

MANUFACTURING & TECHNOLOGY NEWS

COVERING INNOVATION, GLOBALIZATION & INDUSTRIAL COMPETITIVENESS

PUBLISHERS & PRODUCERS, P.O. BOX 36, ANNANDALE, VA 22003

PHONE: 703-750-2664 FAX: 703-750-0064 URL: WWW.MANUFACTURINGNEWS.COM

Wednesday, November 30, 2011

Volume 18, No. 19

Another U.S. Industry Turns To Trade Law As Its Last Resort

And now it is the U.S. solar industry's turn to deal with the strife associated with filing a trade case against China, pitting producers against importers in a vicious fight.

When SolarWorld filed an antidumping and countervailing duty petition with the federal government against Chinese manufacturers of crystalline silicon photovoltaic cells in October, the opposition quickly mounted a counter attack. Chinese producers rushed to hire Washington attorneys to fight the petition. They were joined by American importers that benefit from the Chinese incentives and subsidies. They formed a coalition that hired more lawyers and PR agents to flood the wires with press releases and lobbying campaigns.

Other high-profile U.S. industries have sustained similar campaigns: steel, semiconductors, textiles, furniture and tires, among others. Over the past four years, many other smaller industries have filed trade cases against China with the federal government in order to save themselves

including clothes hangers, wood flooring, artists canvases, coated paper, magnets, school notebooks, cement, steel wheels, steel fasteners, stainless steel pressure pipe, magnesium carbon bricks, copper pipe and tube, citric acid, high-pressure steel cylinders, aluminum extrusions, wire, oil country tubular goods, electric blankets, inner-springs for beds, graphite electrodes, kitchen appliance shelves and even tow-behind lawn groomers.

It is part of a long trend of beleaguered U.S. industries on the verge of being wiped out by cheap Chinese products having to instigate a trade case to take a final stand. An industry will cull together a million dollars or more to file a case, only to suffer the wrath of free-trade ideologues and a public relations machine funded by foreign interests, retailers and importers to discredit them. They must prove material damage. A final decision from the U.S. International Trade Commission takes a year.

(Continued on page four)

DOD Will Not Allow Any More Mergers Of Its Large Prime Contractors

The era of large defense company mergers is over. The Department of Defense says it will not allow any more mergers or acquisitions among its largest defense contractors. It also says it will reserve the right to reject mergers of smaller defense companies if they weaken aspects of the defense industrial base that are deemed critical to national security. The Defense Department also does not want the defense industrial base to suffer the meltdowns that have occurred in many civilian manufacturing sectors due to short-term greed.

The new policy guidance, issued by DOD's Office of Manufacturing & Industrial Base Policy, says competition in the private sector and preserving market forces are essential for the industry's development. Nevertheless, "the Department is not going to support further consolidation of our principal weapons systems prime contractors," it says.

The Office of Industrial Policy predicts an uptick of mergers and ac-

(Continued on page two)

DOD Mergers... (Continued from page one)

quisitions “and other industry adjustments” as military budgets start to retrench, but it “will require transparency with respect to all contemplated transactions,” says the policy guidance. “These transactions will be examined to ensure that the Department’s long-term interests in a robust and competitive industrial base dominate any near-term or one-time proposed savings, that potential organizational conflicts of interest are avoided or carefully mitigated and that the Department has full visibility into restructuring costs and the potential for continuing capital investment in R&D.”

DOD will assess whether proposed mergers of defense firms “will result in the creation of a weaker stand-alone firm less likely to thrive without the necessary capital structure that their larger parent company is able to provide.” If it finds this to be the case, then “transparency will be essential so that the Department is confident the value created largely by the Department over the years is not lost to the detriment of the taxpayer or the warfighter. The Defense Department would not want to see its industrial base experience what has happened in some other sectors of the economy: poor risk management, unnecessary leverage and excessively short-term behavior at the expense of long-term health. Transparency allows all of these things to be addressed early in the process, which is in the interest of all involved.”

DOD is going to start analyzing the competitive structure and health of the defense industry “sector by sector — from shipbuilding to professional services and from stealth to space,” says the Office of Manufacturing & Industrial Base Policy. The analysis will be ongoing and will be used by the Department as it “seeks to sustain the health, vibrancy and efficiency of the industrial base upon which our security depends. While we cannot sustain the base in a given sector if it has the wrong size and shape for the new era, once it is right-sized and

right-shaped, the government will take an interest in keeping it that way.”

DOD is also going to become more active in assessing the lower tiers of the defense industrial base, where the majority of money on weapons systems is spent. Companies deeper in the supply chain possess important technology capabilities and “are centrally important to a healthy industrial base,” says the policy statement. “Their health and performance are critical to us.” The market analysis “aims to locate early indicators of risks to defense programs, identify cross-program interdependencies throughout the supply chain, pinpoint areas of limited competition that may drive up cost and find areas of overreliance on foreign sources that may exist,” says the policy statement. “The sector-by-sector, tier-by-tier analysis will be conducted annually to ensure that the industrial base which the Department relies upon is healthy, vibrant and flexible to meet the Department’s needs today and well into the future. This analysis will be used to influence the Department’s investment decisions.”

