**JCM Project Design Document Form**

## A. Project description

A.1. Title of the JCM project

| |
|---|
| Reducing GHG emission at textile factories by upgrading to air-saving loom |

A.2. General description of project and applied technologies and/or measures

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|---|
| Exporting textiles products from Indonesia is the highest amount in South-eastern Asia. In the project, at 3 sites of textile factory in Indonesia, this project upgrades existing weaving looms to total 96 units (ISTEM 16 units, CENTEX 17 units and Easterntex 63 units) of the latest air-saving looms (Toyota JAT810), which can reduce energy consumption of air compressors.<br>This "JAT810" has original air-saving technology to reduce air consumption for weft insertion more than 15% of the conventional model. The effect is not only reducing $CO_2$ emission by saving the power consumption of air-compressors but also reducing the running cost. |

A.3. Location of project, including coordinates

| | |
|---|---|
| Country | Republic of Indonesia |
| Region/State/Province etc.: | P.T. Indonesia Synthetic Textile Milles (ISTEM): Tangerang Banten<br>P.T. Easterntex: East Java<br>P.T. Century Textile Industry Tbk (CENTEX): Jakarta |
| City/Town/Community etc: | P.T. Indonesia Synthetic Textile Milles (ISTEM): Jl Mochamad Toha KM.1, Pasar Baru, Karawaci Tangerang, Banten<br>P.T. Easterntex: KM. 50 Surabaya – Pandaan Kab. Pasuruan, JAWA TIMUR<br>P.T. Century Textile Industry Tbk (CENTEX): Jl. Raya Bogor KM 27, Ciracas, Jakarta |
| Latitude, longitude | P.T. Indonesia Synthetic Textile Milles (ISTEM):6°10'01.9"S 106°37'20.5"E<br>P.T. Easterntex: 7°40'31.5"S 112°42'11.9"E<br>P.T. Century Textile Industry Tbk (CENTEX): 6°19'31.6"S 106°52'40.0"E |

A.4. Name of project participants

| | |
|---|---|
| The Republic of Indonesia | P.T. Indonesia Synthetic Textile Milles (ISTEM)<br>P.T. Easterntex |

| | |
|---|---|
| | P.T. Century Textile Industry Tbk (CENTEX) |
| Japan | Toray Industries, Inc. |

A.5. Duration

| | |
|---|---|
| Starting date of project operation | 01 January 2017 |
| Expected operational lifetime of project | 7 Years |

A.6. Contribution from Japan

The proposed project was partially supported by the Ministry of the Environment, Japan through the financing program for JCM model projects which provided financial support of less than half of the initial investment for the projects in order to acquire JCM credits. Apart from support from financing program for JCM model projects, the project was also financially supported by Japanese company.

In terms of technology transfer, Toray Industrious has conducted OJT training and provided a manual on operation, maintenance and safety measures of the three factories during the installation of advanced air-saving looms.

## B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

| | |
|---|---|
| Selected approved methodology No. | ID_AM011 |
| Version number | 1.0 |

B.2. Explanation of how the project meets eligibility criteria of the approved methodology

| Eligibility criteria | Descriptions specified in the methodology | Project information |
|---|---|---|
| Criterion 1 | The project replaces existing air jet looms at a weaving factory with air jet looms equipped with energy saving technologies such as an optimized shape reed's tunnel of nozzles and a pressure sensor to measure air pressure of nozzles for optimization of compressed air consumption of welt insertion | The project replaces existing air jet looms at a weaving factory with the latest air-saving looms (Toyota JAT810), which equipped with energy saving technologies such as an optimized shape reed's tunnel of nozzles and a pressure sensor to measure air pressure of nozzles for optimization of compressed air consumption of welt insertion |
| Criterion 2 | The air jet looms which are installed by the project reduce the specific air | Toyota JAT810 which are installed by the project reduce the specific air |

