Settlement Types of Production Orders - Process Orders - Product Cost Collectors

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**Purpose**

The purpose of this page is to clarify the understanding of the system logic concerning the settlement of production orders, process orders and product cost collectors.

**Overview**

The settlement rule for orders in CO-PC-OBJ is automatically created by the system, and is normally of settlement type PER or FUL to material. This document deals with the different types of settlement rules.

1. **Customizing for Production Orders / Process Orders**

The default rule for the settlement rule is specified in Customizing for each plant and order type (transaction OKZ3 or OPL8). If the default rule is PP1, all production orders for this plant and order type receive the FUL rules. If the default rule is PP2, all the production orders for this plant and order type receive PER rules.

2. **FUL Rule to Material - controlling on a lot**

If an order has a FUL rule for settlement to material, then this is make-to-stock production which is lot-related.

The actual costs are only settled once the order has been finally delivered or technically completed. This means that the prerequisite for settling actual costs is the DLV status and the delivery date (AFPO-LTRMI) being set before the last day in the settlement period. Alternatively, the TECO is required and the date of the technical completion (AUFK-IDAT2) must be set before the last day of the settlement period.

2.1 **Settlement before status DLV / TECO**
For orders that have not yet been finally delivered or technically completed, the actual costs are not settled. The balance remains on the order.

If required, you can calculate WIP with actual costs. To do this, you require a results analysis key on the order. If you also want to post the WIP to FI you need to store posting rules in Customizing for results analysis for all results analysis categories relevant to settlement (transaction OKG8), and you need to select the "Transfer to Financial Accounting" indicator in the results analysis version (transaction OKG9). The WIP posting is triggered by settlement. The balance remains the same on the order even when WIP is created and settled.

2.2 Settlement after status DLV / TECO

If the order has been finally delivered (status DLV) or is technically completed (TECO), then the actual costs are settled to stock or a price difference account, depending on the price control of the material. The base quantity is always the total delivery quantity of the order. This also applies to the settlement of subsequent debits.

If the material has price control S, then the actual costs are posted to the price difference account.
If it is set to V, then the actual costs are settled to the stock account, if the stock is covered (See note 2471234).
If the indicator is set to V, and the stock is NOT covered, then the actual costs are settled to stock for the quantities that are still in the warehouse, the rest is settled to the price difference account. Example: 10 pieces with variances of 150 USD are settled, and there are only two pieces left in the warehouse. Then variances for these two pieces are settled to stock, being 30 USD. The remaining 120 USD are settled to the price difference account.
It is generally strongly recommended that you do NOT use the V price control indicator for FINISHED products (for more information, see SAP notes 81682 & 2393887).

If you are using the account-based profitability analysis and the price difference account is a cost element, then the price differences are automatically posted to account-based profitability analysis. You can deactivate this logic using substitution (see SAP note 169688).

If a variance key has been selected on the order and variances have been calculated, then these are transferred to costing-based profitability analysis. Prerequisites are listed in SAP note 35507.

If the order has posted WIP to FI before it reaches the DLV/TECO status, then the WIP is broken down again in FI.

3. PER Rule to Material - controlling by period

If an order has the PER rule for settlement to material, then it is periodic make-to-stock production.
The actual costs are settled regardless of a status.
This means that you post the balance of the period (actual costs minus deliveries) to stock or the price difference account. The base quantity is always the delivery quantity of the period.

If the material price control indicator is set to S, then the actual costs are posted to the price difference account.
If the price control indicator is set to V, then the actual costs are settled to the stock account, providing the stock is covered.
If the control indicator is set to V, and the stock is NOT covered, then the actual costs for the quantities still in the warehouse are settled to stock, and the rest is settled to the price difference account.
Example: 10 pieces with variances of 150 USD are settled, and there are only two pieces left in the warehouse. The variances are settled to stock for these two pieces, being 30 USD. The remaining 120 USD are settled to the price difference account.
It is generally strongly recommended that you do NOT use the V indicator for FINISHED products (for more information, see SAP note 81682).

If you are using account-based profitability analysis and the price difference account is a cost element, the price differences are automatically posted to account-based profitability analysis. You can also deactivate this logic using substitution (see SAP note 169688).

If you selected a variance key on the order, and variances have been calculated, then these are transferred to costing-based profitability analysis. Prerequisites are listed in SAP note 35507.

If required, you can calculate WIP with target costs for the orders. To do this, you need to select a results analysis key on the order. If you want to post the WIP to FI you need to store posting rules in customizing (for results analysis) for all results analysis categories relevant to settlement (transaction OKG8), and select the "Transfer to Financial Accounting" indicator in the results analysis version (transaction OKG9). If you decide to calculate and post WIP, then the order balance less the WIP from the period is settled instead of the whole order balance. The balance of the order after settlement corresponds to the WIP.

4. PER/FUL Rule to Material and Sales Order / Project - MTO with valuated sales order stock / project stock

A variant of the scenario described under point 2 and 3 is the make-to-order production with valuated sales order and project stock.

