ISO-9002 CERTIFICATION AT DAURALA SUGAR WORKS, DAURALA

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ABSTRACT

Daurala Sugar Works complex, comprising of cane sugar factory, distillery, potable liquor plant, chemical plant and fancy sugar plant, is located at Daurala, District Meerut, India. It is the first and only sugar complex to be accredited with the prestigious ISO-9002 certification in India. In this article the authors share their experiences regarding the process of certification, difficulties faced during certification and the advantages achieved with the certification, for the benefit of the Sugar Industry.

Keywords : DSW, ISO, DNV, quality systems, quality manual, quality policy, MR

INTRODUCTION

Daurala Sugar works (DSW) is located at Daurala, which is a small township about 14 km from Meerut on Delhi-Roorkee National highway. It consists of a cane sugar factory, distillery, potable liquor plant, chemical plant and fancy sugar plant and has a total workforce of over 1500 employees.

DSW manufactures a spectrum of products such as:

1. Plantation white cane sugar
2. Refined sugar
3. Fancy sugar products like breakfast sugar, sugar cubes and sugar sachets
4. Industrial alcohol
5. Many brands of liquors
6. A number of fine chemicals like benzaldehyde, benzyl alcohol, benzyl benzoate, phenyl acetic acid etc.

The main customers include general public, big food processing units, pharmaceutical and perfumery industries, Central Government, Defence Ministry.

From the beginning, DSW had highly organised work culture and Quality systems in every area of its operation. Most of the operational areas had thorough work systems and set procedures which had evolved over the period of time to near perfection. Documentation was an essential part of the systems.

In order to further improve upon existing quality systems, it was proposed to get an accreditation or certification like ISO certification. After sustained efforts the certification was awarded to DSW. DSW is the first such complex in India to have been awarded an ISO certification.

This article describes in brief the process of certification, the difficulties faced during the certification and the advantages achieved with the certification.
ISO

ISO is International organisation for standardisation, located at Geneva, Switzerland. ISO certifies quality assurance systems worldwide based on rigorous quality audits. It issues ISO 9000 certificates through various certification agencies like DNV, TUV etc. which are accredited by accreditation boards of the various countries.

ISO 9002 is applicable to the quality systems of manufacturing units like DSW.

DET NORSKE VERITAS (D.N.V.)

DNV was established in 1864 and is now a worldwide organisation operating in 130 countries with more than 360 stations and over 3500 employees. It is one of the leading industrial certification bodies and is a founder member of European Foundation for Quality Management (EFQM) and provides accredited quality system certification services to International organisation for standardisation (ISO), Geneva.

DNV is accredited with National Accreditation Boards of 13 countries including UK, Netherlands, USA, France, Germany, Australia New Zealand, Italy, Sweden and Norway and has certified over 5000 companies worldwide.

Due to its international reputation, DNV, Netherlands was chosen by our company, DCM Shriram Industries Limited, New Delhi, to audit Daurala Sugar Works for ISO-9002 quality system certification.

ISO CERTIFICATION AT DSW

The fundamental requirement of ISO-9002 certification was the documentation of all work procedures at all levels of operations and administration. This required conceiving and drafting customised work procedures for the different plants.

Due to diversity of operations, the task was challenging but it was not so difficult as DSW already had good quality systems in practice and a high degree of documentation of the procedures. Quality has always been a focus area at DSW and the company is recognized by the excellent quality of its products. The response of the workmen was positively enthusiastic which also made the task simpler.

Procedure adopted for certification

The following procedure was adopted to achieve the ISO certification:

Co-ordination Committees

To begin with, the management constituted a ‘Steering and Co-ordination Committee (SCC)’ which was to initiate steps for the process of achieving certification. The SCC in turn constituted a ‘Unit Co-ordination Committee (UCC)’. The UCC was to monitor, organise, co-ordinate, guide and provide the necessary help to the entire process of certification at the unit level. The committee further decentralised the job by constituting an ISO task force.
Quality Manual

The task force started to function in order of priority, the first being the preparation of a 'Quality Manual'. The Quality Manual addressed the quality management system adopted and followed by the company. It defined the management responsibilities for each level of operation and administration. It also defined in detail the activities and associated responsibilities related to the process of achieving and safeguarding the certification. Customer complaints were given prime importance and manner of handling and responding to such complaints was also well defined in the manual.

The management responsibilities defined in the Quality Manual necessitated the management to lay down a 'Quality Policy' giving the essence of the quality management systems in brief and to appoint a 'Management Representative (MR)'.

Quality Policy and Management Representative

The management through the task force framed the Quality Policy of the company which stated our objectives, responsibilities and duties giving maximum importance to customer satisfaction.

The management appointed a MR whose role was to plan, co-ordinate and provide all the necessary inputs required for ensuring the establishment, implementation and maintenance of quality management systems. The MR was also to provide information to the 'Management Review Committee' which would review and suggest improvements in the quality management system.

The planning for the entire process being complete, the exercise was carried out in the following steps:

- Sub-task forces, comprising of the people directly related to the actual process operations, were made to document the procedures of process operations and administration, within a rigid time frame.

