

**INTERPRETATION IC 90.1-2016-5 OF
ANSI/ASHRAE/IES STANDARD 90.1-2016
Energy Standard for Buildings Except Low-Rise Residential Buildings**

Date Approved: October 21, 2017

Request from: Richard Lord, Carrier Corporation, 2003 Irby Lane, Murfreesboro, TN 37127.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IES Standard 90.1-2016, Section 6.4.1.2.1, regarding the water-cooled centrifugal *Kadj* efficiency correction procedure.

Background: In the ASHRAE/IES Standard 90.1 there is a procedure to correct minimum efficiencies listed in Table 6.8.1-3 for water cooled centrifugal chillers not designed for operation at AHRI 550/590 standard rating conditions to application conditions to determine if the application efficiency is in compliance with the standard. This procedure is called the *Kadj* procedure. The international Saudi Arabia Standard 2874 has adopted ASHRAE/IES Standard 90.1 efficiencies and procedures but implemented the *Kadj* procedure in reverse. The two approaches are shown below;

ASHRAE 90.1-2010, 2013, 2016

Efficiency in table 6.8.1-3 (kw/ton)/*Kadj* ≤ Efficiency at application rating

SASO modified requirement

Efficiency at application rating * *Kadj* ≤ Efficiency in table 6.8.1-3 (kw/ton)

Interpretation: The reverse implementation of *Kadj* where the rated application efficiency is corrected to standard ratings conditions is equivalent to the procedure defined in Section 6.4.1.2.1 and can be used to determine compliance

Question: Is this interpretation correct?

Answer: Yes.