DOD will start looking to nourish a new generation of innovative startup companies and smaller firms to provide “new ideas to the defense industry.” Encouraging new entrants into the industry is “a key part of the Department’s defense industrial strategy.”

Finally, DOD will embrace globalization, which it says is “affecting se-

curity and commerce in profound ways [with] implications for the defense industry.” Military engagements around the world have become dependent on the involvement of many countries. The Pentagon’s orientation toward global suppliers must be similar. DOD “simply cannot avoid or wall itself off from globalization,” says the policy guidance. “Depending on the program, from a few percent to much more of the value-added in defense goods and services is sourced overseas — mostly to companies that serve as subcontractors to U.S. primes and that provide, for example, a particular specialized part. Sometimes that is where the best technology or best value can be found, and when it is, the Department owes it to the warfighter to do so. Globalization of our market is not an option — it is a reality.”

The DOD will continue using “non-heritage firms” (i.e. foreign firms) for essential technologies. “Just as we have opened our markets to the leading firms from around the world, we urge our partner nations to do likewise,” according to the guidance. “Exports obviously strengthen our industry’s competitiveness, but they also enhance our security — and international security — when they build the capacities of international partners.”

The policy guidance is located in the Office of Manufacturing & Industrial Base Policy’s “Annual Industrial Capabilities Report To Congress,” located at http://www.acq.osd.mil/mibp/docs/annual_ind_cap_rpt_to_congress-2011.pdf.

Chinese Sell Planes To DOD

Cirrus Aircraft has sold 25 of its SR20 aircraft to the U.S. Air Force, according to the Chinese newspaper Huanqiu. But Cirrus Aircraft “is now wholly owned by China Aviation Industry General Aircraft Company,” meaning the U.S. Air Force is buying aircraft from a Chinese company, says Huanqui. In an article in the newspaper titled “China Aviation Industry Becomes U.S. Defense Contractor for the First Time,” the publication says the value of the order for training aircraft to be used at the Academy Airfield in Colorado Springs, Colo., is more than \$6 million.

*MAPI ECONOMIST ERNEST PREEG WRITES THAT***The World Economic Order Has Fundamentally Changed Due To China's Cheating, And The U.S. Is The Big Loser**

BY RICHARD McCORMACK

A "radical" global economic transformation has taken place over the past decade, with China rising quickly and substantially beyond the United States to become the world's largest exporter of manufactured goods, according to a study from the Manufacturers Alliance/MAPI. China now accounts for 20 percent of global exports of manufactured goods (\$1,476 billion), up from only 7 percent (\$220 billion) in 2000. Over the same period, the U.S. share fell precipitously from 19 percent (\$649 billion) to 13 percent (\$990 billion).

At current rates, China will soon account for 25 percent of global manufactured exports, while the United States' share is headed down to only 10 percent.

China's exports are now more than 50 percent larger than those of the United States, and they are on track to double U.S. exports by 2013.

The repercussions for the U.S. economy are substantial. Massive U.S. trade deficits — caused in large part by mercantilist currency policies by China and other Asian countries — have cost the United States millions of jobs, according to MAPI. A trade deficit of \$1 billion accounts for the loss of between 4,000 and 1,000 jobs. Last year, the \$80 billion increase in the U.S. trade deficit meant the loss of an additional 320,000 to 800,000 American jobs. "Thus a \$475 billion deficit in 2011 means 2 million to almost 5 million fewer workers," according to MAPI.

"A particularly disturbing dimension for the manufacturing sector was the growth of trade imbalances for the five largest exporters, who account for 67 percent of global exports," according to the MAPI analysis. "In 2010, surpluses of \$582 billion by China, \$333 billion by Japan, \$255 billion by the EU, and \$172 billion by South Korea, stood in striking contrast to the \$425 billion U.S. deficit," says the study.

The fundamental restructuring of exports away from the United States and toward China "is having a decisive impact on the functioning of the international economic system," says MAPI. China's trade surplus increased by an order of magnitude over the decade, from \$50 billion to \$582 billion, while the EU's surplus was up by more than 400 percent, from \$51 billion to \$255 billion. South Korea's surplus rose by 202 percent, from \$57 billion to \$172 billion; Japan's was up by 41 percent from \$237 billion to \$333 billion.

Meanwhile, the United States was headed in the opposite direction, with its trade deficit increasing 33 percent, from \$319 billion in 2000 to \$425 billion in 2010.

The trends continued through the first nine months of

2011, with the U.S. trade deficit surging another 9 percent (from \$375 billion to \$409 billion).

The international trade system is no longer working properly, according to report author Ernest Preeg. Over the past decade, countries such as China have increasingly manipulated their currencies to gain unfair competitive advantage in trade. "In historical perspective, the economic leaders met at Bretton Woods [in 1944] to replace the currency manipulation and discriminatory bilateral trade agreements of the 1930s with a rules-based multilateral system, the same challenge, with considerable irony, facing global leaders today. It is time for a critical, in-depth assessment of the decline and pending fall of the Bretton Woods structure, and of what should be done to restore a balanced, cooperative, and rules-based multilateral economic system." Mercantilist exchange rate policies have become "the most important protectionist policy instrument in play . . . since an undervalued currency provides both across-the-board import protection and across-the-board export subsidies," adds Preeg.

