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Dry Cooler Minimum Efficiency and Test Code

Add minimum efficiency and Test Code for dry coolers (air cooled fluid coolers) to the 2022 version of Title 24 to match that found in ASHRAE Standard 90.1 - 2019. See attached file for details.

The introduction of the Test Code in Title 24 will assist purchasers of dry coolers confirm the actual rated capacity that was specified in their system design as well as prepare the market for the anticipated introduction of a dry cooler certification program by the Cooling Technology Institute within approximately the next year.

Note that this change was implemented into Standard 90.1 - 2016 by Addendum "bq" and subsequently incorporated into Standard 90.1 - 2019.

Thank you for your consideration of this proposal.

Additional submitted attachment is included below.

Proposal for Title 24 2022

Update Table 110.2 G, *Performance Requirements for Heat Rejection Equipment* as follows:

Equipment Type	Total System Heat Rejection or Rated Conditions	Subcategory or Rating Condition	Performance Required	Test Procedure
<u>Propeller or axial fan dry coolers (air-cooled fluid coolers)</u>	<u>All</u>	<u>115°F entering water 105°F leaving water 95°F entering air db</u>	<u>≥4.5 gpm/hp</u>	<u>CTI ATC-105DS</u>

Also modify footnote “c” to the Table as follows:

^c For purposes of this table, dry cooler performance is defined as the process water flow rating of the unit at the given thermal rating condition divided by the total fan motor nameplate power of the unit and air-cooled condenser performance is defined as the heat rejected from the refrigerant divided by the total fan motor nameplate power of the unit.

Add ATC-105DS to Appendix 1-A under “Cooling Technology Institute”:

ATC-105DS (18) Acceptance Test Code for Dry Fluid Coolers (2018)

Also add ATC-105DS to Section 100.1 (Definitions):

CTI ATC-105DS is the Cooling Technology Institute document titled “Acceptance Test Code for Dry Fluid Coolers, 2018 (CTI ATC-105DS (18)).

Note that the minimum efficiency of dry coolers is currently included in Standard 90.1-2019 (added by Addendum “bq” to the 2016 version of the Standard) as well as the current version of the IECC.