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.