*(Continued on page eight)****U.S., EU To Eliminate Trade Barriers And Boost Growth***

The European Union and the United States government have created a new working group aimed at increasing trade and creating jobs. The new "High-Level Working Group on Jobs and Growth" led by U.S. Trade Representative Ron Kirk and EU Trade Commissioner Karel De Gucht, will identify policies to increase trade and investment "to support mutually beneficial job creation, economic growth and international competitiveness," according to the White House.

Government officials involved in the initiative will work with the private sector to examine and reduce barriers to trade such as tariffs, quotas, non-tariff barriers and rules. The will also try to make regulations and standards compatible.

"For each option it assesses, the Working Group will take into consideration the short- and medium-term impact on economic growth, job creation and competitiveness; the feasibility of each option; and the implications for and consistency with bilateral and multilateral trade obligations," says the White House.

The Working Group will issue a report with findings, conclusions and recommendations to leaders in the United States and European Union by the end of 2012.

Solar Industry's Last Resort...*(Continued from page one)*

For U.S. domestic producers in trade cases, the process can be degrading and complex. It involves trips to Washington, D.C., where lawyers speak in a language of numbers — 301, 201, 421, 337, 701 or 731. They are accused of starting trade wars, involving industries far beyond their specific fight. When the United Steelworkers union filed its tire case, the Chinese countered with a case against the U.S. poultry industry.

But if a U.S. industry does not put up a fight, it will be gone, say those who represent domestic producers. The U.S. tire industry is still in business after the Steelworkers union's successful case against China last year. Despite all of the brouhaha from tire importers and retailers, that case was upheld by the World Trade Organization this summer. The U.S. steel industry remains viable after a similar experience in the mid 2000s.

"The fight matters," says one trade attorney involved in the tire petition. "It is worth the fight, but it is always a fight."

When John Bassett, president and CEO of Vaughan-Bassett Furniture Co. filed a petition against Chinese dumping with the International Trade Commission in 2004, he was shocked when 21 law firms were hired by the opposition. "There is one law firm on our side and there are 21 on their side," Bassett said.

The trade remedy route is the last

resort for many companies and industries battling with Chinese producers. "Since nobody is making manufacturing policy at a high level, companies have to do it with the only tool we have, which is a self-remedy, self help, one case at a time — ad hoc system," said one trade attorney involved in recent cases. "It's really difficult and it would be great if the government said, 'We're with you.'"

Even a top government official who was in charge of trade law said trade cases are an ineffective strategy for reversing the manufacturing crisis in America. "As a practical matter, as the person who is responsible for administering the dumping laws, I can honestly tell you they don't work," said President George W. Bush's Undersecretary of Trade Grant Aldonas in 2004. "We don't have the tools right now the way these laws are written to go after a problem like China." None of the laws have changed since Aldonas made that statement.

The trade laws do not solve the bigger issue of how to encourage U.S. production, regain industrial competitiveness and create good-paying American jobs that will pay down the country's mounting debt created by a generational embrace of

a post-industrial "new" economy that is based on the wonders of the Internet, services and the financial sector.

Opponents in the cases filed by U.S. producers frequently raise the same issues: that the additional cost

"The fight matters. It is worth the fight, but it is always a fight."

of duties applied to Chinese imports will undermine many more U.S. jobs in the retail, sales and marketing industries, and that consumers will be hurt the most by having to pay higher prices.

And so it is the case in the latest petition filed by SolarWorld on Oct. 19 before the International Trade Commission. SolarWorld has argued that Chinese imports have surged beyond comprehension — up 350 percent over the past two years; that in July 2011 alone, imports of Chinese crystalline silicon PV panels and modules exceeded the volume imported in all of 2010; that Chinese prices have dropped by 50 percent over the past year; and that countless Chinese incentives, preferential loans and lines of credit worth tens of billions of dollars, subsidized utilities, and land and tax rebates have led to the demise of at least seven major American solar manufacturing plants and the loss of thousands of jobs. This has occurred just as the market is on the verge of explosive growth.

They argue that 95 percent of Chinese production is not intended for Chinese domestic consumption, but for export. China's total solar capacity is 32 times greater than its do-

Air Freight Hits A Soft Patch

Global air freight traffic continued to be down in October. Air cargo demand was 4.7 percent below the same month in 2010, according to the International Air Transport Association (IATA). Since the middle of this year, air cargo traffic has declined by 5 percent "far greater than the 1 percent fall in world trade," according to IATA Director General Tony Tyler. "Air freight is among the first sectors to suffer when business confidence declines. In anticipation of weaker economic activity, companies shift to cheaper and slower modes of transport."

Air passenger travel is not suffering the same fate, however. Passenger air traffic increased by 3.6 percent in October over the same month in 2010. But IATA is skeptical: "Despite the deepening euro zone crisis, European carriers have showed above trend demand growth of 6.4 percent," says Tyler. "With Europe accounting for 29 percent of global air travel, this suggests that the current overall strength in air travel is based on fragile foundations."

