

# **BURNER MANAGEMENT SYSTEMS**

## Industry Leading Expertise

Forney has decades of experience in designing, manufacturing and applying Burner Management Systems (BMS) to all types of fossil-fired boilers. Forney is a leading supplier of BMS systems with thousands of installations worldwide, covering a wide spectrum of fuels, including coal, oil, gas, black liquor, wood, process-by-products and refuse. Forney's Functional Safety Management (FSM) process to design and test safety integrity systems meets the requirements of IEC 61508 / 61511.

## Flexible Solutions

From stand-alone applications to seamless integration into the plant automation system, Forney provides BMS systems to suit your requirements. Forney integrates its burner management into the customers' choice of control system platform. Regardless of platform, Forney BMS simplifies plant operation and improves safety through automation.

## Factory Acceptance Tests

During Factory Acceptance Testing (FAT) all system inputs and outputs are wired from the customer's connection point in the BMS to an automated hardwired simulator. This method tests and proves program functionality as well as internal wiring and external connection accuracy. Software simulation is provided on many systems reducing the time required for FAT.

Operation during FAT simulates normal operation, abnormal conditions and appropriate system responses allowing operators to familiarize themselves with the actual system controls. Simulated abnormal conditions also allow operators and I&C personnel to perform basic troubleshooting techniques.

## Extensive Documentation

- Detailed schematic diagrams show all connection points, both internal and external wiring.
- Detailed logic diagrams show every logic gate as programmed along with addresses to correlate to the code.
- Programs are annotated with logic function descriptions to assist in understanding the program and troubleshooting problems.
- Detailed cabinet assembly and layout drawings show the physical location of all BMS componentry. All cabinet components are permanently labeled with device names that correlate to the schematic diagrams.

## Minimize Downtime

Forney goes beyond NFPA requirements to provide "first out" cause of trip indication for master fuel trips by providing cause of trip indications for each igniter, burner, pulverizer, and fuel header. This greatly simplifies troubleshooting and gets equipment back on-line quickly.

## Regulatory Management

Forney designs all BMS per NFPA 85 and monitors various regulatory agencies (NFPA, FM, IEC SIL/TUV Class 6) to ensure our BMS designs stay current. Forney participates on NFPA committees that develop and maintain burner management system design requirements. Forney's experienced BMS designers can review your existing BMS against the latest edition of NFPA 85 to identify gaps and make recommendations to bring it into compliance.



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