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CONCRETE OPERATIONS – MASTER FILES

Introduction

The Concrete Operations function set integrates with other IES Business functions in numerous ways, but there are a number of specific Master Files that exist exclusively for the purpose of managing the Concrete Operations function set, and these are the Master Files discussed in this Document.

Not all Master Files for Concrete are discussed here, because some Files are used by the system 'behind the scenes' and require no User interaction or intervention, even though they are updated during execution of some Concrete Management functions, and even though some Reports operate on such tables.

The Files discussed here comprise those tables that need to be set up and / or maintained for the proper execution of Concrete Business Management, and in some cases Files are mentioned here even though they are really part of other IES Business Modules, or because they relate to or are linked to other IES Business Modules. The options for operating on these Files are found in the File Maintenance sub Menu within the Concrete Operations Business Module, or in the designated Module outside of Concrete Operations if so indicated.

The Product Register

The Concrete Product Register works in conjunction with the Inventory and Retail Catalogs, and offers functions that are peculiar to Concrete Operations, and that are in addition to or as extended from the standard Retail and Inventory functions. The set up of this Product Register is crucial to the proper functioning of Concrete Operations management, and in order to understand it better, we look at a Concrete Delivery Ticket and an Aggregate Weigh Bill 1st.

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For the sake of clarity, we are going to introduce some terms here to differentiate between product types. In the sample of a partially captured Concrete Delivery Ticket shown above, please note the Product Formula shown at the **RED** arrow, and we will call this a FORMULA type of product. Now note the product shown at the **BLUE** arrow, and we call this one a DELIVERY type of product. The product shown at the **GREEN** arrow we will call a MANUFACTURE product type.

All of these product types must be listed on the Retail Catalog, on the Concrete Product Register, and in some cases also on the Inventory Catalog.

When the FORMULA product code is input on a Ticket, this results automatically in the MANUFACTURE products being listed, because the FORMULA product is linked to a Bill of Materials. When the Load Size is input, this results automatically in the FORMULA product being listed also as a DELIVERY product, and the delivery section may subsequently include further delivery products like Placing, Pumping, etc. When we look at examples of setting up products on the Product Register, we will again refer to the example shown above, but now we will also consider the Aggregate Weigh Bill, before we look at the Product Register examples.

In the picture shown above (a partially captured Weigh Bill), we wish to draw attention to the fact that such a Weigh Bill always has a Plant of Origination, a Product that is being delivered, and a Price for this Product, which in this case we call a Transfer Price. For the sake of 'connecting' our examples with the foregoing, we will call these AGGREGATE products, but we note also that the Aggregate Products from the originating Plants end up becoming MANUFACTURE products when they are used at the Concrete Production Plants.

And now we are ready to look at examples of Product Code setups on the Concrete Product Register, starting with a FORMULA product type.

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Concrete Ops Product Master [1] ()

Concrete Operations Product Master

EXIT Save

Product Code	339d
Product Description	2000 PSI Concrete
Target Stock	
Bill of Materials	339d Formula 399D
Job Cost Type	ACOD Concrete Deliveries

This example of a FORMULA product is shown in more clarity in the next 2 pictures.

☑ Record KPI's for this Product ?

	Plant Number	Transfer Price	Income and KPI Account	Cost of Sales
1	01 Molynes Rd		101-01052 INCOME FROM CONCRETE	101-01052 INCOME FROM CONCRETE
2	02 West Mount		102-01052 INCOME FROM CONCRETE	102-01052 INCOME FROM CONCRETE
3	03 75th Street		103-01052 INCOME FROM CONCRETE	103-01052 INCOME FROM CONCRETE
4	04 Kingsway		104-01052 INCOME FROM CONCRETE	104-01052 INCOME FROM CONCRETE
5	05 South Gate		105-01052 INCOME FROM CONCRETE	105-01052 INCOME FROM CONCRETE
6	06 Downtown		106-01052 INCOME FROM CONCRETE	106-01052 INCOME FROM CONCRETE
7	07 Red Deer		107-01052 INCOME FROM CONCRETE	107-01052 INCOME FROM CONCRETE

Some Products use the same Account Settings. If so, you can inherit those Settings from another Code rather than defining them all over again ...   Inherit

Product Code	339d
Product Description	2000 PSI Concrete
Target Stock	
Bill of Materials	339d Formula 399D
Job Cost Type	ACOD Concrete Deliveries

☑ Record KPI's for this Product ?

