COUNTER-FLOW INDIRECT DEW-POINT EVAPORATIVE COOLING METHOD AND APPARATUS

The present invention provides a new counter-flow indirect dew-point evaporative cooling method and its corresponding cooling system. The key component of this cooling system is a counter-flow heat exchanger that enables a part of the product air to flow from the dry channels to the wet channels without the change in its direction. Compared with the conventional M-cycle indirect evaporative cooler, this new cooling system has more even airflows and lower pressure drops in its channels, higher dew-point cooling effectiveness, higher cooling capacity, and higher energy efficiency.

Figure 5