

Abstract

This report describes a methodology for the development of an application for tracking and reporting of instrument and control data in a timely manner, including a complete plant instrument index and including an equipment form, a calibration form, a report menu, a critical trip report, a DCS search engine with supporting DCS loop form and DCS report form, a circuit and raceway application, including forms for cable information, raceway information and report menu, and a line-book application. The functions discussed detail the necessary features for a power-generation instrument and control application and should be used for guidance in the user development of an application for tracking and reporting of instrument and control-equipment data.

Key Words

Technical Report, Application, Document Management System, Data, Distributed Control System, Instrument, Work and Asset Management System, Report, Tracking

1 Scope

This technical report provides guidance in the design and function of a method for instrument tracking and documentation control that is adaptable for use by multiple plants and is compatible with many of the available plant-site-distributed control systems. The report addresses methods to develop a user-friendly interface that allows instrument technicians and electricians easy access to instrument-and-control-drawing information (loop, electrical and connection), cable schedules, piping-instrument documents, and work-practice procedures.

This technical report addresses methods linking a document management system with a work and asset management system. These links eliminate the time to manually search for plant drawings, manuals, or critical documents. Convenient access is included to daily maintenance, calibrations, state certifications, audit schedules, instrument-outage-calibration-list reports, and options for detailed reports.

2 Purpose

The purpose of this technical report is to provide advice and guidance in the development of methods to address the common issue of tracking, troubleshooting, and reporting instrument and control (I&C) equipment data in a standard format.

3 Definitions

Document Management System (DMS) – a system that electronically manages drawings, documents, and manuals throughout the lifecycle of the plant.

Distributed Control System – a control system, usually of a manufacturing system, process, or any kind of dynamic system, in which the controller elements are not central in location (like the brain) but are distributed throughout the system with each component sub-system controlled by one or more controllers. The entire system of controllers is connected by networks for communication and monitoring.