Additional information to the proposed JCM methodology "Installation of energy saving air jet loom at textile factory"

1. Means to reduce GHG emissions and basic concept of their calculations

Electricity consumption in the textile factory operating air jet looms mainly comes from the energy consumption by compressor which produces compressed air to be used for weaving. Installation of air jet looms equipped with energy efficient technologies which reduce amount of compressed air consumed to weave fabrics results in the reduction of total amount of compressed air required to weave fabrics at the textile factory and energy consumption by the compressor. The conceptual diagram of the pre/post project implementation is as shown in Figure 1 below.



Figure 1 Conceptual diagram of air jet looms and air compressors

2. Supplemental explanation of specific air consumption and reduction rate

The following is an example of how to set $SAC_{PJ,i,j}$ and $RR_{i,j}$ according to given data set.

<Example>

[Assumption]

- Project site: the factory X only
- Project air jet loom type: air jet loom type Y manufactured by manufacturer Z only
- Reference air jet loom type: the previous model air jet loom by one generation manufactured by manufacturer Z
- Fabric types woven at the project site: 6 fabric types

The experimental data of specific air consumption as per the fabric type for both project air jet loom Y and reference air jet loom are collected from the manufacturer Z as shown in the table below.

| (A) | (B) | Deference | Specific air | Specific air | Reduction rate of |
|------------------------------|------------------------------|-----------------|------------------------|----------------------|-------------------|
| Fabric type ^{*1} at | Fabric Type ^{*1} of | between (A) and | consumption of | consumption of | specific air |
| factory X | experimental | (B) | the project air | the reference air | consumption |
| | data | (%) | jet loom type <i>i</i> | jet loom | (%) |
| | | | (Nm ³ /m) | (Nm ³ /m) | |
| 3791 | 3813 | -0.58% | 1.72 | 2.20 | 21.8% |
| 3880 | 3883 | -0.08% | 1.88 | 2.45 | 23.3% |
| 3905 | 3909 | -0.10% | 2.49 | 3.45 | 27.8% |
| 4807 | 4794 | +0.27% | 2.78 | 3.58 | 22.3% |
| 4872 | 4872 | ±0.00% | 1.90 | 2.38 | 20.2% |
| 5789 | 5755 | +0.59% | 2.11 | 2.87 | 26.5% |
| | | | (Minimum) 1.72 | | (average) 23.7% |

*1 Fabric type is defined by the figure calculated by weft density multiplied by fabric width.

All the experimental data are deemed applicable as the difference in the fabric types of project factory X and the experimental data stays within plus or minus 5%. Reduction rate of specific air consumption is also calculated for each fabric types using collected data.

Accordingly, the default value for $SAC_{PJ,i,j}$ is fixed at the minimum value of 1.72 and $RR_{i,j}$ is fixed at the average value of 23.7%.