

Batch

A quantity of a material produced during a given production run. The main characteristic of a batch is its homogeneity.

Batch record

A logging of all the batch-related planned and actual data. The batch record can be defined by the user according to guidelines or legal specifications (such as the GMP guidelines).

Campaign

The uninterrupted execution of process orders of the same kind based on the same master recipe.

Campaign planning

The planning of a campaign, comprising the following tasks:

- scheduling of a campaign
- allocation of a campaign to a specific resource such as a line or a processing unit
- availability check of the resources to which the allocation is made

Changeover recipe

A changeover recipe defines the activities necessary to transfer a processing unit from an initial state to a subsequent state.

Circulating material

A material used in a process, which is also (partially) recovered/recycled, such as a catalyst. A circulating material appears twice in the operation material list, first as an ingredient and secondly as a yield.

Cleanout recipe

Recipe which describes the time, resource and material requirements, as well as the activities that are necessary to clean out a vessel after the productive run of a campaign.

Co-product

Valuable materials generated during a production run together with other valuable materials. Example: When gas is produced, other products obtained are gas, tar, benzol and other carbon derivatives.

Control recipe

A recipe containing all process instructions for the execution of a process order by a process control system or a line operator. Control recipes are generated from the process instructions in a process order and sent to the corresponding process control system. One control recipe is generated for each control recipe destination defined in the process order.

Control recipe destination

Process control system or operating group to which a control recipe is transferred for processing. The control recipe destination specifies

- the technical address to which a control recipe is transferred
- how the transfer takes place (for example, initiated by R/3 or by process control)

Coordination of material requirements

Planning coordination for different production, recycling and waste disposal facilities.

Dangerous good

Substance or mixture that poses an immediate danger to any person coming into contact with it.

Dynamic function call

Process instruction which enables the line operator to call a user-defined function module from within the PI sheet. Depending on the function module, this option can be used to start a dialog or retrieve data from internal or external applications. The process instruction specifies

- the function module to be called
- the import and export parameters to be transferred

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Hazard note

A document that notes the dangers in the handling, transportation, and storage of a material. A hazard note can be allocated to a material, a resource, or a recipe.

Ingredient

A material used in a process. Ingredients are contained in the recipe material list. They can also be allocated to an operation or a phase.

Inspection results request

A type of process instruction which specifies that inspection results are to be recorded for one or more operations during the production process. The inspection results request specifies the operation(s) for which inspection results must be recorded. For these operations, the function for recording inspection results can be accessed directly from within the PI sheet.

Intra material

A material without a master record which only exists temporarily between two processing steps. An intra material is listed in the operation material list.

Line

A production facility at which materials are changed by means of processes. A line consists of processing units used in sequential or parallel order for the execution of process orders. The following types of lines exist:

- production line
- recycling line
- waste disposal line

Line operator

Operator of a line in a process.

Master recipe

A recipe describing the production of materials in one production run. The master recipe contains detailed information on the use of a process at a specific plant. It is the basis of the process order.

Material

Substance or object dealt with on a commercial basis or used, consumed, or generated during production. A material can be a chemical element or a compound.

Material list

A list containing all materials required during a production run and their quantity specifications. There are recipe material lists and operation material lists.

Material quantity calculation

The material quantity calculation comprises the charge and yield calculations. The charge calculation determines how much of each material or ingredient is to be used in a process. The yield calculation determines the quantities of product yield (main product, by and co-products) to be obtained. The mixing and yield ratios between the materials or ingredients used in a process, as well as the material characteristics must be taken into consideration when carrying out the material quantity calculation.

Operation

Independent part of a recipe which is executed on a processing unit. An operation is subdivided into phases.

Phase

A subdivision of an operation. Phases can be arranged in sequential or parallel order. A phase can have materials from the material list allocated to it. Phases have the same primary resource classes/resource as the operation. It is possible to allocate further secondary resources to them.

