

STANDARD OPERATING PROCEDURE

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SUBJECT: INDO KORDSA ENERGY MANAGEMENT SYSTEM

OBJECTIVE: MANAGEMENT OF THE ENERGY SOURCES

CROSS REFERENCES:

EXPLANATION OF REFERENCES: COP P 143 KORDSA GLOBAL ENERGY MANAGEMENT SYSTEM

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INDO KORDSA ENERGY MANAGEMENT
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INDO KORDSA ENERGY MANAGEMENT

1. INTRODUCTION

1. The purpose of this procedure is to establish the methods and essentials for the activities to be carried out by participation of all Indo Kordsa employees with the aim of efficient and productive use of the energy sources and minimization of environmental impacts of the energy sources in line with the energy, SHE and quality policies of Indo Kordsa.
2. This procedure defines the organizational structure and the system flow related with all energy management and saving activities carried out at Indo Kordsa.
3. All employees of Indo Kordsa are directly responsible for the implementation of this procedure.

2. SYSTEMS

- a. Energy saving means reduction of energy consumption and/or cost per unit production (kwh/ton).
- b. Energy productivity means more efficient use of the energy.
- c. Energy means the capability of a system to produce an activity outside itself.
 - The energy sources at Indo Kordsa are as follows:
 - Electricity
 - Steam
 - Gas (LPG and NG)
 - Other fuels (diesel, gasoline, IDO, etc.)
- d. Energy unit means energy consumption calculated in kWh.
- e. Energy management means a dynamic process which ensures management of the energy sources so as to ensure production at targeted quality and cost within a certain period of time by taking into account of all economic, social and environmental conditions.
- f. Energy committee means the committee where various disciplines are represented with the participation of related managers, engineers, and the financial specialist and where essentials related with carrying out and spreading of all activities related with the energy are established and where the activities are reviewed after completion.

3. TECHNICAL SPECIFICATIONS

3.1. Responsibilities.

3.1.1. Responsibilities of the Management.

- a. Give support for establishment and continuity of the energy management system.
- b. Appoint members of the energy management committee members and leader.
- c. Lead the establishment of the targets for the energy management and the enhancement of the saving measures.
- d. Review the targets and the activities once a year.

3.1.2. Responsibilities of the energy committee

- a. Establish the essentials of the energy management system.
- b. Assist in making of the annual energy planning and the establishment of the targets.

3. TECHNICAL SPECIFICATIONS (CONT'D)

3.1. Responsibilities (cont'd)

3.1.2. Responsibilities of the energy committee (cont'd)

- c. Evaluate the projects and the recommendations from the employees related with the energy saving and propose new projects and support continuous improvements.
- d. Give support to the departments on the issues of:
 - Definition
 - Planning
 - Reviewing
 - Organization
 - Coordination and implementation

Of all processes from the establishment of the energy consumption targets till the stage of utilization.

- e. Assist the departments/external entities in the review and improvement of energy consumption and loss quantities and in the reporting of the utilizations. Fulfilling the forms of Energy Consumption Data required by the relevant governmental institution regarding the energy productivity.
- f. Determine the methods and the necessary measurement instruments related with the energy measurement.
- g. Assist the development of training plans and the works for informing and raising the awareness of the employees on the use and saving of the energy. Give training courses.
- h. Meet once a month to review the targets and the actions taken.
- i. Prepare the monthly energy reports and submit them to the managers; make report presentation to the TCF coordination and the rack up meetings at the end of every quarter.

3.2. Energy Management System

- 3.2.1. Planning and budgeting: It is made every year with the participation of the concerned engineers based on the production plan.
- 3.2.2. By also evaluating the projects with the objective of energy saving and the individual and group recommendations on energy saving coming from the employees, the energy committee may recommend some new studies/projects toward achievement of the targets, these provide input for the targets.
- 3.2.3. Reporting: The energy committee reviews the targets and the actual results and writes its report and presents the report to the TCF coordination and the rack-up meetings.

3. TECHNICAL SPECIFICATIONS (CONT'D)

3.3. Essentials of the Energy Management System

3.3.1. All measurement values and saving studies related with energy are documented and kept under control.

3.3.2. Energy saving projects of which duration of return is 1 year and less are supported. Energy productivity is taken into account in the new investments and feasibility studies are supported.

4. AUDITING

This procedure will be reviewed by Energy Committee Leader once in a two. years.

5. ATTACHMENTS

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