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ISO9001 quality management for the operation of hydrometeorological measuring networks

The data which are gathered by hydrometric and meteorological measuring networks are used for very important decisions. That means i.g. support of decisions in critical situations, for important planning procedures for civil structures, for research work and also for the development of political strategies. The data are normally produced by regional or international measuring networks, consisting of sensor elements, measuring instruments, data transfer equipment and central stations for data processing and archive functions. It's a long way from the physical parameter to the hydrological or meteorological report, which is used by the information users. A long way where, due to measuring errors, technical problems, mistakes of the operating personnel or errors in the data processing system, something can happen to the measuring values.

The international standard EN ISO 9001 layouts different rules to make sure, that the features of products are according to the requirements of the customer. The optimal fulfilment of the user requirements is called "Quality" in the meaning of ISO9001. The basic product of hydrological and meteorological measuring networks are measuring values. What the user requires are accurate and reliable measuring values. A very important part of ISO9001 defines procedures to make sure, that the history of products (=measured values) can be traced down completely. That means, that all features of the measuring system must be fully documented at any time, that all measures, which are necessary to produce exact measurements and also to check the final results, are taken (documented recalibrations, recalibration cycles, taking of control values, etc.). Also organisational structures and detailed definitions of competencies are important issues of ISO9001.

Logotronic has developed a basic ISO9001 compatible process model for the operation of measuring networks. The model is based on the process modelling tool "PROMOL". This software tool can be used to define the necessary processes and documents in detail and can also be used for the dissemination of the ISO9001 documentation in the user-organisation, using Internet and Intranet. The basic process model is open for the adaptation to the specific needs of authorities, which operate measuring networks. The presentation consists of a short overview about the ISO9001 standards and the application of those standards on measuring networks using the modelling tool "PROMOL".

The presentation is made by Mr. Gerhard Pevny, managing director and quality manager of Logotronic GmbH., Vienna.