(Continued on page six)

State Department's Human Rights Report: You Don't Ever Want To Live In China

After reading the U.S. Department of State's annual report on human rights issues in China, it is hard to fathom how any American company could be doing business there. It is even harder to believe that the U.S. government allows the sale of Chinese products in the United States, given the severity and ubiquity of abuses.

China's human rights practices are growing and are heinous, according to the State Department in its "2010 Human Rights Report" on China. The Chinese government is corrupt. It tortures illegally held prisoners and executes them "without due process," says the State Department. China is cracking down on any dissent, with the government "increasingly resorting to extralegal measures including enforced disappearance." There are "illegal detentions at unofficial holding facilities known as 'black jails.'" The Chinese government takes land from people without paying compensation. There is no freedom of the press. The government controls all print, broadcast and electronic media, which are "used to propagate government views and CCP ideology," says the State Department. The Chinese government is increasing its levels of censorship and the manipulation of the press and the Internet.

"Negative trends in key areas of the country's human rights record continued, as the government took additional steps to rein in civil society, particularly organizations and individuals involved in rights advocacy and public interest issues, and increased attempts to limit freedom of speech and to control the press, the Internet and Internet access," says the State Department report. The Chinese "authoritarian state" has stepped up efforts "to silence political activists and public interest lawyers." The government is increasingly resorting to "extralegal measures including enforced disappearance, 'soft detention' and strict house arrest, including house arrest of family members, to prevent the public voicing of independent opinions." "Individuals and groups, es-

pecially those seen as politically sensitive by the government, continued to face tight restrictions on their freedom to assemble, practice religion and travel. The government continued its severe cultural and religious repression of ethnic minorities."

There were "extrajudicial killings, including executions without due process," prolonged illegal detentions, "torture and coerced confessions of prisoners; detention and harassment of journalists, writers, dissidents, petitioners and others who sought to peacefully exercise their rights under the law; a lack of due process in judicial proceedings, political control of courts and judges, closed trials, the use of administrative detention, restrictions on freedoms to assemble, practice religion, and travel; failure to protect refugees and asylum-seekers; pressure on other countries to forcibly return citizens to China; intense scrutiny of and restrictions on nongovernmental organizations; discrimination against women, minorities, and persons with disabilities; a coercive birth limitation policy, which in some cases resulted in

forced abortion or sterilization; trafficking in persons; prohibitions on independent unions; the lack of protection for workers' rights to strike; and the use of forced labor, including prison labor. Corruption remained endemic."

Foreign journalists are not allowed to travel. They have been forced to leave cities where there is social unrest. "Government officials used criminal prosecution, civil lawsuits, and other punishments, including violence, detention, and other forms of harassment, to intimidate authors and journalists and to prevent the dissemination of controversial writings."

Only government-approved publishing houses are allowed to print books. "Newspaper, periodicals, books, audio and video recordings, or electronic publication may not be printed or distributed without the approval of the State Press and Publications Administration," according to the report. The Chinese government continues to jam broadcasts from the Voice of America, the BBC and Radio Free Asia. "Internet distribution of streaming radio news and podcasts from these sources often was blocked."

The only place you will see a television broadcast of foreign news is in hotels visited by foreigners and foreign residence compounds, but even these were subject to censorship.

(Continued on page seven)

Teamsters Sue Over Mexican Trucks

The Teamsters have sued the federal government to stop Mexican trucks from driving into the United States. The suit, filed in the U.S. Court of Appeals for the D.C. Circuit, claims the Department of Transportation's new pilot program allows dangerous Mexican trucks to enter the country "through an illegal pilot program," says the union. The Federal Motor Carrier Safety Administration is breaking the law by allowing Mexican trucks into the country without displaying proof that they meet federal safety standards, say the Teamsters. They also claim that Mexico does not provide comparable access to U.S. trucks because there is little ultra-low sulfur diesel fuel in Mexico and that the program does not comply with the National Environmental Policy Act. Joining the Teamsters in the suit are Public Citizen and the Sierra Club.

Additive Manufacturing Could Be As Important As The Microchip

Additive manufacturing, based on concepts and systems developed by the rapid prototyping industry, has the potential of being a revolutionary technology similar to the steam engine, light bulb and the microchip, according to the Atlantic Council of the United States. Additive manufacturing is on track “to move beyond a mere emerging technology into a truly transformative technology,” according to the group, chaired by Chuck Hagel and Brent Scowcroft. “The ability to locally print almost any designable object would have strong repercussions across our society.”

The potentially disruptive technology could have negative implications for countries whose economies are based on export-led growth such as Germany, China and Japan. As the technology begins to be per-

fectured and deployed, the production of goods could shift to consumer countries, leading to falling demand for imports.

“The exporting countries would presumably also take advantage of additive manufacturing to produce for their own people, and countries with large domestic markets such as China, India, Indonesia and Brazil may successfully transition to an additive manufacturing economy without reduction in prosperity, despite the loss of export markets and disruptive change in manufacturing processes,” says the Atlantic Council.

