

**RUPLAN**

# **BRANCH SOLUTION WATER MANAGEMENT**



**Cost Reduction by Standardized Procedures and  
Automatic Quality Check**

*Let's make engineering easy!*

 **AUCOTEC**

# *The Situation*



Water is not a common article of trade but the basis of all life, which must be available to every human being. Precondition for water of impeccable quality is the appropriate handling of this resource. The quality of water in Germany has always been outstanding. This high quality level is mirrored in the use of technically high-grade and mature plants and products.

The handling of technical systems for water management and treatment is characterized by special features: The facilities to be constructed have a long life expectancy, the necessary rebuilding or extensions are often not undertaken by the original plant construction company. A uniform plant documentation is thus the essential prerequisite for saving time and money spent for such measures. The quality of the plant documentation is also the decisive factor when it comes to reliably fulfil the maintenance obligations with optimized personnel placement. Apart from fast error diagnostics, observation of the exacting safety requirements plays an important role in these tasks.

The quality and reliability of the electrical documentation fundamentally influence the construction and maintenance costs. This aspect should be the prime selection criterion when selecting a CAE system. For this very reason the electrical CAE systems that support both the plant construction company and the user in creating and maintaining the documentation are the ones that take hold.

When analysing specific methods of operation and documentation requirements in the branch research group Water Man-

agement, we were able to identify largely uniform requirements. The jointly established standard is summarized in the projecting guidelines. In the branch solution for water management, software modules and document templates are integrated to enable automated creation of the necessary documents with assured quality.



# The solution:

Like all branch solutions based on RUPLAN, this package consists of the three elements projecting guidelines, projecting solution and quality assurance tools.

## Projecting guideline:

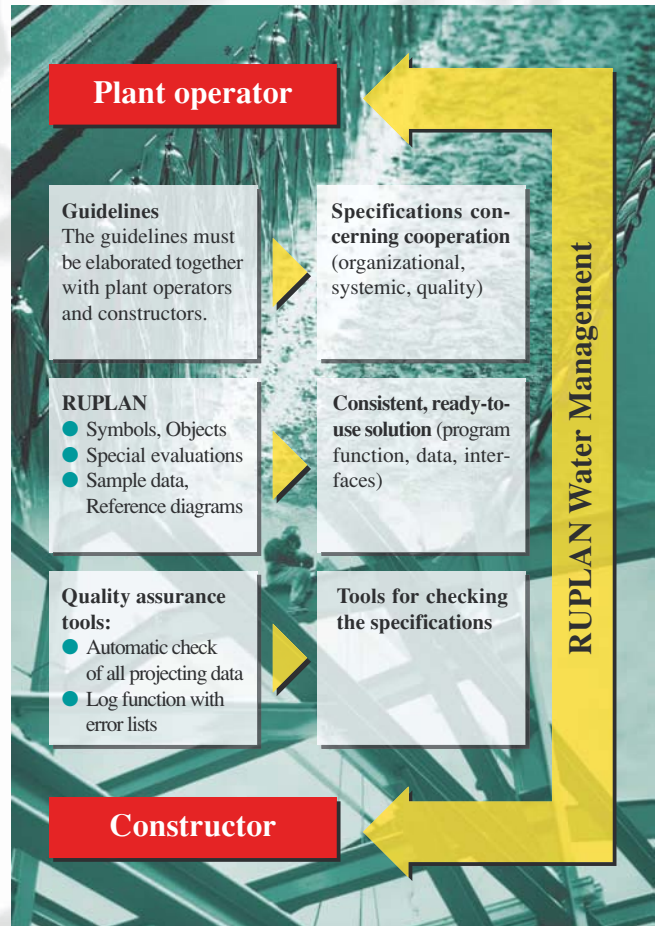
The projecting guidelines are the quality standards elaborated by the branch research group Water Management concerning labelling systematics, standards and regulatory documents and the specific documents including the respective symbols. In addition the method of operation is described that is to be used to achieve a branch-wide uniform documentation as well as error-free evaluation results. All innovations and extensions concerning these guidelines are combined in this branch research group, which consists of operating bodies, subcontractors and service providers; they are the basis for continuous further development. AUCOTEC implements the results and develops new releases of the branch solution at regular intervals.

