序網路的輸電線模型(Sequence Representation of Transmission Line)
13.13序網路的組合(Assembly of Sequence Networks)
13.14問題的形成(Formulation of Problem)
13.15矩陣法(Matrix Methods)
13.16 Z矩陣的計算(Z Matrix Calculation)
13.17結論與習題(Summary)

14.系統保護(System Protection)

14.0簡介(Introduction)

14.1輻射狀系統的保護(Protection of Radial Systems)

14.2兩個電源的系統(System with two Sources)

14.3阻抗(測距)電驛(Impedance (Distance) Relays)

14.4修正阻抗電驛(Modified Impedance Relays)

14.5發電機的差動保護(Differential Protection of Generators)

14.6變壓器的差動保護(Differential Protection of Transformer)

14.7滙流排與線路的差動保護(Differential Protection of Buses and Lines)

14.8保護區的重疊(Overlapping Zones of Protection)

14.9序過濾器(Sequence Filters)

14.10計算機電驛(Computer Relaying)

14.11結論與習題(Summary)