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Standardisation in irrigation

Described are steps to be taken towards standardisation and the organisations involved. German and European standardisation organisations are described the report ends with an assessment of standardisation activities.

Standardisation is a classification instrument within our technical world. It is a part of the existing scientific, social and legal order. The international and European standards overcome trade barriers, support the expansion of the European interior market and encourage cross-border trade. Because of this, they are especially important for an export country such as Germany. The standardisation enterprises of highly developed industrial countries are a source of information about the status of their technology.

Who processes irrigation standards?

The standardisation work on irrigation is carried out in Germany by the working committee III/6 "Irrigation" within the Standardisation Committee Water Organisation (NAW) of the German Institute for Standardisation (Deutsches Institut für Normung e.V. DIN). The staff come from the water economy, research, industry, DLG testing and from the advisory services (Federal Specialist Union for Irrigation). For specific questions the committee strengthens its forces with guest members and their expert knowledge.

The DIN with its organs such as the working committee "Irrigation" is the authorised national representative in the committee of the international and European standard organisations. Current information as to the aims of the standardisation are in preparation for example in Internet under <http://www.din.de>.

In Europe the CEN (European Committee for Standardisation) with HQ in Brussels and internationally the ISO (International Organisation for Standardisation) with HQ in Geneva, are responsible for the processing.

National irrigation standards

For the sake of clarity, the national DIN standards with titles are listed below. No description is given of the activity areas.

DIN 19650 Irrigation – Hygienic Concerns
 DIN 19651 Quick Attachment Pipes
 • Technical delivery requirements
 DIN 19653 Irrigation equipment
 Design and nomenclature

DIN 19654 Quick Attachment Pipes, Testing
 DIN 19655 Irrigation
 • Roles, Basic Requirements, Systems
 DIN 19656 Rotary Jet Irrigator, Testing
 DIN 19658 Rollable Polyethylene (PE)
 Pipeline and Hose for Irrigation Systems
 Part 1 Rollable pipeline
 Part 2 Hose with Material Support (shape-retaining)
 Part 3 Hose with Material Support (non-shape retaining)
 DIN 4047/6 Agricultural Water Supply Terms
 • Irrigation

The above norms are tested for topicality at least every five years. For the creation of standards – so-called "yellow-prints" – in the case of European standard creations "pink prints" – everyone involved is expected to make a representation.

European standards CEN

Members within CEN are the national standardisation organisations of the 15 EU member lands and the three EFTA countries as well as, since April 1997, the Czech Republic. The basic principles of European standardisation are established within the general regulations for cooperation between the EU Commission and the CEN. No description of the basic principles will be given here.

The CEN is organised decentrally. There are however three important decision levels to be mentioned:

1. Technical Bureau (BT) for the standardisation politic
2. Technical Committees (TC) for the working programme and project administration in distinct working areas
3. Working groups for the processing of standardisation norms

For irrigation, up until the end of 1998 a special case meant an extra committee (sub-committee SC) was involved in co-ordination between the technical committee and the working groups. Responsible here was CEN/TC 144. From the end of 1998 an independent technical committee was created for irrigation – TC 334 "Irrigation". The secretariat for CEN/TC 334 is based in France (AFNOR-Paris). Eight working groups