A FORMULA Product is specified with a Code that exists on the Retail Catalog, and the Description is translated from there. Target Stock is irrelevant in this case, but a Bill of Materials link should be specified, because a FORMULA Product is used as a Formula on Concrete Delivery Tickets, and the Bill of Materials should provide the Batched Commodities included in the formula. A Job Cost Type should also be specified in this case, so that the Truck used for delivery (and which is connected to a Job in the Job Costing system) may be updated with the delivery KPI, e.g. Cubic Yards delivered, on the specified Cost Type.

	Plant Number	Transfer Price	Income and KPI Account	Cost of Sales
1	01 Molynes Rd		101-01052 INCOME FROM CONCRETE	101-01052 INCOME FROM
2	02 West Mount		102-01052 INCOME FROM CONCRETE	102-01052 INCOME FROM
3	03 75th Street		103-01052 INCOME FROM CONCRETE	103-01052 INCOME FROM
4	04 Kingsway		104-01052 INCOME FROM CONCRETE	104-01052 INCOME FROM
5	05 South Gate		105-01052 INCOME FROM CONCRETE	105-01052 INCOME FROM
6	06 Downtown		106-01052 INCOME FROM CONCRETE	106-01052 INCOME FROM
7	07 Red Deer		107-01052 INCOME FROM CONCRETE	107-01052 INCOME FROM

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The Plant table on the Product must list all originating Plants where the Formula may be used, together with an Income and Cost of Sales Account in each case. In our example, we use the same Account for Income and Cost of Sales, but you may use different Codes if required. When an originating Plant produces a Concrete Delivery based on the specified formula (Bill of Materials), the Income Account will be credited with the Income and the Cubic Yards Delivered as the KPI (therefore the KPI should be checked, see previous pic). The Cost of Sales will be debited with the cost of the Batched Commodities (MANUFACTURE products) that will be credited from Inventory at average cost.

Please note in the Delivery Ticket example shown higher up, that the FORMULA product also translates as the 1st DELIVERY type product, so the same product code is used without having to be specified again. However, there may be other product codes used also as DELIVERY products, e.g. Pumping, Placing, etc. and they are specified just like the example above, except that they do not have a Bill of Materials, and that the Job Cost Type and KPI are optional in those cases.

The next example is a MANUFACTURE product, i.e. that appears on Bills of Materials (Formulas), and that is not charged directly to a Customer, but which is drawn from Stock for the manufacture of Concrete.

In the picture above we see that only the product Code is required for a MANUFACTURE product type, and none of the other Fields are specified. However, if the MANUFACTURE product also happens to be an AGGREGATE product, it is specified in more detail, as in the next example.

We now look at an AGGREGATE product type, and how it is specified. An AGGREGATE product may also turn out to be a MANUFACTURE product (remember that we are only using these terms to explain the setting up, and there is no flag on the Product Master that says it is AGGREGATE or MANUFACTURE or whatever, but the system will complain if you try to use a product for a purpose it is not set up for, i.e. during processing of the Tickets the system will perform internal validations).

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The picture shown above is an example of an AGGREGATE product type, and shown in more clarity in the next 2 pictures below. The example we show here is when you use 'split' types for AGGREGATE and MANUFACTURE. For example, if at the originating Plant you want to measure production of SAND from different locations, you may set up SAND.M (the codes may be numbers or any other combinations you wish to use, these are only examples), SAND.K, SAND.X, etc., each with a Target Stock code of SAND. That means that at the originating Plant production can be measured for different sources of SAND, even though they are all sand, while at a delivery or receiving Plant, it is simply sand and taken into Stock as SAND, regardless of source. That means that SAND is then set up simply as a MANUFACTURE product (like CEMENT in the earlier example) without specifying any other Fields. However, an AGGREGATE product must be set up with more detail, as shown here. TARGET STOCK is optional, and used only when the types are split, as explained. The KPI should be checked for production to be measured at the Originating Plant.

On the Plant Table, we need to list all potential Originating Plants, together with Transfer Price, Income Account and Cost of Sales Account.