There could be a shift of economic power toward the leaders of design and production of additive manufacturing printers, supplies and support. “The United States, in particular, could experience a renaissance in innovation, design, IP ex-

ports and manufacturing if it becomes the leader in both production of additive manufacturing printers and the designs that are most desirable and marketable.”

Developing countries could improve their economic conditions “and reduce dependence on producers of manufactured products such as China,” says the Atlantic Council. “The trend toward increasing competition for resources and even a zero-sum global economy could be slowed or reversed. In addition, international efforts to address environmental challenges, especially climate change, could receive a boost as the cost to take ameliorative or mitigating actions could be reduced.”

Such a shift would take decades, similar to technologies like personal
(Continued on page 10)

Trade Remedies... *(From page four)*

mestic demand for solar. “This is unlike some other industries where China is primarily producing for domestic use and then ruining our markets by sending its excess here,” says SolarWorld’s lead attorney Timothy Brightbill, a partner with Wiley Rein LLP. “They are sending everything here — not their excess. Nearly everything they produce is for export. We reached a point where somebody had to take action.”

Those favoring the trade case have formed the “Coalition for American Solar Manufacturing,” which now includes 150 companies representing more than 11,000 American workers.

Opponents have coalesced into the recently created “Coalition for Affordable Solar Energy” (CASE) and have gone on offense, noting that as of November 30 the group has recruited 132 solar companies as members, representing 13,134 jobs, or 13 percent of the U.S. solar industry workforce.

“Today, the solar industry is 100,000 employees of which 57 percent are in the installation business, 21 percent are in sales and distribution and only 14 percent are in manufacturing,” says Kevin Lapidus, senior vice president of legal and government affairs for SunEdison, based in St. Louis and a lead member of CASE. “This is a situation where one company representing 2 to 3 percent of the U.S. industry is taking an action that will undermine the remaining 97 to 98 percent of the industry. So when you talk about U.S. jobs, this is a matter of one company that is going to ruin it for the 97 to 98

percent of the U.S. workforce.”

Petitioning the U.S. government for a trade remedy has potentially serious consequences for the companies that initiate the case, say others involved in previous actions. “We have seen many times companies with a significant interest at stake and a real aggressive mentality at the beginning of the process fade away and go quietly into the night because of strong-arming by customers who source some of their product offshore,” says Auggie Tantillo, executive director of the American Manufacturing Trade Action Coalition.

Policymakers in the administration and Congress reflexively state that America’s industrial interests are being preserved because of “safeguards” that are written into trade agreements. They argue that such safeguards act as sentries at the gate, and that all an industry has to do when it is being overwhelmed by subsidized imports is to flip a switch and go back to the full duty or apply penalties. “But most of the people involved in formulating U.S. trade policy know that it is complete nonsense, and yet they continue down that road,” says Tantillo. “You will hear it soon with the Trans-Pacific Partnership — they will say: ‘Don’t worry about Vietnam. We know they have inherent advantages, but we’re going to put in a nice safeguard.’ And I raise my hand and ask: ‘Can you show me where the United States has used a safeguard arrangement under a free trade agreement?’ The room gets very quiet. They completely overlook the real world mentality that in a lot of instances filing a case means taking on your customer and your customer has tremendous leverage. You can win your trade remedy case and lose your business.”

Human Rights... (From page five)

There are 14 government ministries that engage in blocking content for 420 million Internet users. These agencies are involved in “the censorship of thousands of domestic and foreign Web sites, blogs, cellphone text messages, social networking services, online chat rooms, online games and e-mail,” says the Department of State. “The Ministry of Public Security, which monitors the Internet under guidance from the CCP, employed thousands of persons at the national, provincial and local levels to monitor electronic communications. Officials considered tools like social networking, micro-blogging and video-sharing sites a major vulnerability for social stability and political control.”

Internet cafes, major news portals and people accessing the Internet at public libraries were required to register their real names and identification numbers off their national identity card in order to access the Internet. These organizations were “complying with secret government orders” aimed at monitoring Internet use. Internet cafes and schools have been required to install “Green Dam” software aimed at censoring objectionable content “based on an updatable central database,” says the State Department. “Domestic websites that refused to self-censor political content were shut down, and many foreign websites were blocked.”

The State Department describes dozens of cases of Internet surveillance and cases of citizens being detained for posting content, such as when an explosion struck a Nanjing chemical factory on July 29, 2010. The Chinese government reported 28 killed. But local citizens said the number was 259 people. “Local officials took extreme measures to prevent citizens from reporting on the incident, including dispatching armed police to search the homes of nearby residents with the aim of deleting any images or video of the scene,” says the State Department.

One woman (Cheng Jianping), was sentenced to jail for a year for “re-tweeting” a message related to the dispute between China and Japan. Her crime, according to the Department of State: “Disturbing social order.”

There is no academic freedom. Freedom of assembly is not allowed, yet there are hundreds of riots over such things as workers not being paid, the environment being destroyed, illegal land requisitions, government corruption and embezzlement. There is no freedom of association. Non-government organizations can't operate independently. There is no freedom of religion, with the state holding priests as prisoners.

There were 225 million migrant workers in China in 2008. “These economic migrants lacked official residence status in cities and it was difficult for them to gain full access to social services, including education and health care, despite laws, regulations and programs meant to address their needs,” says the report.