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Keywords

Irrigation, standards, DIN, ISO, CEN, sprinkler, drip

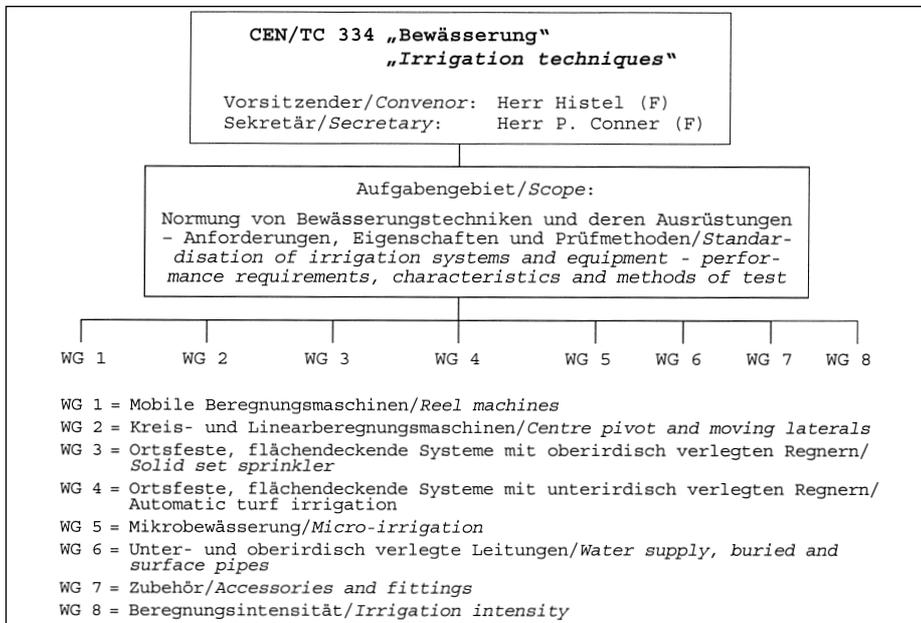


Fig. 1: Organisational structure of the technical committee 334 „Irrigation“

(WG) are currently organised under the technical committee, out of which the WG 6 stands under German leadership (Alteneder, Foitzik) (fig. 1).

Through these working groups a series of European standards have already been completed and published in German, English and French.

Below is listed a presentation of the published European standards:

DIN EN 12234 Irrigation systems, irrigation machines with mobile action

Part 1: Model series

Part 2: Attachment of PE pipes for irrigation machines with mobile action

Part 3: Technical specifications

Part 4: Terminology and classification

DIN EN 12325 Irrigation systems, circular and linear irrigation machines

Part 1: Technical specifications

Part 2: Minimum requirements and technical specifications

Part 3: Terminology and classification

DIN EN 12484 Irrigation systems – automatic lawn irrigation systems

Part 1: Establishing the roles and equipment through the owner

Alongside the German version of the already launched EU DIN EN, the European version is as follows:

prEN ISO 8224-1 Mobile irrigation machines – working parameters, test systems

prEN ISO 11545 Circular and linear irrigation machines – water distribution

prEN 12484-2 to 5 automatic lawn irrigation systems

prEN 13635 micro-irrigation

prEN 12734 Quick attachment pipes

prEN 12742 -1/-2 fixed-site installed irrigation systems

The ISO standardisation

is carried out with around the same application as that of the CEN. The irrigation

activities are established within the ISO/TC23/SC18

“Tractors and Machinery for Agricultural and Forestry/Irrigation and Drainage Equipment”.

Active working together by the ISO does not take place. The work is

being monitored.

Assessment of standardisation activities

In order that the standardisation work becomes a little more

Fig. 2: Standardisation of mobile irrigation machines

transparent, using the example of the mobile irrigation as an example, an attempt is made to illustrate where standards are finding use already today (fig. 2). The facts given are neither complete nor current because every year new or reconditioned standards are coming onto the market.

The proportion of completely national DIN standards in figure 2 is low. Already, ISO standards are widely applicable. The European standards cover around the same size of field as do the ISO norms. From the German side, attempts are being made to draw the contents of the national norm as much as possible into the European standardisation and then to bring the result out as the German version of the European norm with the grammalogue DIN EN.

France has involved itself very strongly in the European standardisation of irrigation technologies and uses the same experts as the ISO work.

In Germany there exists a competent standardisation group that above all wishes for more support from industry.

On an international basis, the International Commission on Irrigation and Drainage (ICID) tries, with the ISO, to define minimum standards for developing countries. This point has been already discussed many times but does not really seem to be realisable.