PI sheet

See "process instruction sheet".

Primary product

The product for whose production the process is carried out. A primary product is distinguished from other products in that its material number is stored in the recipe header.

Primary resource

The primary resource is the processing unit or reaction vessel at which an operation is carried out. It is occupied for the duration of the operation, which means that all the phases of this operation are automatically carried out at this primary resource.

Process control

All the activities of measuring, controlling, and regulating processes, regardless of whether or not they are carried out manually or automatically.

Process data calculation formula

A type of process instruction which specifies that a value must be calculated in the PI sheet. This value is then sent to a particular destination using a process message. The process data calculation formula specifies:

- ❑ the value to be calculated
- ❑ the formula to be used for calculation
- ❑ the message category of the requested process message

Process data request

A type of process instruction which specifies that process control is to send a process message with actual data on a process. A process data request contains the following information:

- ❑ the conditions necessary for the sending to take place
- ❑ the process messages category to be used
- ❑ information to be provided by process control

Process instruction

A structure used to transfer data or instructions from PP-PI to process control. Process instructions are allocated to the phases of the master and the process order. They are combined in a control recipes and transferred to process control for execution. Depending on the type of

information sent, there are the following types of process instructions:

- ❑ process parameters
- ❑ process data requests
- ❑ process journal subscriptions
- ❑ process data calculation formulas
- ❑ inspection data requests
- ❑ dynamic function calls

Process instruction category

A categorization of process instructions according to structure and usage. The process instruction category specifies:

- ❑ the type of process instruction (for example, process parameter or process data request)
- ❑ the characteristics of this process instruction, that is, the information to be sent via this instruction

Process instruction characteristic

A characteristic of a characteristics group released for use in process instructions. Process instruction characteristics are allocated to process instructions either directly or via the instruction category. Together with the corresponding characteristic values, they determine

- ❑ the information transferred or requested in a process instruction (for example, the status of a control recipe)
- ❑ the requested data is to be processed (for example, the message category to be used to report it)

Process instruction sheet

Editing of process instructions of a control recipe for display and processing at the screen. The PI sheet enables a dialog between PP-PI and the line operator in a line which is operated manually (either totally or partially). Depending on

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the process instructions, the PI sheet supports the following functions:

- display of control information in natural language
- recording of actual process data
- calculation of values
- reporting the entered or calculated data using process messages
- recording inspection results by jumping directly to the QM module
- calling user-defined function modules in order to start a dialog or
- retrieval of data from internal or external applications

Process instruction type

A classification of process instructions according to their function. The R/3 System has the following types of process instructions:

- process parameters
- process data requests
- process journal subscriptions
- process data calculation formulas
- inspection data requests
- dynamic function call

Process management

A component of PP-PI which is the interface to process control. Process management comprises the following functions:

- receiving released process orders from the process planning component
- creating control recipes from process order data

- passing on the control recipes to the line operator or process control system involved
- receiving, checking, and distributing process messages
- manual creation of process messages

Process manufacturing

Process manufacturing refers to the processing of gases, grains or liquids. The processes involved can be continuous or discontinuous, i.e. manufactured in batches.

Process message

A structure used to send actual data on a process from process control to one or several destinations of the following types:

- other R/3 components
- user-defined ABAP/4 tables
- users of the SAPoffice Mail system
- external function modules

Process messages are used to update existing data records, as well as to generate batch and production records. The content of process messages is determined by the process message characteristics as well as by the characteristic values assigned to them.

Process message category

A subdivision of process messages according to their structure and usage. The process message category specifies:

- the characteristics to be allocated to a process message, that is, the information to be sent
- which message destinations a process message is to be sent to

Process message characteristic

A characteristic in a characteristic group which has been released for use in process messages. Process message characteristics are allocated to

process message categories. Together with the corresponding characteristic values, they determine the content of a process message.