Chinese government officials “frequently engage in corrupt practices with impunity,” says the study. “Many cases of corruption involved areas that were heavily regulated by the government and therefore susceptible to fraud, bribery and kickbacks, such as land usage rights, real estate and infrastructure development. Court judg-

ments often could not be enforced against powerful special entities including government departments, state-owned enterprises, military personnel and some members of the CCP.”

Violence against women was widespread, with domestic violence affecting one-third of China's 267 million families, according to the U.S. State Department. A family that had more than one child was forced to pay “social compensation fees,” which can reach 10 times a person's annual disposable income. If families do not pay the fee, they are detained and their property is confiscated and destroyed. “In order to delay childbearing, the law sets the minimum marriage age for women at 20 years and for men at 22 years.” It is illegal for a single woman to have a child. In Puning City, there were 8,916 sterilization procedures in April 2010 for woman who had two children.

Many employers do not hire women in order to avoid paying maternity leave and childcare. China's official retirement age is 60 for men and 55 for women. “With the exception of men and women involved in physically demanding jobs for which the retirement age was 55 and 45, respectively,” according to the State Department. “In addition, work units were allowed to impose an earlier mandatory retirement age for women than for men. Lower retirement ages also reduced pensions, which generally were based on the number of years worked. Job advertisements sometimes specified height and age requirements for women.”

Women in China have a suicide rate that is three times higher than for males, with an average of 500 female suicides per day in 2009. “Many observers believed that violence against women and girls, discrimination in education and employment, the traditional preference for male children, birth-limitation policies and other societal factors contributed to the high female suicide rate.” Fifty-eight percent of suicides involve the use of pesticides. The mortality rate for female babies was 27 percent higher than for boys, due mainly to neglect. “Kidnapping and buying and selling children for adoption increased over the past several years, particularly in poor rural areas. There were no reliable estimates of the number of children kidnapped; however, according to media reports, as many as 20,000 children were kidnapped every year for illegal adoption.”

Worker unions don't work, with virtually every union dominated by party officials and management of companies. “Direct election by workers of union leaders continued to be rare,” says the study. Union activists recently have been arrested and labor activists who have been detained in previous years remain in prison. The State Department lists more than two-dozen such individuals. There is very little collective bargaining. Employers withheld wages and required unskilled workers to deposit several months' wages “as security against the workers departing early from their labor contracts,” says the State Department. “These practices often prevented workers from exercising their right to leave their employment and make them vulnerable to forced labor.”

Unpaid prison labor is still a problem, with prisoners being forced “to work for private production facilities associated with the prisons,” says the State Department.

(Continued on page nine)

New Economic Order... (Continued from three)

The charters of the International Monetary Fund and the World Trade Organization expressly prohibit members from manipulating their currencies to gain unfair advantage, yet these obligations "have now been repudiated by China, with U.S. concurrence," writes Preeg in "A Decade of Transformation in World Trade." "Chinese protracted, large-scale purchases of foreign exchange of several hundred billions of dollars per year over the past nine years, resulting in over \$3 trillion of official reserve holdings, are far and away the greatest currency manipulation experienced in the history of the IMF. China, however, has stated that it has complete sovereignty over exchange rate policy, which constitutes an official repudiation of its IMF and WTO obligations, while the United States, surprisingly, has agreed with the Chinese sovereignty claim. This massive Chinese currency manipulation, moreover, has recently induced other exporting nations, particularly in Asia and including Japan, to follow in the Chinese wake by devaluing their own currencies in order to remain competitive with Chinese exports.

"The central questions are how much is the Chinese currency undervalued, and what should be done to end China's unfair competitive advantage in trade. As to the undervaluation, it is extremely large by any precedent, but will only be known when and if China ceases its large-scale official purchases and allows its currency to rise to a market-based rate. For example, as a result of the 1985 Plaza Accord, when the United States pressed the EU and Japan to let their currencies rise to market-based levels, the European currencies rose by about 50 percent and the Japanese yen by 90 percent, while the Chinese current account surplus today is at least as large as those of the 1980s.

"As to what the United States should do in response, the best strategy would be for the United States, together with other like-minded nations adversely affected by Chinese currency manipulation, to bring a formal complaint against China in the IMF and initiate a dispute proceeding in the WTO for violation of its obligations and, if China does not respond positively and promptly, to

apply retaliatory trade sanctions. In any event, the longer major exchange rate adjustment is delayed, and Chinese official currency holdings continue to soar by the trillions of dollars, the more conflicted and disruptive the ultimate policy resolution is likely to be. Meanwhile, Chinese exchange rate policy can best be called mercantilist realpolitik, defined by Bismarck as doing what works and serves your interest.

