2.4.2. Control of quality (ISO 9000)

Management of Chosen Types of Companies Under the TQM System

"CONTRACTOR" – means a construction company which offers and realises civil engineering projects on a "turn-key" basis as a general contractor, or as a subcontractor, in a limited scope of the work. Contractors deal with building systems (a building. a tunnel, a bridge, etc.) rather than subsystems (components of a system e.g. walls, plumbing). The terms system and subsystem are explained in more detail in Appendix 4.

"CONSULTANT" – is a person or company that provides professional advice or services in a specialised field. They usually co-operate with big companies that carry out complicated construction projects. The scope of their activity also belongs to various building systems.

"MANUFACTURER" – is a person or firm making some articles or products. In the case of the construction industry these are usually building materials or special construction equipment. Manufactures are active in subsystem engineering, mainly in the production of various building materials.

Contractors and consultants usually sell directly to the users (owners). This is true for small construction companies as well as for large construction firms. In this respect, the way the contractor and the consultant act differs sharply from the style of work observed among most of the manufacturing companies. One can say that contractors and consultants make a high proportion of their sales direct to the clients (owners), while manufacturing companies as a group make a low proportion of direct sales.

In the case of a contractor and a manufacturer, the duties connected with successful implementation of the TQM system in the company are entrusted to the care of Quality Departments. At the beginning of the TQM era, it was not unusual that the responsibility for the quality was assigned to an individual as an extra function in addition to their regular line of responsibilities. The quality responsibilities competed or even conflicted with the manager's original line of duties. The quality programme within the company is much more likely to be successful when its head performs no other functions and is able to concentrate exclusively on quality matters. When an individual is given quality responsibilities as a secondary function rather than a primary one, it is difficult to apply a full range of quality concepts. For example, it may limit involvement in areas within the person's line of responsibilities such as gathering data from customers or designing and planning for the quality of the construction activities.

In a consultant firm there is usually a quality manager who has formal training in quality concepts and applications.

In the case of a Contractor, the TQM system is the basis for activities which include:

- meeting customer requirements,
- reducing development cycle times,
- just in time/demand flow manufacturing of the building industry,
- improvement teams,
- reducing product and service costs,
- improving administrative systems training.

Consultants usually assist contractors in performing their duties. Their tasks within the TQM system include:

- establishing service standards for contractors (also for manufacturers),
- establishing the scope of application of the TQM quality programme,
- taking active steps in order to create a positive atmosphere around the TQM programme,
- providing a feeling of importance for quality managers who are responsible for TQM implementation in the construction company,
- providing information and showing the awareness of the company's' needs and to keep the client's employees informed on quality matters they regard as important to the well-being of the company,
- safety – because the owner entrusts his or her property and financial resources to the contractor, "construction services safety" is as vital as product safety in the manufacturing industry.

Manufacturers, who produce building materials have to observe the following TQM rules:

- providing performance (this refers to the primary operating characteristics of the product which are usually measurable),
- paying attention to the features of the materials (these are additional characteristics that enhance the product's appeal to the user),

- taking care of reliability (reliability of a product is the likelihood that a product will not fail within a specific time period),
- providing conformance (is the precision with which the building material or equipment meets the specified standards),
- taking care of durability (durability measures the length of a product's life. when a product can be repaired, estimating durability is more complicated),
- establishing appropriate serviceability (serviceability is the speed with which the product can be put into service when it breaks down as well as the competence and behaviour of the serviceperson. this point mainly concerns building equipment),
- paying attention to aesthetics (aesthetics is the subjective dimension indicating the kind of response a user has to a construction material or equipment. it represents the individual's personal preference – the ways an individual responds to appearance),
- taking into consideration a perceived quality of the product (for example: well-maintained tools and an immaculately clean workplace may indicate a good workman and manufacturer).

It should be noted that a European construction company operating in an economic environment is influenced by many different factors. The TQM system is one of them.