**CUT ENERGY COSTS**

Machine tool idling, unnecessary pump rotation, and continuously running peripheral equipment all drive up the costs of CNC machining processes. But these energy wasters are in the crosshairs of a new suite of power-cutting control applications.

Developed by Okuma Corp., a Japanese builder of CNC machine tools, these applications, known collectively as ECO suite, are available on Okuma machines featuring the OSP suite, an open-architecture CNC control system. Included in ECO suite is ECO Idling Stop, billed as the world’s first application that stops machine tool idling. This feature monitors milling and turning spindles and automatically turns off the coolers for these spindles when cooling is complete. Okuma claims ECO Idling Stop has achieved energy savings of nearly 75% in non-cutting operations over a one-month period.

Another part of ECO suite is an optional feature called ECO Hydraulics. Typical hydraulic pumps lack pressure feedback and simply run at a constant speed, noted Brad Klippstein, controls product specialist at Okuma America Corp., Charlotte, N.C., the U.S.-based sales and service affiliate of Okuma Corp. When pressure in the hydraulic system is not being used to do work, it is relieved through a pressure regulator valve, producing a good deal of heat in the process, Klippstein explained.

But the ECO Hydraulics system includes feedback that allows it to vary pump rotational speed to regulate pressure. So there is no longer any need to waste energy by relieving excess pressure through a regulator valve. In addition, Klippstein said, the pump can be slowed when no work is being done by the system. Demonstrations have shown that ECO Hydraulics can achieve over 60% reductions in pump power consumption by minimizing unnecessary rotation, according to Okuma.

A third energy-saving feature, called ECO Operation, lets operators set time limits for peripheral equipment such as chip conveyors and mist collectors so that the equipment automatically stops after cutting is finished. And a fourth feature, ECO Power Monitor, shows power consumption levels for spindles, feed axes, and peripheral equipment and lets operators see how much energy is being saved right on the machine tool’s display.

Should the size of a company’s energy bill affect its level of interest in the ECO suite? “Absolutely not,” Klippstein said. “You’re still saving money with this, no matter what your energy costs are.”

For more information about Okuma America Corp., visit [www.okuma.com/americas](http://www.okuma.com/americas) or call (704) 588-7000.

\*

Caption: ECO Idling Stop saves energy by shutting down coolers when their job is done.