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"Sweeping Away The Competition..."

Whitepaper on Material Yield Variance Sub-System

Header Fields

- Create a multi-divisional material variance tracking system
- One set of "source" code
- Standard terminology across divisions
- Support KPI - "key performance indicators"

QAD® Setup

- Items and products
- Sites
- Item site differential
- Formula's and scrap percentages
- Cost management
- Production lines

Items and Products

- Unique id that describes a finished good, produced ingredient, batch item, by-product or package material
- How do we classify the item?

Classifying the Item

- Product Line - User defined left open to divisions
- Group - User defined left open to division
- Type - "FNGD, PACK, INGR,PDIN,BYPD," last four digits "customized" by division (e.g. PACKCAPS)

Sites

- A unique code to identify a logical or physical entity
- Physical site - used to track inventory -- production activities occur
- Logical site - a code used to identify standards for routing's, formula's and costs

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Item Site Differential

- An item may have different formulas, routings and costs per site
- Defines the differences between item-site planning maintenance, and item-site cost maintenance
- Allows for tracking of "standards" and comparison analysis

Formulas

- Set-up formulas
- Attach scrap percentages to formulas
- Attach formula to item and site
- Create "N" number of formulas
- Comparison reporting

Cost Management

- Create logical costing sites
- Enter costs for different sites
- Cost set to cost set copy
- Rollup costs
- Yield reporting for cost sets

Yield Setup

- Yield component
- Yield parent
- Site groupings

Yield Component

- An item that is captured by the yield calculation to be used later in the reporting of actual usage vs. standard
- Components can be set up globally by product line, item type and group, e.g. all ingredients are yield components

Yield Parent

- An item which is used to drive standard production credit for all lowest level yield components or lower level yield parents
- Yield parents may be set up by product line, group and item types, e.g. all FNGD = yield parents

Site Grouping's

- Site Grouping - A set of QAD sites linked together for the purpose of yield reporting
- Have two facilities - have one yield report
- Facilitate DCS Interface

Standard Yield Terminology

- Ideal standard usage (standard usage w/o scrap)
- Standard usage (standard usage w/ scrap)
- Ideal operational usage (operational usage w/o scrap)
- Operational usage (operational usage w/ scrap)
- Actual usage (ISS-WO)
- Actual usage (inventory variances, CYC-CNT)

Standard Yield Terminology Continued...

- Theoretical variance - (ideal standard - actual)
- Formula variance - (standard - operational)
- Operational variance - (operational - actual)
- Opportunity variance - (ideal operational - actual)

Logical Yield Dataset

- Production site group - list of sites where system searches for production (RCT-WO's)
- Issue site group - list of sites where system searches for usage (ISS-WO') inventory variances
- Standard site - the site the yield calculation uses to determine which standard formula to use
- Operational site - the site the yield calculation uses to determine which formulas to use for capturing operational usages and support variances to standard

Yield Control File

- Setup defaults for yield execution
- Setup defaults for yield reporting

QAD Execution

- Work order release
- Work order receipt/backflush
- Cycle counting

Work Order Receipt/Backflush

- Driver screen to produce necessary inventory transactions in QAD
- RCT-WO - production credit
- ISS-WO- actual usage
- Modify backflush
- Include scrap percentage in backflush
- Production adjustments, backflush adjustments

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Cycle Counting

- Used to report inventory variances that are not related to the production process
- Types: recount, initial, cycle, tag
- User defines which types yield will "pick up"

Yield Execution

- Calculate scrap
- Automatic allocation
- Manual allocation

Calculate Standard / Operational Usages

- System "pulls together" all "RCT-WO" transactions from production site group that are classified as a yield parent and uses that number to extend the standard and operational formulas

Calculate Actual Usage

- System "Pulls Together" all ISS-WO transactions from issue site group and matches them up to a corresponding yield parent
- Can ignore yield parent logic and post to direct repetitive labor parent i.e. "batches and produced ingredients"

Automatic Allocation

- System "pulls together" all cycle count activity and allocates the inventory variances to those "yield parents" in which actual usage was reported against during the time period
- All items in which no "ISS-WO's" transactions occurred during the time period will be flagged to be manually allocated

Automatic Allocation

- Flags can be switched to modify the behavior of automatic allocation in determining which items need to be manually allocated
- Variances are allocated based upon percentages of "ISS-WO's" that are backflushed against production

Manual Allocation

- The user determines which production item number will receive the variance that occurred during the time period
- Items can be allocated by a percentage basis and the system will recommend certain items that will be used in the process

Yield Procedures (Sample Flow)

- Calculate scrap
- Automatic allocation
- Manual allocation
- Verify "yield numbers"
- If yield numbers do not match check yield setup, site groups, yield flags

Reporting

- Item usage summary
- Yield reporting

Item Usage Summary

- Detail Breakdown of Transactions in QAD for certain time period
- Summary yield information for each item
- Calculates actual usage and compares to actual usage summarized by yield calculation
- If no errors then yield system performed correctly

Benefits of Yield Dataset

- Multiple comparisons
- What if's
- Simulations
- Flexibility in reporting

Yield Reporting

- Daily, weekly, monthly, TYD
- Flexibility
- User creativity
- Control file driven
- Product line (department business unit)
- Group (flavors, colors, sizes)
- Item type (ingredient, packaging, by-products, produced ingredient)
- Wild card reporting, multiple sorting