

Device Management Solution **SUCCESS** in Modern Paper Mill

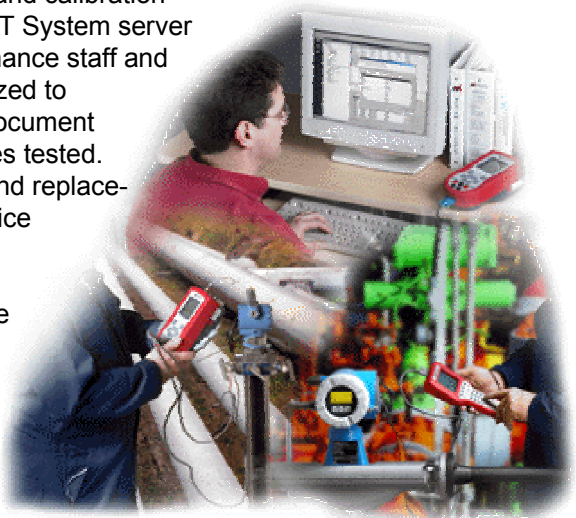
Introduction: Device Management is a hot topic in many process industries. Hundreds of thousands of dollars are being spent to improve access to asset information from all levels of an Enterprise. The best device management solutions offer state-of-the-art device management software, effective pre-calibration organization, efficient downloading of work procedures to handheld tools, intelligent handheld calibrators and communicators for executing field work, dramatically improved post-calibration processing of calibration results, historical data audit, and information retrieval, and are designed to be network compatible linking all aspects of an Enterprise together as needed. This makes a paper mill a prime candidate for the Meriam Device Management Solution.

Application: A large paper mill recently budgeted money for a undefined device management solution. The pressing needs were to: 1) prove critical device maintenance plans for plant water systems were in compliance with state law, 2) incorporate device management database software system to manage re-calibrations and scheduled maintenance, 3) provide improved device maintenance history and access to the history in the form of an audit trail, and 4) incorporate the successful solution across five (5) production areas, the engineering department, and the environmental department for plant-wide integration and data access.

Paper mills are divided into production areas such as power generation, pulping, digesting, bleaching, paper machines, etc. Normally a maintenance superintendent is responsible for the overall maintenance of the mill, and each production area has a maintenance supervisor and a maintenance crew.

Solution: The paper mill implemented the Meriam Device Management Solution to meet its needs. The Solution consists of the DMS database software, the MFC 4101 HART Communicator for configuration management, and the MFT 4011 Communicator / Calibrator for NIST traceable field calibration standards and calibration results documentation. DMS Server was installed on an IT System server and DMS Client was installed on workstations for maintenance staff and planners prior to a planned plant outage. MFT's were utilized to execute calibration procedures downloaded from DMS, document test results, and upload the results to DMS for field devices tested. MFC's were utilized to commission both newly installed and replacement field devices, while at the same time storing the device HART configurations for upload to the DMS software.

On the first scheduled plant shut down, the DMS database was populated with more than 200 device configurations without a single manual entry. The MFC and MFT were used to copy the HART configuration parameters from each field device and then upload them to DMS. DMS then automatically created a unique entry for each device using the uploaded tag number to identify them. This



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completed two goals in one step; populate the database and document the configuration of the HART field devices.

Next, the DMS operator developed calibration procedures for pressure and temperature devices, assigned the appropriate procedure to each device tag, and downloaded the calibration procedures directly to an MFT documenting process calibrator. Taking the MFT into the mill, the instrument technicians were not only able to calibrate the field devices, but also to document the results. MFT calibration features like Quick Cal and Smart Trim were used on HART transmitters to allow technicians to use just one handheld for pressure and temperature standards, loop current measurement, and HART communications to conveniently execute trim commands.

Results: The paper mill has met the initial requirements for documenting critical devices, maintenance scheduling, audit trail records, and on-demand record access using the Meriam Device Management Solution. Expectations were met or exceeded in all areas. Initially the subject paper mill had a single user license for the DMS Client, one MFC and two MFT units operating in the most critical environmental impact area of the mill – power and recovery. The mill is now expanding to 5 – 10 DMS clients and equipping the instrument technicians in all five production units with MFTs and MFCs.

All of the mill's field devices will eventually be managed by DMS. In this case the Solution is being deployed one production area at a time. Although the initial work with the Device Management Solution focused on HART transmitters, DMS and MFT can handle conventional device calibration procedures and results with equal ease. Device files can be created within DMS manually, if the situation requires it, and entire blocks of device files can be cloned to quickly provide support for plant system duplications or expansions.

Summary: The Meriam Device Management Solution is quickly becoming a force in the process industries. Meriam is the only single source supplier of the software, documenting process calibrators, and HART communicators that make device management programs successful.

