

Additional Information on the Proposed Methodology
“Introduction of Non-Inverter High Efficiency Centrifugal Chiller”

1. Market share of non-inverter type chiller manufacturer in Vietnam

In Vietnam, chiller manufacturers, such as Company A, Company B, Company C and Company D occupy relatively high market share in non-inverter type chillers market according to interviews with technical experts of chillers in Japan.

2. Research on the COP values of non-inverter type chillers in Vietnam

2.1 Catalogue COP values

Catalogue COP values of centrifugal chillers sold by Company A and Company B are collected except for Company C and Company D because of the following reason.

- COP values of non-inverter type centrifugal chillers which are calculated with the same conditions are not obtained for Company C
- COP values of non-inverter type centrifugal chillers are not publicly available for Company D

As a result, total 28 COP values of centrifugal chillers ranging from 300 USRt to 1,500 USRt, provided with the same temperature conditions, are obtained.

2.2 Determination of the reference COP values

It is observed that similar COP values fall into a certain cooling capacity range. Therefore, three cooling capacity ranges are set to determine the reference COP values for each range. The most efficient COP, which has the largest value, in each capacity range is selected as the reference COP and is shown in Figure 1 below in red circles.

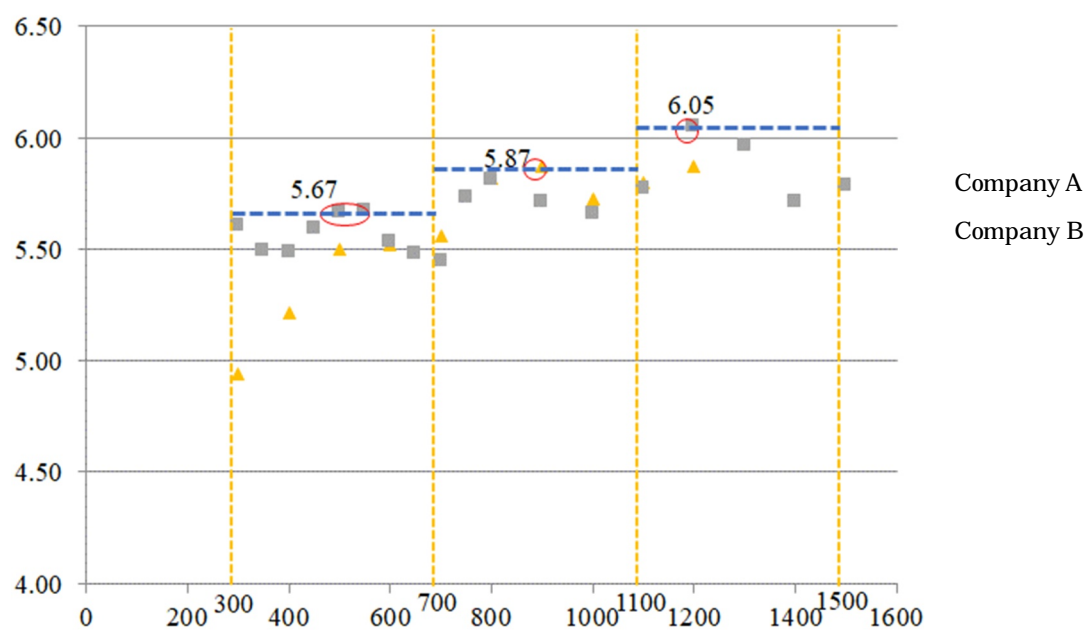


Figure 1: COP values of centrifugal chiller marketed in Vietnam

The reference COP for each cooling capacity range is determined and shown in Table 1 below. (“x” in the table represents cooling capacity per unit.)

Table 1: Established $COP_{RE,i}$ for the proposed methodology

Cooling capacity per unit (USRt)	$300 \leq x \leq 700$	$700 < x \leq 1,100$	$1,100 < x \leq 1,500$
$COP_{RE,i}$	5.67	5.87	6.05