

Motor Doc's Hot Topics: Industrial Energy Update

Written by Howard W Penrose, Ph.D., CMRP, Vice President, Dreisilker Electric Motors, Inc.
Thursday, 25 October 2012 10:57

The U.S. Department of Energy (DOE) has made industrial information, software, training, grants and resources available in the past. Given some recent updates to the agency's Website, significantly more information is now available. The materials developed in relation to electric-motor applications have been put through extensive reviews by industrial teams and revised to reflect new data.

If you haven't yet visited it, the DOE Website, <http://www.eere.energy.gov/topics/manufacturing.html>, contains information on all of the above, including software for steam; process heating; combined heat and power; compressed air; motors; pumps; fans; HVAC systems for data centers; solar panels; and refrigeration. These tools are free to download and use, as is the site's other information. Training classes in a variety of tools are also available through the site, with some provided, for fee, by third parties.

The addition of PdM capabilities

One of the top DOE software programs, MotorMaster Plus, in its last version, received funding in 2000 from Dreisilker Electric Motors, Inc., Pruftechnik and ALL-TEST Pro for modifications that added predictive maintenance (PdM) capabilities. This allowed end-users to add vibration, motor-circuit analysis and similar testing to a motor database and search motors by condition, thus permitting repair versus replace decisions to be made in advance of equipment failure. This version of MotorMaster Plus works on Windows through XP. Another version of the software, MotorMaster International, which does not have the PdM tool capability, works on versions of Windows through Windows 7. In addition to these software programs, DOE offers a separate belt-efficiency calculator that can be used online or downloaded for computer use. Users can enter a series of motors and the calculator will compare the efficiency of standard V-belts to cogged V-belts.

Tools for mature motor-system management programs □

The combination of motor-system-related materials, software and training offerings available via the DOE Website certainly can be utilized as the basis for an effective motor-systems management program. Still, there are other items that should be added to a mature/maturing program, as the primary emphasis of the tools referenced in this month's column is energy, followed by reliability, maintenance and lifecycle costs. We'll cover a number of those other items in future articles.**MT**

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for Maintenance & Reliability Professionals (SMRP).