A Double Dose of Dini

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The Geography of Carbon Emissions

(Originally from American Thinker, May 23, 2009)

As noted in May, Jack's *Fact or Fiction?* output comes faster than we can publish them. From time to time, we are running additional installments of his well-received writings, as "A *Double Dose of Dini.*" - Ed.

No American city is among the top 50 cities in the world for air pollution according to the World Bank.¹ Another list, 'The Top Ten of the Dirty Thirty,' compiled by the Blacksmith Institute of New York compared the toxicity of contamination, the likelihood of it getting into humans and the number of people affected. Places were bumped up in rank if children were impacted. No U.S. or European sites made the list. Sites in China, India and Russia occupied six of the top ten spots. Some examples:

- At Linfen in Shanxi province the heart of China's coal industry - industrial and automobile emissions put the health of three million people at risk.
- At Sukinda in the state of Orissa in India,
 2.6 million people face the hazards of one of the world's opencast chromite mines.
- And in Dzerzhinsk, Russia, 300,000 people are exposed to toxic by-products from chemical weapons.²

Have you heard about this? Probably not. But there's more. Another report states that seven of the world's ten most polluted cities are in China. Of the ten cities in the world with the highest levels of air pollution, three are in India.³ There are more reports, but by now you probably get the point. Note that no U.S. city has been mentioned. Steven Hayward, in discussing the Blacksmith report, makes an observation that could well apply to all of these documents, "Not surprisingly the media

and green campaigners in the United States completely overlooked this report."⁴

China has some of the worst pollution problems in the world. Nearly two-thirds of China's 343 major cities currently fail to meet the nation's air quality standards. Pollution levels in China's major cities are 10 to 50 times higher than the worst smoggy day in Los Angeles.⁵ The twenty fastest growing cities in the world are all in China.

China is adding 100 gigawatts of coalfired electrical capacity each year. That's another whole United States' worth of coal consumption added every three years, with no stopping point in sight. Much of the rest of the developing world is on a similar path.⁶

As Fareed Zakaria notes, "The combined carbon dioxide emissions from the 850 new coal-fired power plants that China and India are building between now and 2012 are five times the total savings of the Kyoto accords. So you can put in all those curly light bulbs and drive all the Priuses you want; India just ate that for breakfast and China will eat the next round of conservation for lunch."

Jane Orient adds this on the futility of reducing emissions. "In a symbolic gesture, the Forces of Darkness, which are trying to end an age of enlightenment and reason, urged people to turn off their lights for an hour between 8:30 and 9:30 PM local time. Bjorn Lomborg calculated that if one billion turned off their lights for one hour, it would have been the equivalent of shutting of China's emissions for a full six seconds.⁸

Although China receives the most attention, it is not the only Asian nation where this concern is present. India is also growing rapidly, and its major cities experience particulate levels often eight to ten times higher than the worst American cities. India is the fourth-most coal-dependent country

in the world and has enough reserves to last for the next 100 years. Carbon emissions in India are rising faster than nearly every other country on the planet. Between 1980 and 2006, India's carbon output increased by 341%, compared to 321% for China, 103% for Brazil, 238% for Indonesia and 272% for Pakistan.⁹

Peter Huber sums this up quite well; "Cut to the chase. We rich people can't stop the world's five billion poor people from burning the couple of trillion tons of cheap carbon that they have within easy reach. We can't even make any durable dent in global emissions - because emissions from the developing world are growing too fast, because the other 80 percent of humanity desperately needs cheap energy, and because we and they are now part of the same global economy. What we can do, if we're foolish enough, is let carbon worries send our jobs and industries to their shores, making them grow even faster, and their carbon emissions faster still."6 P&SF

References

- 1. Steven F. Hayward, *Index of Leading Environmental Indicators* 2009, Pacific Research Institute, San Francisco, CA, 2009; p. 3; http://liberty.pacificresearc h.org/docLib/20090414_Env_Index_09.pdf; last accessed 08/27/09.
- 2. The Top Ten of the Dirty Thirty, Blacksmith Institute, New York, NY, September 2007; http://www.b lacksmithinstitute.org/wwpp2007/ finalReport2007.pdf; last accessed 08/ 27/09.
- 3. Norman Myers and Jennifer Kent, The New Consumers: The Influence of Affluence on the Environment, Island Press, Washington, DC, 2004; pp. 77 & 90.

