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عنوان مقاله:
HEAD PRESSURE CONTROLS IN COMPRESSION CHILLER SYSTEMS

محل انتشار:
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خلاصه مقاله:
This article covers the basics of head pressure controls in compression chiller systems. Condenser capacities are based, in part, on TD (temperature difference) between the ambient and the refrigerant condensing temperature. As the ambient falls, and the TD increases, the condenser capacity will increase. For example, a condenser rated at 150,000 Btu/h at a110ºF and 10ºF TD, would have a capacity of 750,000Btu/h with a 50ºF TD. In laymen's terms, it has now become five times larger than it needs to be. An over-sized condenser means lower head pressure, and reduced electrical consumption. When the actual ambient is below the design ambient, we can take advantage of the now greater condenser capacity, allow the head pressure to fall, and start reaping the benefits to a point. Too much of any good thing can become problematic, and reducing head pressure is no exception. If the head pressure is allowed to fall below certain minimums, system performance can be adversely affected in the following areas: 1.Underfeeding TEVs (thermostatic expansion valves) and starving evaporators. 2. Oil logging. 3. reduced compressor efficiency and higher discharge temperatures.

کلمات کلیدی:
Condenser-oil logging- evaporator - mass flow - expansion valves - Flooding Valves - ORIT valve

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