3KEYCATALOG™

Simulator Equipment Catalog

CURTISS-WRIGHT

Nuclear Power Products and Services

What is 3KEYCATALOG™?

An important activity in simulation development is to gather reference data–i.e., design and operational information about the system or equipment being modeled–extract specific data values or configuration information relevant for modeling, and use this information, either directly or through derivations, to configure and parameterize the simulation models. Reference data, which typically comes from a variety of sources, such as hardcopy prints or electronic media, is not always usable as-is, but has to be worked with, to complete the simulation.

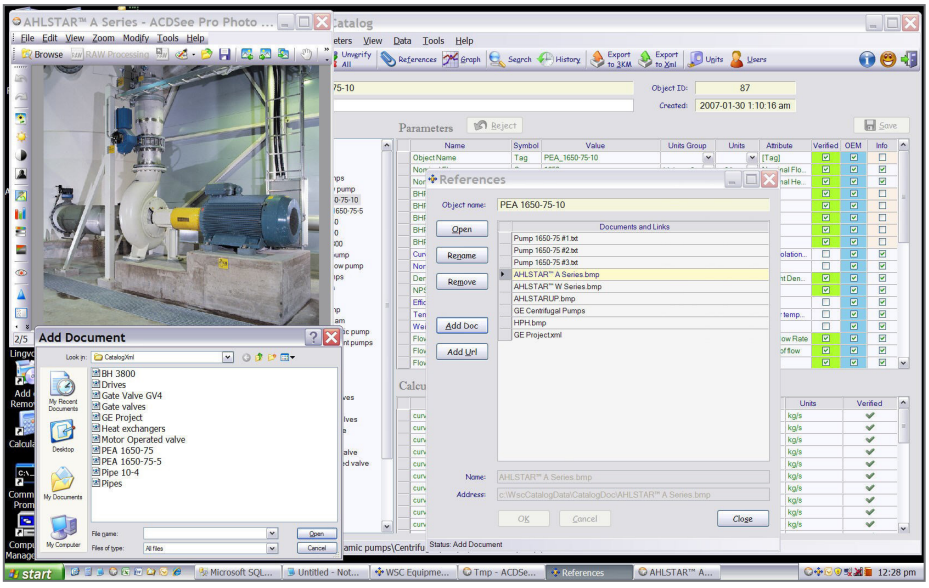
Often, as model development progresses, reference data usage information–i.e., which pieces of source data have been used and how they have been used–is either lost or obscured, because no efficient tool is available that manages and tracks this process, from source to the models. This adversely impacts both quality and configuration management.

3KEYCATALOG™, developed by Curtiss-Wright's Simulation Group*, fills this gap. It provides an effective tool for cataloging and archiving raw source information about equipment, capturing extracted usable data, performing needed derivations, managing processes for its verification and transfer to the simulation models, and making visible how data is used in the simulation.

*: WSC, a legacy brand of Curtiss-Wright's Simulation Group, headquartered in Frederick, MD, is a global simulation and services company. Acquired by Curtiss-Wright in 2024, WSC is recognized for the quality and efficiency of their products and flexible team-oriented approach to serving its customers.

Key Components

- GUI client for managing all functions
- Centralized server-based repository using commercial database products (SQL Server, Oracle)
- Multi-user environment implemented over the network
- Object-oriented design, with asset-specific object classes for various types of equipment
- Encapsulation of equipment parameter forms and derivation rules within objects
- Implementation of processes for independent verification of data extraction and parameterization
- Automated transfer of parameterization data to 3KEYMASTER™ models
- Upload of electronic versions of reference data as attachments to equipment objects
- Equipment object revision history



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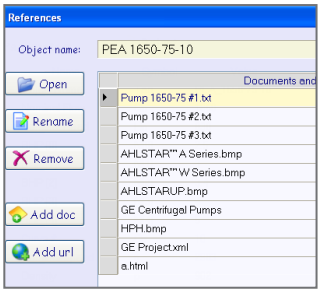
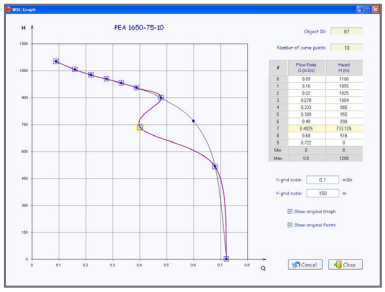
3KEYCATALOG™ Uses

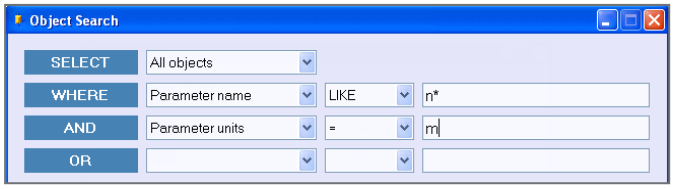
3KEYCATALOG™, with its asset-centric information management approach, has powerful applications to Quality and Configuration Management for simulation development, or for Asset Management. However, when coupled with Simulation Assisted Engineering (SAE), it makes its use in complex engineering projects even more compelling.

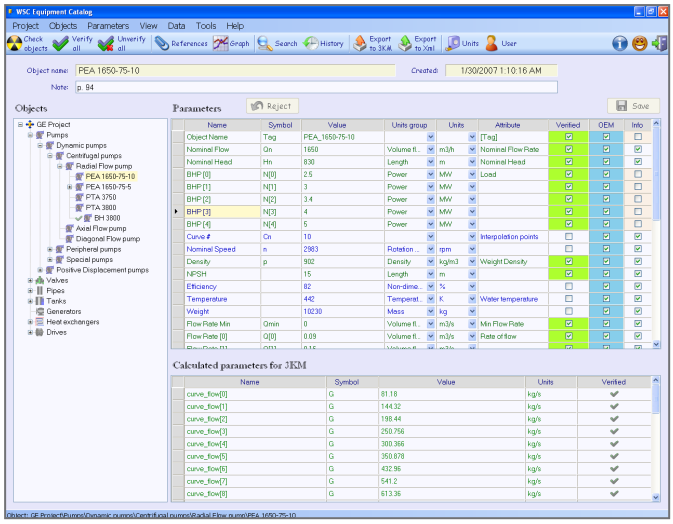
Platform for Configuration, Quality, and Asset Management

- Central information repository for asset information, with cataloging by asset class and equipment identifiers
- Standardized process for data derivations for better quality control
- Independent verification of information used for quality assurance
- Establishing the design basis and change history accurately for configuration management









3KEYCATALOG™ Features

3KEYCATALOG™ provides powerful features for users to customize the organization and structure of the catalog, searching for and managing objects and information within it.

- Organize structure of cataloging, adding, deleting, and modifying objects
- Link data reference files
- Manage object history
- Develop and invoke asset class-specific form sheets for capturing extracted information and performing data derivations
- Specify preferred units of measure
- Graphing of object characteristics
- Capture data verification process
- Compound Boolean search on any parameter type
- Export parameterization data

Why Choose 3KEYCATALOG™?

3KEYCATALOG™ provides multi-user parallel-development capability while maintaining central data repository control for all reference data and data-usage information. Its intuitive GUI and object-oriented asset-based approach makes it easy for engineers to relate to and use.

Advantages

- Ease of use–fully GUI-based
- Single centralized authoritative source of equipment data
- Protection against accidental overwrites in a multi-user environment
- Direct integration with 3KEYMASTER™ simulation environment; XML-based integration with other applications
- Extendable–easy to add new custom objects
- Data reference tracking at point-of-use
- Reporting capability using native DBMS functions

CONTACT INFORMATION: 7196 Crestwood Blvd., Suite 300, Frederick, MD, 21703 USA
simulation@curtisswright.com | +1.301.644.2500