eRMS
Equipment Recipe Management System

Equipment Recipe Management Improves Quality and Engineering Productivity

For semiconductor, FPD and LCD manufacturers, maximizing equipment performance through effective recipe management and associated parameters minimizes operator errors, reduces costs and provides engineers with the competitive edge they need to succeed in quality-demanding semiconductor and flat panel display manufacturing environments. Thanks to BISTel's highly efficient eRMS, engineers can more easily track changes in recipes and parameters with powerful tools that enable recipe version control, and recipe comparison within and between equipment and function change history.

Flexible, Efficient and User-Friendly eRMS for Better Fab-wide Operations Management

Selecting the wrong recipe ID can set invalid recipe parameter values, which may in turn lead to a disruption or downtime in wafer or panel production, resulting in costly material scraps and significant financial losses. In addition, process engineers are often responsible for recipe editing, copying and distributing recipe files to and from equipment using USB drives. Managing recipes in this manner is a risky, and laborious process that decreases equipment and overall engineering productivity. BISTel eRMS workflow engine lets engineers customize and modify applications for equipment recipes and parameters without ever shutting down the system. eRMS recipe and equipment mapping provide greater flexibility to accommodate complex selection requirements. With eRMS, engineers can also validate, download and upload recipes and parameters more effectively, reducing material reworks and scraps, enabling equipment and processes to perform at peak.

Intelligent Manufacturing

BISTel's intelligent manufacturing solutions are shaping the factory of the future, improving costs, operational efficiencies, and quality across factories by connecting the manufacturing ecosystem to better detect, analyze, predict, and adapt real-time to changing manufacturing conditions. BISTel solutions collect, manage, and analyze data, monitor the health of machines and equipment, optimize process flows, and identify root cause failures to mitigate risk in manufacturing. The release of BISTel's intelligent manufacturing solution includes advanced machine learning, industry leading analytics, predictive, and continuous improvement applications that accelerate the road to smart manufacturing.

Markets Served

Semiconductor Manufacturing
Semiconductor Equipment Manufacturers
Flat Panel Display Manufacturing
PCB/SMT | Biotech
LED Manufacturing

Key Benefits

- Improved quality
- Reduced error rates and scraps
- Increased engineer productivity
- Fab-wide recipe management efficiencies
- Recipe validation for improved quality
- Automated parameter-based recipe control

Key Features

- Centralized database collects and manages all recipes
- Parameter-based recipe control
- Recipe validation and interdiction
- Unlimited recipe revision control
- Global data sharing - Once a recipe is set up, and stored, all EES applications can use the information, eliminating duplication of recipe definitions
- eRMS supports Recipe Data Library (RDL) in formatted and un-formatted types of equipment model
- eRMS is compliant to SEMI E42 standard
- Framework-based solution for greater efficiency

SYNOPSYS®

Fab-wide Recipe Management Operations

CIM and/or MES system focus only on the management of Recipe IDs (PPID) associated with products, steps and equipment. Recipe management of recipe files for each individual equipment is also important for effective fab-wide operational management.
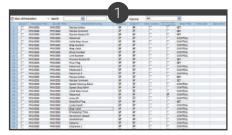
Centralized Control
- Recipe up/download
- Recipe comparison
- Revision history management interdiction

FAB-centric Integration
- Full download
- Integration (eR2R, eFDC)
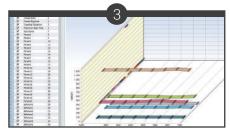- Simple parameter base control

Parameter-based Control
- Parameter-based control
- RaP support (E139)

Registering base information about a specification, based on each parameter

Managing registered parameters with batch processing

Analyzing recipe versions, based on each parameter

Interdiction Check

Parameter Version Control
- SPEC Table
- Parameter
- EQP Update

Managing specification versions, based on each parameter

Recipe Data Library (RDL)

- Supports both formatted & un-formatted recipe body structure types
- Supports up to 60 types of RDL for different equipment models
- Proven to be effective and can be applied easily

Recipe Execution

- Query Recipe Directory uploads the directory of currently running process programs
- Download Recipe Body of a recipe to the equipment
- Upload Recipe Body of a recipe from equipment
- Delete a recipe from equipment
- Select the mapped recipe(s) from the contexts supplied by the user
- Select the mapped equipment or the list of equipment supplied by the user

Recipe Validation/Verification

- Validate Sequence Recipe running on the equipment
- Validate recipe parameters set value on the equipment
- Validate the equipment constants
- Query status variable to the equipment workflow control

Workflow Control

- Allows users to customize the recipe execution business logic
- Allows users to add new features to the eRMS
- Allows users to integrate to the legacy applications