"A final comment on the trade impact of exchange rates relates to the euro, which is substantially undervalued for the eurozone northern tier of highly competitive exporters led by Germany, and is thus a major reason why the EU has increased its global market share of manufactured exports relative to the United States, from parity in 2000 to 50 percent larger in 2010. Over the past couple of years of eurozone financial crisis, there has been a shift out of euros into dollars as the safer haven for fi-

nancial assets, resulting in a lower euro exchange rate to the dollar. More fundamental, the single currency is substantially undervalued for the northern tier exporters and overvalued for the southern tier importers, as illustrated by the great disparity in member current account balances. The overall eurozone is close to balance on current account, but the northern tier export powerhouses have surpluses, as a percent of GDP, of 7 percent for the Netherlands, 5 percent for Germany, and 3 percent for Austria, while the southern tier import powerhouses have deficits of 8 percent for Greece and 4 percent for Italy and Spain. This huge regional imbalance in export competitiveness is, in fact, a root cause of the eurozone financial crisis, but is only raised here for its adverse trade impact on third countries, and, in particular, on the United States. It is certainly a trade competitiveness issue worthy of closer examination."

Preeg can be reached at epreeg@mapinet.net.

Federal Mfg. Program Gears Up

The federal government's Advanced Manufacturing Partnership (AMP) is gearing up, seeking ideas for how to revive American manufacturing. The program is looking for individuals and organizations to submit white papers and models it can study and possibly deploy for its long-term program. They can be sent via e-mail to amp@ostp.gov

The program is also planning two full-day regional workshops, one on December 5, 2011, at the University of California, Berkeley's Bechtel Engineering Center Sibley Auditorium, and another on December 12, 2011, at the University of Michigan's North Campus Research Complex in Ann Arbor.

The AMP Steering Committee is co-chaired by Andrew Liveris, President, Chairman, and CEO of the Dow Chemical Company, and Susan Hockfield, President of the Massachusetts Institute of Technology. The committee is comprised of the following members, of which not one is from a small- or medium-sized domestic manufacturing company:

- Richard Harshman, CEO, Allegheny Technologies
- Douglas Oberhelman, CEO, Caterpillar
- Wendell Weeks, CEO, Corning
- Andrew Liveris, CEO, Dow Chemical
- Alan Mulally, CEO, Ford
- David Cote, CEO Honeywell
- Paul Otellini, CEO, Intel
- William Weldon, CEO, Johnson & Johnson
- Wes Bush, CEO, Northrop Grumman
- Bob McDonald, CEO, Procter & Gamble
- Stephen MacMillian, CEO, Stryker
- Louis Chenevert, CEO, United Technologies
- Jared Cohon, President, Carnegie Mellon University
- George "Bud" Peterson, President, Georgia Institute of Technology
- Susan Hockfield, President, Massachusetts Institute of Technology
- John Hennessy, President, Stanford University
- Robert Birgenau, Chancellor, University of California, Berkeley
- Mary Sue Coleman, President, University of Michigan

More information on AMP can be found at <http://www1.eere.energy.gov/industry/amp/getinvolved.html>.

DOD Must Select Capabilities It Intends To Preserve

The Defense Department's budget has skyrocketed over the past decade, increasing by more than 70 percent due to 9/11 and the wars in Iraq and Afghanistan. But as that growth has come to an end, the U.S. defense industrial base is in for trouble, according to various analysts.

President Obama requested \$553 billion for DOD's baseline budget for 2012, but the Budget Control Act of 2011 that passed Congress on Aug. 2, reduced that base budget to \$450 billion over 10 years. With the recent failure of the congressional super committee, an additional \$600 billion could be sliced out of defense.

An era of weapon system cancellations is present upon the industry. "The question of what to keep rather than what to cut is the fundamental strategic issue that needs to be given top priority by Congress and the Pentagon in coping with the emerging era of declining defense spending," says Barry Watts, senior fellow at the Center for Strategic and Budgetary Assessments. "It is unlikely that a sound strategy for preserving the truly critical elements of the U.S. defense industrial base will emerge, despite the best intentions of all concerned, unless this question is given top priority."

Will the United States stop funding its nuclear submarine develop programs? Will it cut long-range precision strike and targeting networks? If it does not fund critical capabilities, "to whom would the country turn" when it needs them? Watts asks.

It will be impossible for the Department of Defense to maintain 50 to 75 "critical" sectors of the defense industrial base, says Watts. "As a rule of thumb, a strategy for preserving the U.S. defense industrial base has little chance of succeeding if the number of critical elements exceeds a single digit," he told a recent hearing of the House Armed Services Committee. "In other words, the total number of critical sectors cannot be more than eight or nine if the inherent demands of effective strategy are to be satisfied. . . Attempting to preserve every sector of defense industry without regard to prioritization would be unaffordable."

Getting Congress, the Secretary of Defense, the Army, Navy and Air Force and Marines "to agree on a short list of critical military capabilities and the corresponding elements of the defense industrial base is no easy task," he added.

A robust defense industrial base no longer even exists, added Frederick Downey, vice president of national security at the Aerospace Industries Association. The seven largest companies in the aerospace - defense industry have combined annual revenues that are only equal to the annual revenue of Wal-Mart, Downey notes. Last year, 110 combat aircraft were delivered to the Pentagon, produced by 190,000 workers, down from 938 combat aircraft produced by 700,000 workers in 1960.

"Despite these changes, many still view the aerospace and defense industrial base an outsized behemoth," says Downey. "The Pentagon still officially relies on a distorted free market model to maintain an effective aerospace and defense industrial base. . . We do not believe that is an effective policy and when it does not produce

the desired outcomes, the Pentagon will likely resort to more reliance on regulations, which will only increase cost."