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to control the bias voltage. Since the CV supply can generate arcing damage on the substrate, arc detection must be provided between the CV supply and the substrate.

HIPIMS+ has a much higher deposition rate than conventional DC sputtering, which makes the technology suitable for industrial purposes. Another advantage is the much better target utilization. Many different coatings can be applied. For the cutting tool market an AlTiN coating produced HIPIMS+ offers advantages as compared with arc coatings for stainless steel machining. Thick layers of AlTiN coating (6 to 8 µm) can also be deposited to increase the lifespan of threading inserts. Furthermore CrN coatings show great promise for cutting and forming tools, components or decorative finishes. Due to the flexible Hauzer equipment, HIPIMS+ can be combined with other deposition methods in one process, facilitating hybrid multilayers.

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- 4. Steven F. Hayward, *Index of Leading Environmental Indicators 2009*, Pacific Research Institute, San Francisco, CA, 2009; p. 10; http://liberty.pacificresear ch.org/docLib/20090414_Env_Index_09.pdf; last accessed 08/27/09.
- Steven F. Hayward, "China Comes Clean," National Review Online (April 21, 2006); http://www.nationalreview.com/ comment/hayward 2006 042 10629.asp; last accessed 08/27/09.
- 6. Peter W. Huber, "We Cannot Make a Dent in Global Carbon Emissions," http://www.opposingviews.com/articles/opinion-we-cannot-make-a-dent-inglobal-carbon-emissions; last accessed 08/27/09.
- Fareed Zakaria, The Post-American World, W.W. Norton & Co., New York, NY, 2008; p. 90.
- 8. Jane Orient, "Earth Hour Celebrates Darkness," *Civil Defense Perspectives*, **25** (3), 2 (March 2009).
- 9. Priyanka Bhardwaj and Robert Bryce, "India Chooses Coal, Not Kyoto," *Energy Tribune*; http://www.energytribune.com/articles.cfm?aid=1736; last accessed 08/27/09.

Answers to I.Q. Quiz #454 From page 7.

- 1. Acid/alkali, cyanide and hexavalent chromium.
- Concentrated wastes include spent cleaners, acids, chromates, stripping solutions and plating solutions that have been hopelessly contaminated.
- Propellers, eductors, compressed air, recirculating pump. A propeller is the best because the others typically are inefficient for mixing large tank volumes and/or release gases and mists.
- FALSE. A centered mixer can create a vortex in an unbaffled tank. This effect can be reduced by baffling or using two opposing props (clockwise and counterclockwise).
- Centrifugal (for liquid transfer);
 Diaphragm (pumps sludge from clarifier to filter press); Chemical metering (addition of chemical treatment reagents)

In Memoriam



We are saddened to share with you, the sad news, that our valued board member Bill Saas (Coventya), has lost his wife Rosemary, to her long and courageous battle with cancer.

ROSEMARY S. SAAS (nee Siegwarth) Wife of William J. Saas; mother of Janet S. Pier (Jim), Hollace S. Rhodes (Stephen), Mark W. Saas (Maura), Julie S. Gaul (Michael); grandmother of Caitlin, Meg and Abby Pier; Owen, Nora and Liam Rhodes; Will, TJ, Catherine and Elizabeth Saas; Regan, Bailey, Devin and Conor Gaul; sister of Margaret Sullivan (Jerry), Janet Sherman (Rick), Susan Hack (Ed); dear friend of countless. In lieu of flowers, the family suggests donations to The Saas Family Scholarship at Magnificat High School, 20770 Hilliard Rd., Rocky River, OH, 44116.