

by the

NUMBERS

75 government and military standards on product data management, configuration management, engineering drawing practices, product materials content, manufacturing quality, and units of measure have been collected, and are available for free download, at www.product-lifecycle-management.com

11 million

tons per year is what China may import in bio fuels by 2020, according to John Cole, of the law firm Simmons and Simmons, cited by Industrial Info Resources, a marketing information service. Cole says China is planning to have at least 10% of its automobiles be bio fuel compatible by 2020, requiring 22-million tons of bio-ethanol or other bio-fuel per year. Since China only can produce half that amount, it is beginning to make plans to import the other half. www.industrialinfo.com

20% more robots will be installed in Asia from 2006-9 than in Europe and North America, says the International Federation of Robotics (www.ifr.org), as reported by ABB, which says its sales of robots in China almost doubled last year; Shanghai became ABB's global robotics headquarters in April 2006 (adding to production and assembly in France, Germany, Norway, Sweden, and the U.S., the former headquarters). www.abb.com

10 states have adopted clean-car programs that will reduce global warming emissions by 64-million metric tons per year by 2020, an amount greater than the national emissions of more than 140 nations, says the U.S. Public Interest Research Group. Measurement and control opportunities abound in three components: Low-Emission Vehicle program (standards for emissions of smog-forming and toxic air pollutants); Zero-Emission Vehicle program (for hybrids, fuel-cell vehicles, and electric vehicles); and global warming emission standards (emission limits). States are California, Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, and Washington. uspirg.org

>33 system integrators who say they serve the East North Central region have expertise in biotechnology and 21 CFR Part 11, according to *Control Engineering's* Automation Integrator Guide. www.controleng.com/integrator

10.6 minutes was the average time it took operators to respond to a situation using an interface designed according to Abnormal Situation Management Consortium (www.asmconsortium.com) guidelines. Operators using traditional screens took 18.1 minutes on average, says Honeywell Process Solutions/Human Centered Solutions. For more, see hpsweb.honeywell.com

63% (260 million metric tons) of the equivalent avoided or sequestered carbon dioxide reported to the U.S. federal government in 2003 resulted from U.S. electric power sector efforts, says Edison Electric Institute. www.eei.org

27%

of respondents to a recent *Control Engineering/Reed Corporate Research* survey said they used position sensors for tool positioning; 26% for packaging applications. For more, see *Product Research*, this issue. www.controleng.com/archive

>1,300

schools in 45 U.S. states work with Project Lead The Way, a not-for-profit organization that promotes pre-engineering courses for middle and high school students; PLTW partners with public schools, higher education institutions, and the private sector to increase the quantity and quality of graduating engineers and engineering technologists. www.pltw.org

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