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Now Available on a Tablet Near You…

EPRI-developed "apps" on circuit breakers, Terry Turbines, air-operated valves, and bolted joint maintenance practices enable effective knowledge transfer and help sustain equipment reliability.

EPRI's Nuclear Maintenance Applications Center (NMAC) has been researching new ways to capture component knowledge and transfer it to engineers and maintenance craft personnel. Such knowledge transfer contributes to high levels of equipment reliability, supports safe plant operation, and helps avoid unplanned outages that can increase maintenance costs. For example, NMAC has developed several maintenance "apps" for tablet and mobile device use, which enable engineers and craft to experience maintenance tasks/activities in a virtual reality setting and supplement hands-on training.

Users can build proficiency by stepping through the app at their own pace, and can use the application to supplement plant procedures while performing maintenance in the field. Experienced technicians/engineers also can use the app to re-familiarize themselves with component maintenance prior to the job as a just-in-time training tool.

The circuit breaker app (EPRI Product 3002000163), released in October 2014, offers interactive guidance on the disassembly and reassembly of an ABB K-Line circuit breaker, which contains more than 1500 parts. This application is built on a computer aided drafting platform that can:

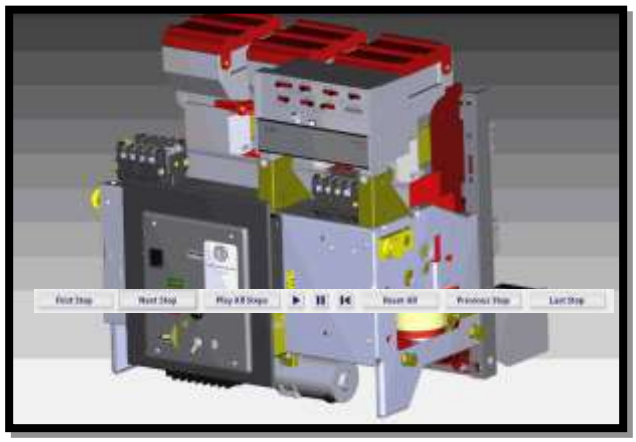

ABB K-Line Circuit Breaker being disassembled.

- Show an exploded view of the breaker
- Display piece part names by clicking on the part
- Identify individual parts by clicking on the part name in the Bill of Materials
- Show a cross-section of the device to view part interactions
- Rotate the mechanism/assemblies to view from all sides
- Assemble/disassemble the device automatically or step by step

Using the same platform, NMAC released the Terry Turbine maintenance app (EPRI Product 3002002802) in September. Terry Turbines are single-stage turbines that commonly support emergency operations at nuclear plants. The NMAC app is applicable to several Terry Turbine configurations, including reactor core isolation cooling (RCCI), high-pressure coolant injection (HPCI), and auxiliary feedwater (AFW) systems. The platform allows users to review a complicated activity just prior to performance, such as the lifting evolution for removing the upper casing.

Earlier this summer, NMAC released Version 2 of the air-operated valve (AOV) application (EPRI Products 3002002703 [Windows version] & 3002002704 [Android version]). This latest version added a diagnostics module to assist technicians in troubleshooting the valve actuator. The AOV platform immerses the user in a virtual environment to support learning and to review proper maintenance techniques. To expand deployment of the AOV app, NMAC will be releasing a multi-language version in early 2015 for Chinese, Japanese, French, and Korean. The multi-language version will function on Windows, Android and iOS devices.

In November, NMAC released the Bolted Gasket Joint Maintenance application (EPRI Product 3002003224). This application, being built on the same virtual platform as the AOV application, covers the fundamentals of assembling a bolted flange and will simulate hands-on bolt torquing for proper gasket engagement. NMAC will continue exploring new formats for effective knowledge and technology transfer during 2015.

For more information, or to provide feedback on EPRI's suite of maintenance apps, contact Rick Way at 704.595.2679 or rway@epri.com.