	Plant Number	Transfer Price	Income and KPI Account	Cost of Sales
1	04 Kingsway	200.00	104-01043 PRODUCTION: SAND MOB	104-01043 PRODUCTION: SAND MOB
2	05 South Gate	210.00	105-01043 PRODUCTION: SAND MOB	105-01043 PRODUCTION: SAND MOB

The Transfer Price is the Price at which the Customer or Receiving Plant is billed per TON, and the Income Account will be credited at the Originating Plant, together with the KPI. In the case of a Receiving Plant as opposed to a Customer, the Target Stock (if not specified, then the Product Code applies) is taken on at the Transfer Price per TON. The Cost of Sales Account is never used in this case,

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but is a forced input and you should simply specify the same Account as for Income.
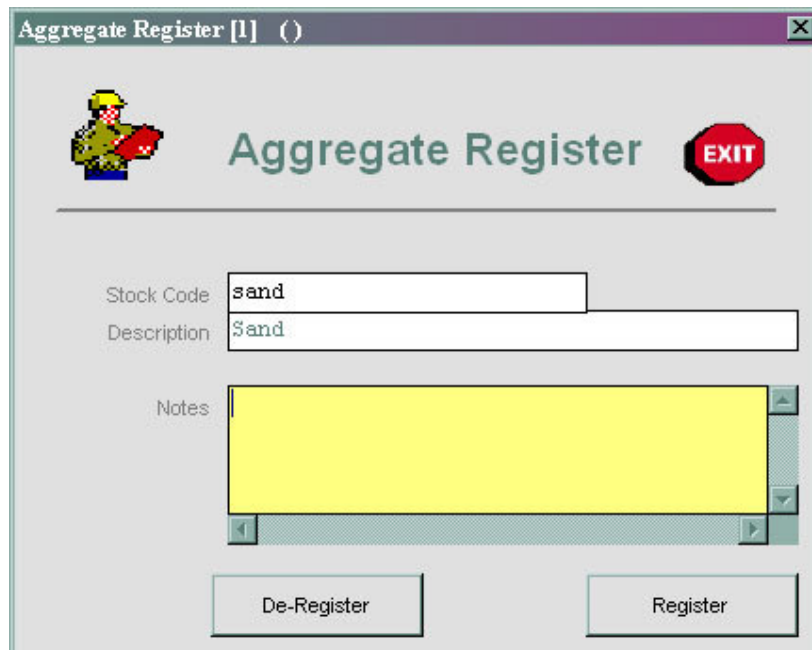
We noted before that all the product codes must also be set up on the Retail Catalog, and in some cases on the Inventory Catalog as well. The Inventory and Retail Catalogs are not shown here, as they are explained in their respective User Manuals sets. However, here are some tips: -

The Accounts Routing specified for Concrete Products is discerned from the Concrete Product Register, so even though it needs to be specified also in Retail (a standard requirement of Retail!), the Accounts Routing parameter in Retail will be ignored by Ticket Processors, and you can use some default parameter. The same applies to many of the other Fields on Retail. The critical Fields on the Retail Catalog are Bill of Materials (for FORMULA products), Description (all products) and Price (FORMULA and DELIVERY products).

For Inventory, only MANUFACTURE type products need to be set up. This would include all products listed on Bills of Materials used with FORMULA Products, all AGGREGATE products that do not indicate a separate TARGET STOCK, and all TARGET STOCK as indicated on AGGREGATE products. When setting up these Inventory Items, it is necessary to list all Stores (Plants) for each Item where the Item will be used during Manufacture of Concrete. The Plants that only produce AGGREGATE and that do not stock it, do not have to be listed on these Inventory (Stock) Items.

The Aggregate Register

Product Codes already established on the Concrete Product Register may be registered on the Aggregate Register. The singular purpose for doing so is to inform the system how to treat the Batching Values when this Product Code is encountered on a Concrete Delivery Ticket.

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Below, we show Batching Values on a Concrete Delivery Ticket. Note that the Batching Lines for Aggregate products (the 1st 3 lines in this example) accumulate, whereas non-aggregate products have independent line totals.

	Batched Commodity	Unit	Design Qty	Required	Batched	Actual	Variance
1	sand Sand	lb	1,726.00	17,260.00	17,260.00	17,260.00	0.00
2	34stone 3/4 Stone	lb	1,400.00	31,260.00	31,300.00	14,040.00	40.00
3	38stone 3/8 Stone	lb	200.00	33,260.00	33,270.00	1,970.00	10.00
4	cement Cement	lb	150.00	1,500.00	1,510.00	1,510.00	10.00

The Plant Register

Each Plant used in the system must be defined on the Plant Register. A Plant has a short Code, a Name, must be attached to a Store (so the system knows how to deal with Stock Transactions for that Plant) and has a Cash Receipt Account. This is a standard IES Cash Receipt Account in the Ledger, and is connected to Cash Up functions, as this Account will reflect all Cash Tickets processed at the Plant.