- The task force studied the process of the individual plants in detail and in consultation with the shop floor people, selected the operational parameters.

- The entire operations were then documented giving in detail the actual parameters being maintained at every stage of operation.

- Based on these documents, work instructions for the shop floor workmen were prepared. The work instructions were prepared in easy and commonly used language so as to be fully understood by all workmen.

- These work instructions were displayed at the work site for the workmen to study and follow them.

- The workforce was trained and educated to work as per the work instructions.

- The workforce was also encouraged to incorporate the ISO-9002 quality systems in their day to day activities and jobs, by way of regular meetings and counselling sessions.
The above prepared the basic infrastructure which was then to be perfected to meet the standards set by DNV. This was done in the following manner:

- Selected executives were asked to conduct checks and cross checks of documents and work procedures over and over again by way of internal audits.
- The documents were revised on the basis of these audits to eliminate errors and incorporate the missing details.
- The workmen were also subjected to internal audits to make them familiar and conversant with the newly defined systems.

The MR helped in conducting ‘Management Review Committee’ meetings at regular intervals during the above exercise. The management review committee meetings focused on the following main points:

1. **Audit reports**

   The internal audit reports were carefully analysed to suggest improvements and modifications.

2. **Customer complaints**

   Customer complaints were given utmost importance. Each and every complaint was recorded in detail. Customers were contacted and their grievances were settled. The reason for the complaints was determined and remedial corrective steps taken.

3. **Corrective and preventive action**

   On the basis of data on process variables, product non-conformities and customer complaints, suitable corrective and preventive actions were initiated.

**The Certification**

A pre-audit was then done by the auditors from DNV who helped in improving the documents further.

The final audit was done from 16th to 18th of June 1996, by a team of auditors from DNV who recommended DSW for the ISO-9002 certification from DNV, Netherlands.

The process of certification ended at this stage but the certification-linked activities shall continue for the times to come. Internal audits and management review meetings are held regularly throughout the year to ensure proper working of the quality systems and complete compliance of the quality policy. DNV also carries out audits every six months to affirm that these quality systems are followed in the plants to the full extent.
CHALLENGES FACED DURING CERTIFICATION

Several challenges were faced during the process of certification, some of which have been listed below:

- Daurala has extensive diversity of operations and because there were different processes being followed in different plants, customized work procedures had to be written for each plant.
- The work force at Daurala has a varying degree of skill, education and technical knowledge due to different type of manufacturing activities being carried out. Customised training had to be imparted keeping in mind the different skill levels of the workmen.
- It was the first time that a sugar complex was going for such a certification, as such it was difficult to get any guidance from past experience or from other sugar factories.
- Sugar being a seasonal industry, auditing and implementing of corrective measures etc. was possible only during a limited time period and not throughout the year.
- Inspite of this exercise being carried out in different plants and departments for different process operations, impeccable co-ordination had to be maintained between the different departments to achieve the certification at one go, within the targeted time frame.

ADVANTAGES ACHIEVED

Accreditation with the distinguished ISO 9002 certification not only elevated the reputation and goodwill of the company in the market, but also helped us in a number of ways:

- It helped in achieving consistency in the quality of our products.
- It helped us in reducing the customer complaints and making the process more customer friendly.
- It upgraded the process operations by providing a chance to audit and self-analyse the existing systems thoroughly.
- It helped in creating a professional work culture among the employees.
- It helped in enriching the discipline among the employees in offices and at the shop floor level.
- It helped in developing a systematic, coherent and well defined system of working.
- It also helped us in maintaining the relevant records in a much more classified and precise manner.
- As auditors from DNV carry out audits every six months, the quality systems are followed throughout the year with the same vigour and perfection as for the first audit.
- It gave the employees a new inspiration and pride in being associated with and being a member of an ISO certified company.

The cumulative effect of the above factors helped in improving the overall work atmosphere and productivity of the plants.
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RESUMEN

El Daurala Sugar Works está localizado en Daurala, distrito de Meerut, India y se compone de una fábrica de azúcar, una destilería, planta de líquido potable, planta química y una planta moderna de azúcar. En India, éste es la primera y única fábrica de azúcar que es acreditada con la prestigiosa certificación de ISO-9002. En este artículo los autores comparten sus experiencias en lo referente al proceso de certificación, dificultades encontradas durante la certificación y las ventajas ganadas con la certificación, para el beneficio de la industria azucarera.

Palabras Claves: DSW, ISO, DNV, sistemas de calidad, manual de calidad, norma de calidad.

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RÉSUMÉ

Industrie sucrier Daurala Sugar Works, au Daurala, du Meerut en Inde, qui comprend une sucrerie de canne, une distillerie, une usine de produits chimiques et une usine de sucreries spéciaux, est la première unité sucrière de l’Inde qui a reçu la certification prestigieuse ISO-9002. Les auteurs présentent le travail nécessaire pour la certification, les difficultés rencontrées et les avantages de la certification.