

SPD5132 Indoor Environment and HVAC Systems

<http://ibse.hk/SPD5132/>

Summary of Teaching (Dr. Sam C. M. Hui)

<p>1. HVAC systems: basic concepts</p> <ul style="list-style-type: none"> 1.1 HVAC systems 1.2 HVAC system design 1.3 All air systems 1.4 All water systems 1.5 Air-water systems 1.6 Unitary package systems 1.7 VRF systems <p>2. Water-side systems</p> <ul style="list-style-type: none"> 2.1 Pipe Systems and Design 2.2 Water Systems in HVAC 2.3 Centrifugal Pumps 2.4 Pump Arrangements <p>3. Heat rejection systems</p> <ul style="list-style-type: none"> 3.1 Heat rejection methods 3.2 Cooling towers 3.3 Assessment of cooling towers 3.4 Selecting a cooling tower 3.5 Cooling tower operation 	<p>4. Chiller plant control and operation</p> <ul style="list-style-type: none"> 4.1 Types of chillers 4.2 Refrigeration systems 4.3 Chiller performance 4.4 Chiller plant control <p>5. Heating systems</p> <ul style="list-style-type: none"> 5.1 System types and components 5.2 Design of heating systems 5.3 Boilers 5.4 Warm air furnaces 5.5 Solar heating <p>6. Energy recovery systems</p> <ul style="list-style-type: none"> 6.1 Basic concepts 6.2 Air-to-air energy recovery <ul style="list-style-type: none"> 6.2.1 Run-around coil 6.2.2 Heat pipe 6.2.3 Plate heat exchanger 6.2.4 Energy transfer wheel 6.3 Applied heat pumps
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Concept Map:

