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SW-02

SQA Procedure and Configuration Management System(iCODE)

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SQA(Software Quality Assurance) procedures and the configuration management system(iCODE) meet the international regulatory standards(ASME NQA-1 2008, 2009a) enabling efficient design software configuration management and quality assurance.

Description

● Background

- SQA Documents made by the old design software were based on ASME NQA-1 1994 and 1995a and were not standardized and inconvenient in quality inspection conducted by overseas regulatory agencies. Therefore, a software quality assurance system at international level is required.

● Purpose and Necessity

- Overseas customers who desire to buy the design software demand SQA documents that meet the international standards
- In order to satisfy the quality requirements of design software, it is essential to establish a software quality assurance system and configuration management system based on ASME NQA-1 2008, 2009a which is the quality standard in NRC, in the USA.

● Reflection of Revised SQA Requirements

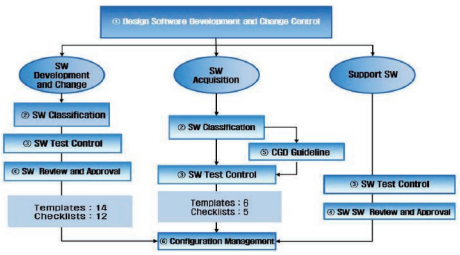
- The main revision contents of ASME NQA-1 2008, 2009a related to SQA are reflected in the three types of design software quality assurance procedures:
  - To append cyber security requirements about an unauthorized user
  - To append notification requirements about software configuration change and condition
  - To enhance traceability of software requirements
  - To give flexibility to create SQA documents

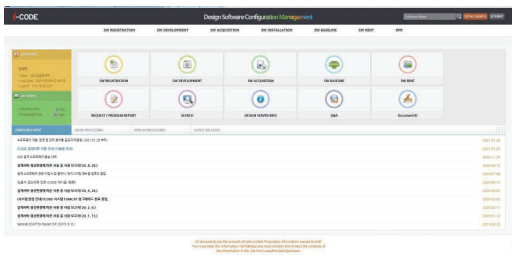
● Composition of SQA Procedures

- Three types of design software quality assurance procedures were developed based on ASME NQA-1 2008, 2009a as upper requirements

Document Number	Document Title
DP-90-03	Design Software Development Control
DP-90-04	Design Software Configuration Management
DP-90-05	Design Software Acquisition Control

● Configuration Management System Development for Efficient Software Quality Assurance Procedures and all the Elements of Configuration Management are Recorded and Stored





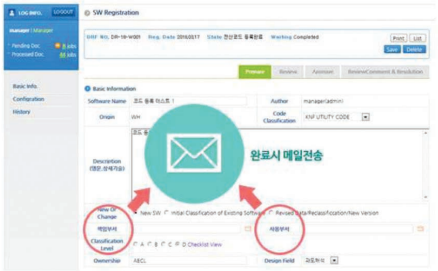
Distinctiveness

● Technical Differences

- Providing standard template(20 types) and checklists(19 types) in compliance with SQA procedures
- Providing user's intuitive understanding on SQA requirements
  (CGD and Baseline Change)
- Quick response to international regulatory requirement changes and standard changes

● Features of the iCODE System

- Intuitive user interface
- Standard framework-based system for better maintenance
- Response to overseas business audits using English interface
- Email notification is automated and design software logs are printable.



● Expected Effect

- Configuration management system(iCODE) which meets the international regulatory standards can provide standardized software quality assurance.
- Enhanced customer credibility with SQA documentation of design software meeting the international regulatory standards

Technology Application Status

- SQA documents of design softwares have been supplied to the UAE as technology transfer.
- The configuration management system (iCODE) has been operated to perform configuration management tasks of the design softwares.

Deliverables

- Design software quality assurance procedures
- Training on the software quality assurance procedures developed for design software verification & validation
- Configuration management system (iCODE)

Technology Readiness Level (TRL)

Actual system proven through operation

Business Model

- **Technology Transfer**
- Licensing
- Joint Search
- **Service Execution**
- Others