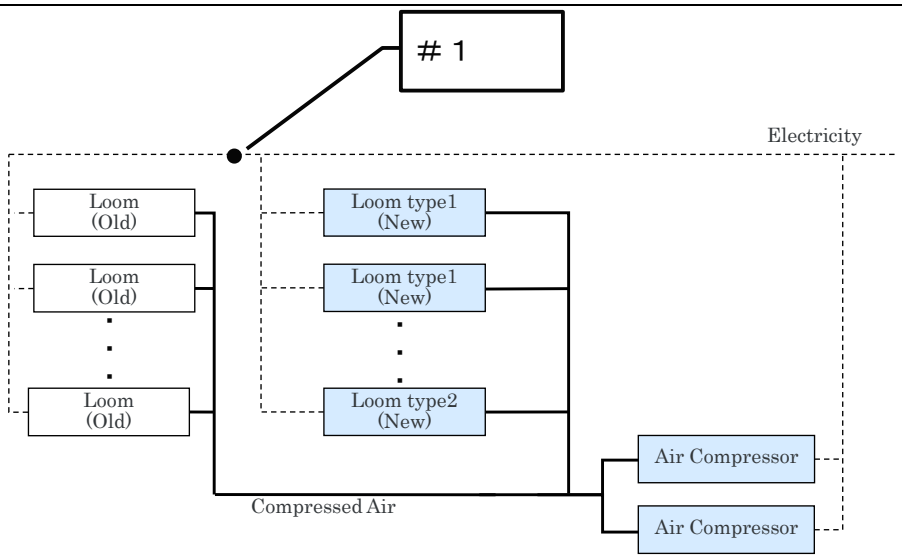
| | | |
|---|---|---|
| | consumption by at least 15% compared with the reference air jet looms in line with the description in Section I of this methodology. | consumption more than 15% of the reference air jet looms. |

## C. Calculation of emission reductions

C.1. All emission sources and their associated greenhouse gases relevant to the JCM project

| Reference emissions | |
|---|---|
| Emission sources | GHG type |
| Electricity consumption by air compressors to generate compressed air for the reference air jet looms | $CO_2$ |
| **Project emissions** | |
| Emission sources | GHG type |
| Electricity consumption by air compressors to generate compressed air for the project air jet looms | $CO_2$ |

C.2. Figure of all emission sources and monitoring points relevant to the JCM project




#1 : Meter to measure the amount of fabric woven

Note : The power for the project air jet loom is supplied from the Grid, and the Project looms will utilize grid power only.

C.3. Estimated emissions reductions in each year

| Year | Estimated Reference emissions ($tCO_{2e}$) | Estimated Project Emissions ($tCO_{2e}$) | Estimated Emission Reductions ($tCO_{2e}$) |
|---|---|---|---|
| 2017 | 3,058.5 | 2,316.2 | 742 |
| 2018 | 3,058.5 | 2,316.2 | 742 |
| 2019 | 3,058.5 | 2,316.2 | 742 |
| 2020 | 3,058.5 | 2,316.2 | 742 |
| Total ($tCO_{2e}$) | 12,234,0 | 9,264.8 | 2,968 |

Note) The aggregate emission reductions at the three sites (CENTEX, ISTEM, and Easterntex) are shown in above-cited table.

| **D. Environmental impact assessment** | |
|---|---|
| Legal requirement of environmental impact assessment for the proposed project | No |

**E. Local stakeholder consultation**

E.1. Solicitation of comments from local stakeholders

The main stakeholders of the project are employees of the project participants, and a local stakeholder consultation meeting (face to face meeting) was conducted for them;

[Date] 14:00 – 16:00 29th September 2016

[Venue] Conference room of PT. Indonesia Synthetic Textile Mills (ISTEM)

[Participated organization in the consultation]

1. Employees of PP
   - ISTEM
   - CENTEX
   - Easterntex
2. Indonesia Textile Association

3. Indonesia JCM secretariat

E.2. Summary of comments received and their consideration

| Stakeholders | Comments received | Consideration of comments received |
|---|---|---|
| Ms. Rini Setiawati Indonesia JCM Secretariat | What items are monitored for JCM? Is electricity consumption monitored? | Monitoring is carried out based on the methodology and only production amount (m) is monitored.<br>No action needed. |
| | How are the monitoring records controlled? | Records related to the production are controlled by each factory under ISO management systems.<br>No action needed. |
| | Do you have a plan to provide training for Indonesian personnel performing tasks for monitoring of JCM project? | Toray will make a plan and provide training to them.<br>No action needed. |
| Mr.Baari La Inggi Indonesian Textile Association | The new type loom includes various energy saving technologies. Are parts of these applied or all of them? | Old model looms are changed to the new model looms which are applied all of the technologies.<br>No action needed. |
| | Technological progress is so rapid. Do you apply the progressed technology for the looms even if it is part of them? | The new model loom is developed by Toyota Industries. Toray apply their new model loom but cannot apply the part of the new technologies for the old model loom.<br>No action needed. |

| **F. References** |
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| N/A |

Reference lists to support descriptions in the PDD, if any.

| **Annex** |
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| N/A |

| Revision history of PDD | | |
|---|---|---|
| Version | Date | Contents revised |
| 1.0 | 01/30/2018 | First edition |
| 2.0 | 03/12/2018 | A3. State of ISTEM<br>C3. Monitoring period |
| 3.0 | 31/07/2018 | Third edition |