Quality Planning

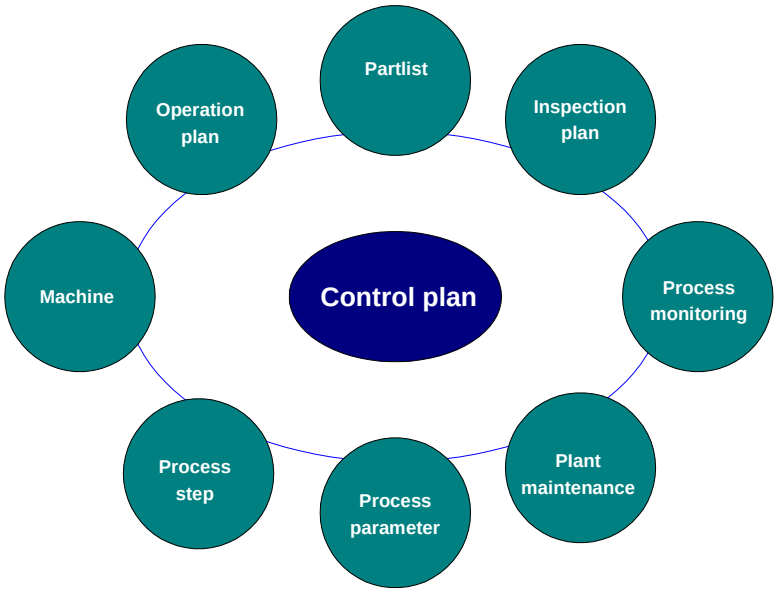
The Module iQ-QVP/APQP (Advanced Product Quality Planning) completely meets the requirements of the QS9000 standard. Methods that were developed for use in the automotive industry have been extended by us to enable their efficient use in any other productive industry, too.
When it came to developing the module, the main objectives were efficiently creating an APQP, a clear quality management during its conduction, and a centralized management of any corresponding documents.

Workflow

According to the Advanced Product Quality Planning (APQP) manual the APQP process consists of the following phases:

- Plan and define program
- Product design and development
- Process design and development
- Product and process validation
- Feedback, assessment, and corrective actions

The process is implemented and presented using functionality of the module *iQ-PROJEKTE*. Here, the phases mentioned above as well as possible sub-phases can be divided into a number of sub-projects. The central action management is used to ensure planned activities are processed as they should.
Furthermore, the iQ-QVP/APQP module meets any requirement regarding the maintenance of a control plan within an APQP. This control plan can be created based on existing parts lists, working plans, or a FMEA, and itself can be used for inspection planning when automatically generating inspection plans.



So, iQ-QVP/APQP provides quality management with a complete tool that additionally benefits from the integrated usage of any iQ-BASIS master data.

Important Features at a Glance

APQP as a project

- Clarity because of utilizing an easy-to-understand tree structure for representing a project consisting of any number of sub projects that can, again, consist of any number of sub projects
- Same feature set for project and sub project
- Assignment of any kind of document, control plans, FMEA's, quality messages, and other organizational elements such as check lists to a project or sub project
- Optional assignment of projects that have already been closed
- Free text fields for describing the project as well as sub projects and possibility to specify the corresponding (sub) project teams and the (sub) project responsible
- Clear planning by integration of Microsoft Project; reimport of planning data from MS Project into the project

Actions for task tracking

- Settlement and monitoring of upcoming tasks by utilizing actions that can be assigned with great flexibility
- Specification of responsibilities and dates
- Support of an automatic date monitoring including escalations
- Support of predecessor and successor actions
- Keeping track of action results and efforts
- Access to upcoming tasks from any iQ-BASIS module

Control plan in general

- Segmented structure by partitioning into the part, the process (along with corresponding process steps), and the characteristics
- Check list support on each level

Control plan header

- Item including revision that should be subject of the APQP
- Categorization in prototype, preseries, series
- Customer including plant and contact person or in case of purchased parts data of the supplier
- Involved persons of the own plant

Control plan version

- Required to document changes or different material variations
- Free text for giving version specific comments
- Documentation of releases by the customer, the supplier, or internal authorities including the release date

