

CREATED OF THE PROCESS PLANS IN THE CONTEXT OF ISO 9001

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Abstract: Formation of technological processes in context with ISO 9001 standards are coming into forefront. Each organization has to take into account the significance of formatting and archiving of production documentation. Every single country use its own approaches towards this issue, instead that, ISO standardization defined intercontinental rules for all countries and users. This report exposes the most frequently problems occurring through the formation of above mentioned processes and their applications within ISO 9001.

Keywords: ISO 9001, PROCESS PLAN, SMALL ENTERPRISES, TECHNOLOGICAL DOCUMENTATION

1. Introduction

Every day, technology is meeting with the challenge of ensuring that their production plans, parts lists, and process plans reflect the current technical design. Generally, the desired state to finalize completing a design proposal and after they define by designer 'how' the product is manufactured.

If one could manage the production process realized synchronously with the technical process, including design work on the same data, it would have a significant positive impact on reducing production costs, improve accuracy of production output and reduced development cycle time.

In the manufacturing sector in recent years the advances in production. Especially in the:

- introduction of quality management systems ISO 9000 series of standards
- environmental management systems ISO 14001 maintenance management (TPM and 5S)
- operations management (JIT and kaizen)
- occupational health and safety management applied to a separate part of a department of engineering, maintenance and production.

Logically, these management systems must be addressed together and combine them in order for organizations to create effective integrated manufacturing system.

2. ISO 9001

One of the most important legislative changes is ISO 9001, which is used by organizations in over 175 countries as a basis for quality management system in a organization. It is required to keep the results of the undertaking various types of records. It is therefore the records of the production process which can also include the technological processes and process plans. These are classified in the third level of management documentation together with safety guidelines and internal guidelines. The best approach is considered to be making of as many records as is necessary because in management are extremely important. At the same time creating records not extreme burden on employees. Records should be done automatically, and if this action is not supported by software is required to use existing forms and routines.

Other legislative adjustments in many countries concerning the technical documentation and document management are also at ISO standards levels.

3. European directives and technical norms.

European Directives and technical standards governing their requirements and managed European companies, products, processes and services. New standardization approach in the European internal market is a recent initiative that seeks to combine the professional qualifications of the European Organisation for

Standardization, the European Commission and the European Free Trade Association (EFTA). This is the first step in an effort to improve awareness as to which standards have important role in the development of the European market.

4. Technological documentation

Technological documentation states in which production centers, such manufacturing technologies, such machines, with such instruments and in such conditions will produce the component. It's typically a planning activity and is characterized by a large number of decision activities, which is important practical experience, customary practices and know-how throughout the company. Type of documentation technology used depends on the:

- o type of parts
- o type of production
- o quantity
- o available machines
- o level of engineering staff
- o availability of computers

In the manufacturing exist next types of technological documentation:

- process plan
- plan sketch
- technological rules
- assembly list
- list of technological tools
- material list
- list of technological documents
- technological norm list
- process instruction
- group instruction
- list of quality control

Technological documentation is the result of planning activities. While creating of documents should be make many routine activities, calculations and analysis. The proposal of technical documentation, such as typical planning work is time-consuming and relies on input data and requirements for the actual production and function.

Some of the dates are defined in the drawings, which is the main background material for the production process.

This mainly includes the following information:

- parts - the number and name and number of the processed documentation
- materials - mainly data about raw material, the quality, type, dimensions, quantities, used standards and internal rules
- production - this is the data on the number of pieces, number of batches, and process control...
- human intervention - information on all persons to participate in the creation, that mean who created documentation and make changes and the person responsible for checking the accuracy of created or changed variant of documentation

5. Micro and small enterprises

Micro and small enterprises are defined:

- smaller production capacities in terms of machinery, that in their case to the limited and often fixed types of operations
- less staffing, where one person often performs more functions and therefore have less time

6. Implementation of ISO 9001

ISO 9001 does not define the form of archiving, that does not require the direct result of technological procedures in the register. In pursuit of different IS is clear that technological process, as such, do not at all. In some cases, the output of so-called. CAD / CAM systems, respectively. production data in the IS document that declares a set of production assimilation. Technological process is therefore not necessary. Norma is not only treatment for all businesses, there is no uniform set of rules even if it's one of the priorities in the field.

Specificities of micro and small enterprises in the implementation of ISO standards resulting from their nature. The obvious advantage of micro and small enterprises is that they are often family businesses headed by the director, who is also owner of the company. This, therefore, is motivated to lead the company to prosperity, to meet old and lure new customers. Customer focus is generally magnified because micro typically operate in regional markets and are often in contact with a limited number of customers and suppliers. The resulting interest in good sub-contracting is a prerequisite for their survival.

The main differences in micro-enterprises in terms of quality management are:

- *Group vs. Individual* - While a large company should be meeting a group of managers and decision in the micro responsibility usually rests on the shoulders of the business owner
- *Long duration vs. momentariness* - Micro have established a strong emphasis on short-term planning, taking into account the cash flows. This can be partly explained by the dependence on individual orders.
- *External shift* - While a large company, some activities and provide inputs internally in the case of micro and small enterprises are replaced or activities respectively procurement of inputs externally. Eg. input control tests are often replaced by the output control results and certificates from suppliers, design and development is often carried out and customer services are also often based on customer documentation. Finally, sometimes it is not possible to carry out internal audit of trained staff - internal

auditors, because of their low numbers and thus there is a potential conflict of interest.

- *Cumulative responsibilities* - While in a large enterprise, selected staff appointed and trained to bear responsibility for an operation in the micro this role often performed by a person who carried out the accumulated other features. Responsibility, competence, communication, where members of senior management is the quality manager, as in large enterprises, and implementation is usually responsible managing director. Facilities management, monitoring and measurement, with responsibility for machinery and equipment and meet legal metrology regulations responsibility automatically lies with the company director, if not authorized by any other member of management.
- *Flexible range* - ISO 9001:2008 enables the company to meet the requirement "appropriate manner" (to some extent), which was not possible, for example in standards in the automotive industry. This approach means that, eg. complexity of documentation quality is lower in micro as well as its quantity, that the extent and amount of information will in small and medium enterprises differ from large companies or that may be created a separate program of continuous improvement, but the specific tasks resulting from the periodic evaluation of the quality objectives.

It should be noted that ISO 9001:2008 "not forgive" Small businesses simply because anything that "small". Exceptions within the meaning of forgiveness certain requirements are possible but are applicable to all types of businesses (not dependent on size) and the eligibility of any exceptions must be justified. Thus it is possible to apply a simple rule: not omit any requirement affecting the quality of the product or service.

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