In this case, the settlement rule also specifies settlement to material. In the detail screen of the settlement rule, the sales order item or WBS element is also entered. Period-end closing takes place in the same way as the business transactions described above.

The only differences regarding settlement are as follows:

- The make-to-stock warehouse inventory is not debited. Instead, make-to-order production is debited.
- If the price difference account is a cost element and if the sales order is a CO object, then the price differences are automatically transferred to the sales order item or the WBS element (see SAP note 183250).

5. PER/FUL Rule to Sales Order / Project - MTO with unvaluated sales order stock / project stock

If a production order has a 100% rule for settlement to sales order/project, then it is unvaluated sales order stock/project stock.
In this case, the order is treated like an internal order, meaning that it is settled periodically to the sales order or project, regardless of the status.

For an unvaluated sales order stock, the sales order always has a CO object, and the goods receipt on the production order is unvaluated. This means that the order is not credited when goods are received. The entire order costs are transferred to the sales order or WBS element.

If you want to calculate WIP on the production order, and settle the order to the sales order or WBS element after it has been finally delivered or technically completed, then you need to make the usual settings (results analysis key, indicator in the results analysis version, posting rules), and also set the "WIP on independent orders" indicator in the results analysis version (transaction OKG9).

Variances are not settled to costing-based profitability analysis.

6. PER Rule to Material for Product Cost Collectors - Repetitive manufacturing with controlling by period

Product cost collectors have a 100% PER to material settlement rule. In the detail screen of the settlement rule the 005 strategy is displayed. This means that processing is slightly different to processing for PER to material (see above).

The actual costs and credits are posted on the product cost collector from the goods receipt for different production orders. The deliveries can go to different stock segments if the material has a separate valuation, or if the material is produced in-house or make to order. During settlement, the value of the goods receipts for the period is dynamically calculated for the different stock segments. The actual costs are distributed to the different stocks according to these values. If no goods were received in a period, then the actual costs are posted to a separate price difference account (account modification PRP). For more information, see SAP note 388457.

7. PER/FUL Rule to Order Position - Joint Production

Co-production is when two products are created simultaneously from the input materials. This often takes place in the chemical industry, where an additional product is created with the main product (e.g. in the production of automobile gas from oil). The SAP System differentiates between by-products and co-products.

From a technical point of view, co-production is implemented in such a way that the order items receive their own CO objects. This means that instead of a CO object for the production order, you have N + 1 Co objects, so one for the order and N for the N co-products.

The value flow is as follows: The material consumption and activities are posted to the order header, the goods receipts are posted directly to the order items. In period-end closing, the order costs are initially posted proportionally to the items, using the preliminary settlement for co-products (transaction CO8A, CO8B). The order items then settle to material. Further information can be found in SAP note 402756 - Information: selection of orders in CO8A, CO8B.

When you create the production order, you create the following settlement rules for the above:
• The order has settlement rules for its order items with equivalence numbers. These numbers are taken from the material master of the main product (view MRP 2, button "co-production") and can be overwritten.
• The order items have settlement rules for 100% FUL/PER settlement to material. Therefore, the order items behave like a normal production order with a material rule (see above).

This means that the order is settled periodically to its items regardless of the status. If the order items have a 100% FUL rule to material, then the costs are only settled from the order item to material when the order item and the order have the DLV status (all order items have been finally delivered), or the order header has the TECO status. If required, you can calculate WIP on the order items beforehand. TECO is set on the order HEADER level via CO02 or COHV. DLV is set on the order items during material movement posting.

8. FUL Rule to Order - Collective orders without automatic goods movements

If a production order has a settlement rule for FUL settlement to another order, then it is most likely to be a collective order without automatic goods movements. Collective orders are hierarchies of production orders. The semi-finished products of the lower production orders are used directly for the higher product.

You can enter settings in the order type (transaction KOT2) to determine whether collective orders are represented in the system with or without automatic goods movements.

Processing with automatic goods movements means that when goods are received on the lower orders, a goods receipt of this semi-finished product is automatically posted on the next order. All orders in the collective order have a settlement rule for 100% FUL settlement to material and behave as described above, for CO purposes.

Processing without automatic goods movement means that the goods receipt of the lower orders takes place on the next order, without going via the warehouse. The orders in the collective order have a settlement rule of 100% FUL settlement to the higher-level order. This means that they initially behave like normal internal orders, and periodically settle the actual costs to the higher-level order. The settlement is always made using a consumption account (see SAP note 82150). This account is written when you create the collective order in the COBRA-KSTAR field. The settlement structure is not interpreted. If you want to create and settle WIP on the orders, then the "WIP on dependent orders" indicator must be set in the results analysis version (transaction OKP9).

Related Content

MTO Customizing at a Glance including technical view on tables and indicators

Information about the Settlement Rule in Cost Object Controlling (CO-PC-OBJ)