- Standardized circuit book setup
- Rules for representation
- Labelling systematics
- Standards and Regulations
- Standard documents
- Specific symbols

## Projecting solution:

- RUPLAN Water Management offers a package with a complete solution with automatic creation of all branch-related documents.
- The symbol library contains all symbols required for this branch.
- The extensive device database comprises all of the necessary technical data.
- A special tool for maintaining and selecting devices ensures comfortable handling.

Table	Serial	Target	Terminal No.	Part	Code	Serial	Part	Position	Remarks	Unit	Code
40	4028	4022	-A1	2	11	4020	4005	-X1	1.1.1	4001	4020/001.1
41	4028	4022	-A1	2	12	4020	4005	-X1	1.1.2	4001	4020/001.2
42	4028	4022	-A1	2	13	4020	4005	-X1	1.1.3	4001	4020/001.3
43	4028	4022	-A1	2	14	4020	4005	-X1	1.1.4	4001	4020/001.4
44	4028	4022	-A1	2	15	4020	4005	-X1	1.1.5	4001	4020/001.5
45	4028	4022	-A1	2	16	4020	4005	-X1	1.1.6	4001	4020/001.6
46	4028	4022	-A1	2	17	4020	4005	-X1	1.1.7	4001	4020/001.7
47	4028	4022	-A1	2	18	4020	4005	-X1	1.1.8	4001	4020/001.8
48	4028	4022	-A1	2	19	4020	4005	-X1	1.1.9	4001	4020/001.9
49	4028	4022	-A1	2	20	4020	4005	-X1	1.1.10	4001	4020/001.10
50	4028	4022	-A1	2	21	4020	4005	-X1	1.1.11	4001	4020/001.11
51	4028	4022	-A1	2	22	4020	4005	-X1	1.1.12	4001	4020/001.12
52	4028	4022	-A1	2	23	4020	4005	-X1	1.1.13	4001	4020/001.13
53	4028	4022	-A1	2	24	4020	4005	-X1	1.1.14	4001	4020/001.14
54	4028	4022	-A1	2	25	4020	4005	-X1	1.1.15	4001	4020/001.15
55	4028	4022	-A1	2	26	4020	4005	-X1	1.1.16	4001	4020/001.16
56	4028	4022	-A1	2	27	4020	4005	-X1	1.1.17	4001	4020/001.17
57	4028	4022	-A1	2	28	4020	4005	-X1	1.1.18	4001	4020/001.18
58	4028	4022	-A1	2	29	4020	4005	-X1	1.1.19	4001	4020/001.19
59	4028	4022	-A1	2	30	4020	4005	-X1	1.1.20	4001	4020/001.20
60	4028	4022	-A1	2	31	4020	4005	-X1	1.1.21	4001	4020/001.21
61	4028	4022	-A1	2	32	4020	4005	-X1	1.1.22	4001	4020/001.22
62	4028	4022	-A1	2	33	4020	4005	-X1	1.1.23	4001	4020/001.23
63	4028	4022	-A1	2	34	4020	4005	-X1	1.1.24	4001	4020/001.24
64	4028	4022	-A1	2	35	4020	4005	-X1	1.1.25	4001	4020/001.25
65	4028	4022	-A1	2	36	4020	4005	-X1	1.1.26	4001	4020/001.26
66	4028	4022	-A1	2	37	4020	4005	-X1	1.1.27	4001	4020/001.27
67	4028	4022	-A1	2	38	4020	4005	-X1	1.1.28	4001	4020/001.28
68	4028	4022	-A1	2	39	4020	4005	-X1	1.1.29	4001	4020/001.29
69	4028	4022	-A1	2	40	4020	4005	-X1	1.1.30	4001	4020/001.30



## Quality assurance tools:

Projecting guidelines can only be effective if compliance with them is checked. For this reason quality assurance tools have been created that automatically check compliance with the guideline. This is especially meaningful when projects are handed over from subcontractors to the operating bodies. The subcontractor can check the flawlessness of his documentation already before handing it over, and the operator can be sure to get the documents in a uniform and error-free state.