Process message destination

A user or component to which process messages are sent for processing. The R/3 System supports the following types of message destinations:

- R/3 function modules
- user-defined ABAP/4 tables
- users of the SAPoffice Mail system
- external function modules

Process message evaluation

A component of PP-PI used to evaluate process messages collected in the process message record. The process message evaluation enables:

- the selection of process messages according to characteristic values
- the display of message data using the SAP Business Graphics component
- the display and further processing of message data in EXCEL using the XXL list viewer

Process message record

A logging of process messages which is stored for a certain period of time. The messages to be included in the process message records are defined for a plant via the message categories allocated to a destination. The messages contained in the process message record can be evaluated using the process message evaluation component.

Process message subscription

A type of process instruction which specifies

- the unplanned events which must be reported by process control to process management

- the message category to be used in order to report an event

Process order

An order describing the production of batches in a production run or the output of a service such as a cleanout. The process order is generated from the master recipe and contains all the information specified during process planning.

Process parameter

Process parameters are process instructions used to transfer information to the process control module. In the case of manually operated lines, the process parameter contains a text for the lineoperator.

Process planning

The planning of process orders. This involves:

- the scheduling of operations
- the checking of material availability
- the release of process orders for production

Production record

User-defined compilation of the actual data of a production run, in which all the events occurring during the production run are logged with a time stamp.

Qualification

The capability or authorization to perform a specific task. You can allocate qualifications to your personnel resources.

Recipe

The general instructions for the use of a production process. There are manufacturing recipes describing a production process as well as non-manufacturing recipes, which check to see that all functions of a resource are working correctly or which carry out the clearing or changeover of a line. Manufacturing recipes are:

- master recipes
- control recipes

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Non-manufacturing recipes are:

- changeover recipes
- setup recipes
- cleanout recipes

Recipe group

Grouping of recipes that describe alternative production processes. Together with the recipe group counter, a recipe group uniquely identifies a recipe.

Recipe material list

A list containing all materials required to execute a process order as well as their quantity specifications.

Recipe object

A type of data object that can be maintained for a recipe. The following recipe objects exist:

- operations
- resources
- material list components
- phases
- process instructions
- process instruction characteristics

Relationship

The linking of start and finish points of operations or phases in a master or process order. There are the same types of relationships as in the Project System. Relationships form a model of the time flow of operations or phases.

- SS relationship (Start - Start)
- FF relationship (Finish - Finish)
- SF relationship (Start - Finish)
- FS relationship (Finish - Start)

Remaining material

An output of a process which must be recycled or disposed of.

Repeated process data request

Type of process data request for the R/3 PI sheet. Repeated process data requests can be used to request several messages of different categories. In the PI sheet, several messages can be created from every message category requested. The message data to be specified is maintained in a table.

Resource

Objects and persons involved in a production process which have capacities allocated to them. Resources are subdivided into resource categories, such as plant line or labor. Resources of the same category can be networked in a resource structure and grouped into resource classes using hierarchies.

Resource category

A grouping of resources of the same kind. The resource category is user-defined via Customizing. You could, for example, define the following resource categories:

- line
- processing unit
- team
- labor
- transport
- storage
- services

Resource network

A resource network describes the physical links between resources, such as processing units (reactors, vessels, etc.) in a plant. It serves to describe the flow of materials through a plant.

Secondary resource

Besides the primary resource, an operation or a phase can also have further resources, called secondary resources, allocated to it. This allocation can be carried out with a start/finish time which is relative to the start/finish time of the operation or phase (time offset).

Setup recipe

A recipe which describes the time, resource and material requirements that exist at the beginning of a campaign as well as the activities that need to be carried out to set up a production run.

Simple process data request

Type of process data request for the PI sheet. A simple process data request can be used to request one message of a specific message category. In the PI sheet, individual entry fields are provided for the message data to be specified.

Yield ratio

The quantity relationship between the yields (materials) created during the execution of a process order.