

EFFICIENCY	OF	PRIMARY	REFRIGERATION	SYSTEM
PRIMARY REFRIGERATION SYSTEM PERFORMANCE				
CLOSED COOLING CIRCUIT	FORMULA		REFRIGERATION MACHINES working on VAPOUR COMPRESSION or VAPOUR ABSORPTION principle.	
EVAPORATOR INLET minimum temp in deg.C.	TO FILL	15		
APPROACH	Te=	258	Uncooled Fraction(Approach)	
CONDENSER OUTLET maximum temp in deg.C.		30	Left in relation to Absolute cooling temp. i.e. -273 deg.C.	
RANGE	ACTUAL COOLING		Actual Cooling(Range)	
ABSOLUTE TEMP in deg.C.		273	which is practical cooling span in relation to -273 deg.C.as	
RANGE	Tc-Te=	45	the starting point.	
FORMULA			Closed Cooling Circuit	
TOTAL COOLING theoretical	Tc	303	Coefficient of Performance	
COP=Te/Tc-Te.	Te/Tc-Te COP		5.7333333333	
Condenser outlet to -273 deg.C.Absolute temp (total theoretical span) minus uncooled fraction(approach) gives RANGE actual cooling taken place in CTS.	Tc-Te=Range			
	Tc=			
Remarks- Coefficient of Performance				
COP is a comparison to understand as to how much times is the uncooled region (known as REACH) left over practical region(known as RANGE) and in both the cases ABSOLUTE temp.-273 deg.C.is start.			In both the cases ABSOLUTE TEMP.-273 deg.C.is starting.	
EFFICIENCY	OF		COOLING TOWER	SYSTEM
CTS.PERFORMANCE				
PRACTICAL COOLING CONDENSER INLET/CST OUT LET minimum temp in deg.C.	TO FILL	20	Result of Evaporative Cooling by CTS known as RANGE	20
CONDENSER OUTLET/CST INLET .in deg.C. maximum temp in deg.C.	TO FILL	40	Maximum Temp.to face practical cooling by CST system	
MAXIMUM COOLING WET BULB TEMP in deg.C. Near the CTS below the shade and away from direct Sun Rays	Mini.Ambi Cooling Temp.		Minimum temp. Shown by Wet Bulb.	10
			Range \times 100 SAY=[A]	2000
		10	Range+Approach SAY=[B]	30
			[A]/[B]= %	66.66667
COOLING TOWER EFFICIENCY on% basis	100 On % basis		COOLING TOWER EFFICIENCY	66.6666666667 %
Remarks-% of performance of CTS system By using EVAPORATION as the force.				
Cooling Tower Efficiency on % basis is calculated by taking % of Actual cooling taken place (known as RANGE) over left out span (known as REACH) as uncooled region insitu taking Wet Bulb temp. as the starting point. (which faces Evaporation as well as Vaporisation in the vicinity of CTS system.				
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