With the use of RUPLAN Water Management as branch standard both the operators and the plant construction companies can vastly reduce their costs. The plant construction companies do not have to take into account different requirements of their customers, and the operating bodies get uniform documents from all subcontractors, thus considerably reducing the maintenance expenditures.

- Automatic check of all projecting data
- Saves time and reduces costs of acceptance
- Avoids correction cycles

# *The performance features*

## **RUPLAN basic system:**

- Intuitive handling due to ergonomically optimized user interface
- Graphic editor for the schematics
- Online reference technology
- Navigation capability over all project data
- Drawing and revision management
- Multi-user capability
- Project management
- Symbol editor
- Freely configurable user interface
- Complete symbol libraries
- Parts lists
- Device lists
- Contents tables
- Terminal lists

## **Device database:**

- Complete device library
- Efficient search functions
- Comfortable device data maintenance
- Uncomplicated import/export

## **Cabinet layout:**

- Automatic assignment from the item management and placement function
- Dimensioning function

## **PLC coupling:**

- Bidirectional assignment list exchange
- Automatic circuit diagram creation

## **Branch-specific evaluations and documents:**

- Special terminal diagrams for 3-pole terminals, soldered joints
- Cable lists
- Device lists
- Automatic circuit breaker lists
- Signal lists

## **Quality assurance tools:**

- Automatic check of all projecting data
- Log function with error lists

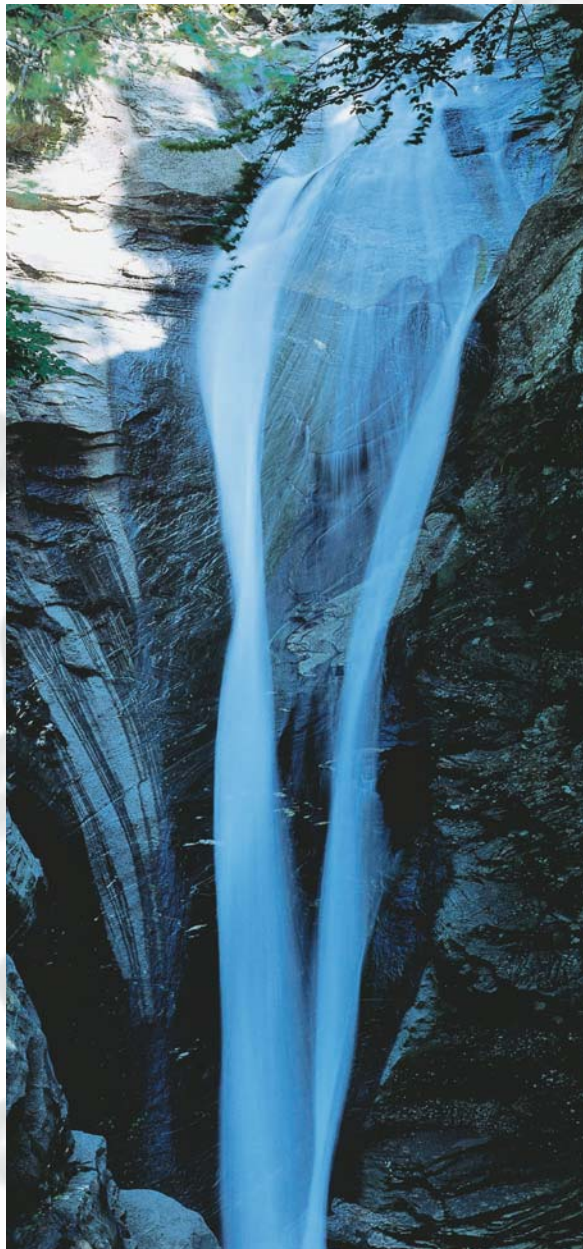
## **Projecting guideline:**

- Specification of quality standards
- Standardized circuit book setup
- Labelling systematics
- Standards and Regulations
- Documents
- Specific symbols

# *Advantages*

## **All advantages at a glance:**

- Uniform branch standard
- High-quality plant documentation
- Similar documents from all subcontractors
- Branch-specific documents
- Expenditure reduction for maintenance servicing
- Saves time and reduces costs of acceptance
- Cost advantages for revision management
- Free choice of supplier for reconstruction work
- Further development of the standard by open branch research group





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