The Truck Register

All Trucks used on Concrete Delivery Tickets are specified on the Truck Register, which effectively opens a system object to record statistics on the Truck, and if

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the Truck is also connected to a Job in the Job Costing System, then the system will record KPI's for the Truck as well, e.g. Cubic Yards Delivered, etc.

Control Parameters

Control Parameters for Concrete Operations include the following: -

Aggregate Conversion

Batched Aggregate Factor	2,000.00

Haulage Tax Retention

Tax Type with Haulage Cha	15 Non-Capital Goods (Input) Vat ▾
Tax Retain %	2.00
Haulage Tax Retention Account	100-00032 TAX RETENTION: HAULAGE

Tax Types Permitted

	Allowed Tax Types
1	1 Std Rate VAT excl Capital Goods & Serv
2	3 Exempt and non-Supplies
3	0 No Tax Record

The Batched Aggregate Factor is used to convert Batched Aggregate Quantities, which are stated in 'lbs' to 'tons' for the purpose of adjusting Stock properly, and may be used to apply the specific factor you require, dependent on the type of 'tons' used.

The Tax type used with Haulage Charges must be specified. The system does not rely on Invoices received for these Haulage Charges, and processes pseudo Invoices automatically, and is able to process these Invoices with or without local Tax. The system will also automatically process Tax retention on such charges, if a Value higher than zero % is specified. The Haulage Tax Retention Account specified is the Account that accumulates the retained Amounts.

The 'Tax Types Permitted' are the Tax Types you allow with Billing of Customer Tickets (both Concrete and Aggregate Delivery). When the Customer is internal, e.g. Aggregate to another Plant, the system will process this as 'No Tax' even if Tax is specified on the Ticket by mistake.

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The Driver Register

Drivers must be registered in order to collect information for Payroll entries. There is no separate Driver Register specifically for Concrete Operations, since the Human Resource Re-Charge Register in Job Costing already provides this facility adequately. Drivers are therefore registered on the Human Resource Register. Once a Driver is registered on the Human Register, and specified on a Concrete Delivery Ticket, then the system will process the necessary statistics for the Driver.

The Customer Register

Customers for Concrete Operations are: -

- ✓ Plants – these are already specified on the Plant Register.
- ✓ Customers – these are specified as regular AR Receivables / Debtors in Accounts Receivable.
- ✓ Cash – no separate specification is required, and all Transactions are processed through the Cash Account connected to the Plant.

The Hauler Register

Haulers are specified for Haulage on Aggregate Weigh Bills, and once a valid Hauler Code is encountered on a Weigh Bill, the system will automatically manage Tax Retention and Hauler statistics for the Account. A Hauler Code is a valid code once an Account Code for it exists in the AP Accounts Payable / Creditors Ledger.
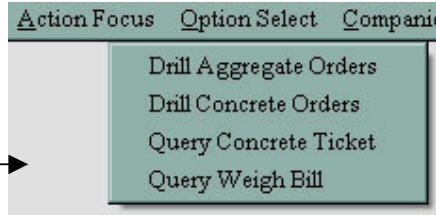
User Profiles

Users who perform Concrete Ops functions need a 'Concrete Profile' in addition to access to the menu options. This is done in the Access Profiles Module by calling up the User Master, choosing Business Profiles and selecting 'Concrete Profile'.

Enquiry Options on Master Files

The topics discussed above are all update options relating to setting up and maintaining the system, but the discussion of the Master Files is incomplete until we have dealt also with the Enquiry options, and we will do this now.

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Aggregate and Concrete Delivery Orders may be drilled into, as well as individual Concrete Tickets and Weigh Bills (these can also be drilled from the Orders).

Action Focus   Option Select   Compani

Drill Aggregate Orders
Drill Concrete Orders
Query Concrete Ticket
Query Weigh Bill

These useful enquiry options allow you to drill into the Invoices and Transactions connected to the events, and below we show only a single example, i.e. a Weigh Bill Drill.

To drill into a Weigh Bill or Concrete Ticket, the Ticket Number and the Plant Number must be known. Alternatively, the Tickets may be reached by drilling the Order (without having to know the exact number) from the Customer Account, which the system will facilitate if the Order Drill options are selected.

In the Weigh Bill Query shown above, you can also drill back into the Order to which the Ticket belongs, at the Red arrow, into the Transactions below where the Yellow arrow is indicated, and into the Invoice (for On Screen or Printer Versions) at the Black arrow.

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