

Engineering Software tools

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Abstract

"Am not gonna reinvent the wheel...this time"

AGENDA

- Motor Assessment tools
- Pumping assessment tools
- Variable speed drives
- Insulation Analysis
- Reverse Osmosis system assessment

Engineering Software tools

- US Department of Energy
 - Industrial Technology Programs (ITP)
 - <http://www1.eere.energy.gov/industry/bestpractices/software.html>
 - Training opportunities available thru ITP

MotorMaster+

- MotorMaster+ is a free online NEMA Premium® efficiency motor selection and management tool
- Identify the most efficient action for a given repair or motor purchase decision
- Features motor inventory management tools, maintenance log tracking, efficiency analysis, savings evaluation, energy accounting, and environmental reporting capabilities.
- http://www1.eere.energy.gov/industry/bestpractices/software_motormaster.html

Pumping System Assessment Tool (PSAT)

- Assess the efficiency of pumping system operations
- PSAT uses achievable pump performance data from Hydraulic Institute standards and motor performance data from the MotorMaster+ database to calculate potential energy and associated cost savings
- Enables users to save and retrieve log files, default values, and system curves for sharing analyses with other users
- http://www1.eere.energy.gov/industry/bestpractices/software_psat.html

DOE ITP software (other tools)

- AirMaster
 - analyze energy use and savings opportunities in industrial compressed air systems
- Fan System Assessment Tool (FSAT)
 - quantify energy use and savings opportunities in industrial fan systems
- Chilled Water System Assessment Tool (CWSAT)
 - evaluate changes to existing equipment including chillers, pumps, and towers, and calculates the energy and cost savings
- Process Heating Assessment Tool (PHSAT)
 - methods to improve thermal efficiency of heating equipment

SIEMENS Energy Saving Tool

- Siemens SED2 EasySave software
- Calculate savings by using variable speed drives
- Provides instant investment analysis, return on investment and payback period
- <http://www.buildingtechnologies.siemens.com/bt/us/Home/Pages/home.aspx>

Insulation Analysis

- 3E Plus developed by NAIMA (North America Insulation Manufacturers Association)
- Calculates thermal performance of piping and equipments
- Translate BTU losses into actual dollars
- Determines economic thickness of insulation
- Calculate Greenhouse gases emission and reductions
- <http://www.pipeinsulation.org/>

Reverse Osmosis System Analysis

- ROSA was developed by Dow Filmtec
- Software program is intended to offer the design recommendations to optimize your system performance
- CADIX for Ion Exchange performance
- <http://www.dow.com/liquidseps/design/rosa.htm>