

OKBR – Basics of Refrigeration and Heat Pumps



Life-Online-Training – Course Schedule – Calendar week xx/20xx

Training leadership: N.N.

1. Day

09:00	N.N.	Welcome, general remarks
subseq.	N.N.	Basics of thermodynamics (<i>temperature, pressure, enthalpy, vapour pressure curve, steam table, density</i>)
10:00	Coffee break	
10:10	N.N.	Basics of thermodynamics Structure and operational principles of the refrigerant circuit (<i>evaporation, compression, condensation, expansion, function of the main components, pipes</i>)
11:00	Coffee break	
11:10	N.N.	Structure and operational principles of the refrigerant circuit
12:00	Lunch break	
12:40	N.N.	Structure and operational principles of the refrigerant circuit Superheat, subcooling (<i>Definition, reasons, how to achieve superheat and subcooling, determination in the refrigerant circuit, examples</i>)
13:40	Coffee break	
13:50	N.N.	Superheat, subcooling
14:50	Coffee break	
15:00	N.N.	Superheat, subcooling
16:00	End of first day	

2. Day

09:00	N.N.	Discussion of homework, open questions
10:00	Coffee break	
10:10	N.N.	Expansion device (<i>capillary tube, thermostatic expansion valve with internal and external pressure compensation, electronic expansion valve</i>)
11:00	Coffee break	
11:10	N.N.	Evaporator (<i>evaporator capacity, dry and flooded evaporation, evaporator designs, air coolers and liquid coolers</i>)
12:00	Lunch break	
12:40	N.N.	Compressor (<i>compressor parameters, performance data, compressor application limits, compressor designs, reciprocating, scroll, rolling piston, screw compressors</i>)
13:40	Coffee break	
13:50	N.N.	Compressor Condenser (<i>condenser sections, desuperheating, condensing, subcooling, condenser designs, air- and water-cooled condensers</i>)
14:50	Coffee break	
15:00	N.N.	Condenser
15:15	N.N.	Discussion of open questions
16:00	End of training course	