Parts of the item

- Assignment of any number of assembled parts to each version of an item
- Application of existing parts lists to the item
- Designation as purchase part including specification of the supplier
- Reference to an existing part specific control plan
- Reference to an existing inspection plan and an existing work plan
- Generation of a part specific inspection plan including combining characteristics in inspection steps

Processes

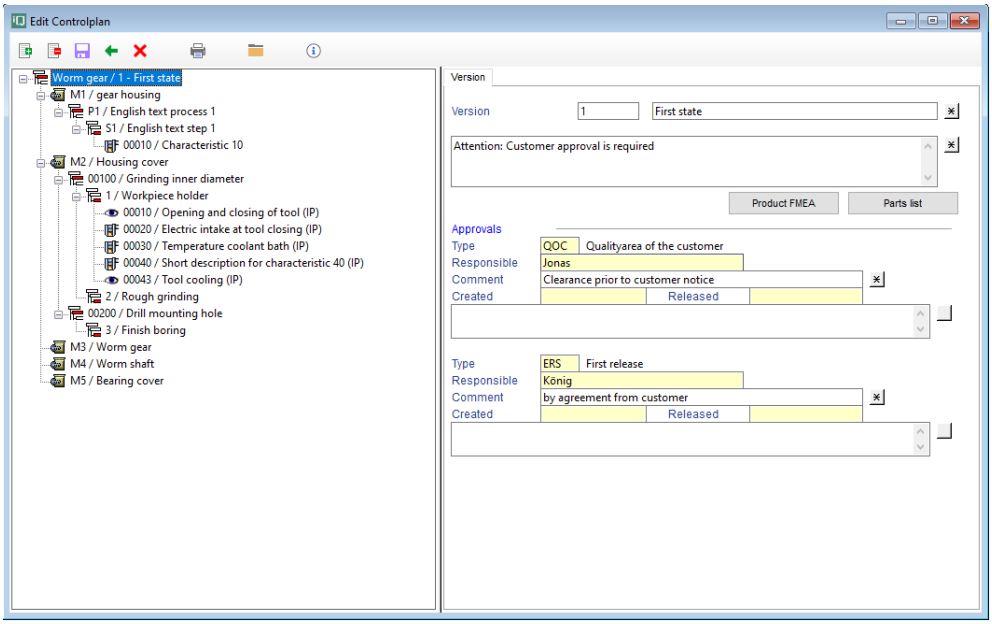
- Reference to the work procedure and/or the machine that is running the process
- Separation into multiple process steps that need not necessarily to be relevant for the APQP

Characteristics

- Each process step can comprise any number of product or process characteristics. Each characteristic contains any requirements relevant for the part or process.
- Reusability in iQ-PLAN because of an identical structure with characteristic id, a short description, and a distinction between attributive and variable
- Description of variable characteristic by specification of target value and tolerances or nominal value and deviation
- Description of attribute characteristics by specification of type and cause of failure groups
- Specification of the inspection frequency and the sample size, of the gauge and regarding machine and process capability
- Definition of the control method and a reaction plan
- Inheritance of data from a previously created knowledgebase such as from a FMEA, in case of recurring characteristics from characteristic catalogues, or from an existing inspection plan e. g. coming from first sampling
- Advanced description of inspection characteristics by considering influences on the process step such as operator self-control, machine setter, process control, tool and maintenance, and so on

Documentation

- Control plan according to different standards defined by ISO/TS, Chrysler, GM, Ford, VW



Interfaces to Other iQ-BASIS Modules

- *iQ-PROJEKTE* for planning, performing, and monitoring any kind of activity
- *iQ-GL* for a centralized maintenance of all master data that is relevant in other modules, too
- *iQ-DOKU* for storing and managing complementing documents
- *iQ-FMEA* for taking over characteristics that have been defined in an FMEA into the control plan
- *iQ-PLAN* to generate inspection plans out of a control plan or to synchronize with existing inspection plans
- *iQ-INFO* if you need to create reports on your own – for example using Crystal Reports