For most military systems, there are only niche companies, serving a market of one buyer, which also happens to be the regulator. There are too many barriers to entry to attract many companies, and the industry does not generate high profits. "If these trends continue, and the defense budget continues to be cut, the capability to deliver critical militarily unique systems will atrophy. Further cuts to existing programs coupled with fewer new starts means that the companies that make up the defense industrial base cannot continue to invest in the workforce, plant and research for programs that one day may be needed."

Human Rights... (From page eight)

"These facilities often operated under two different names: a prison name and a commercial enterprise name. There were no effective mechanisms to prevent the export of goods made under such conditions."

Factories hire children ages 14 and 15 who "worked 15-hour shifts six and seven days a week," according to a report cited by the State Department. A consumer electronics factory in Dongguan City "prohibited bathroom breaks during working hours, restricted the off-compound movement of workers, provided inadequate bathroom and dormitory facilities (a bucket and sponge were provided for showering and 14 workers shared each dorm room), and forced workers who made mistakes to clean the bathrooms."

There is not a national minimum wage. "Governments at various levels continued their efforts to prevent arrears and recover payment of missing wages and insurance contributions," says the State Department. Many of the 230 million migrant workers "were unable to access public services, such as public education or social insurance, in the cities where they lived and worked because they were not legally registered urban residents."

If there are any occupational safety and health laws, they aren't enforced. There were 764 people killed or listed as missing in coal mining accidents during the first half of 2010. The State Department describes five major coal mining tragedies that occurred throughout the country over one weekend in July. In 2009, 14,000 workers were diagnosed with black lung disease.

In its description of China's policies toward Tibet, one subcategory is entitled: "Deprivation of Life." Another is "Disappearance," followed by "Torture and Other Cruel and Degrading Treatment," "Prison Conditions," "Arbitrary Arrest and Detention," "Denial of Fair Public Trial," and "Political Prisoners and Detainees." The report continues its descriptions of human rights abuses for 145 pages. The "2010 Human Rights Report: China" from the State Department's Bureau of Democracy, Human Rights and Labor, is located at <http://www.state.gov/g/drl/rls/hrrpt/2010/eap/154382.htm>.

Additive Mfg.... (From page six)

computers and the Internet.

Assembly lines and supply chains could be reduced or eliminated for many products, says the Atlantic Council. "A given manufacturing facility would be capable of printing a huge range of types of products without retooling, and each printing could be customized without additional costs."

The technology is already being used to create commercial parts and products, such as automobile and aircraft components, custom orthodontics and hearing aids. "Engineers are now able to fabricate fully functional components from titanium and various steel alloys featuring material properties that are equivalent to their traditionally manufactured counterparts," says the Atlantic Council. "As these technologies continue to improve, we will witness greater industrial application of advanced manufacturing for the creation of end use artifacts."

3D printers are now being sold for \$1,000, which has allowed hobbyists "to interact with a technology that, in the past, was relegated to large design and manufacturing firms," says the group. "This has democratized manufacturing, thus resembling the early stages of the Apple 1's impact on personal computing. Thus, the 3D printing revolution is occurring at both the high end and the low end, and converging toward the middle." The analysis is located at http://www.acus.org/files/publication_pdfs/403/101711_ACUS_3DPrinting.PDF.

NASA Selects Tech Winners

NASA has selected 300 small business proposals to enter into negotiations for possible contract awards through the Small Business Innovation Research and the Small Business Technology Transfer programs. A list of the winners is located at <http://sbir.gsfc.nasa.gov/SBIR/SBIR.html>.

Renewable Energy Is Fastest Growing Energy Sector

The renewable energy industry was the fastest growing of all energy sectors over the past five years, according to the International Energy Agency. The renewable electricity sector grew by 18 percent globally from 2005 to 2009 and now accounts for 19 percent of total world power generation. Hydropower is the biggest contributor, accounting for 84 percent of renewable energy generation (or 16 percent of total generation in 2009). Hydro has grown at the same rate as all renewable energy technologies due mainly to new dams in China.

The other renewable electricity technologies have grown "by an impressive 73.6 percent between 2005 and 2009, a compound average growth rate of 14 percent," says the IEA. Wind has grown the most rapidly, overtaking bioenergy. Solar photovoltaics has grown by 50 percent, with installed capacity reached 40 gigawatts at the end of 2010.

Some renewable energy technologies do not need subsidies in order to be competitive with fossil energy. Wind is now competing without subsidies in many countries. Solar water heating is expanding rapidly in places like China "due to its favorable economics," says the IEA.

Renewable energy technologies "should no longer be considered only as high-cost, immature options, but potentially as a valuable component of any secure and sustainable energy economy, providing energy at a low cost with high price stability," says IEA. "Where technologies are not yet competitive, economic support for a limited amount of time may be justified by the need to attach a price signal to the environmental and energy security benefits of renewable energy deployment, when these are not reflected by current pricing mechanisms. Support is also justified to allow the newer renewable energy technologies to progress down the learning curve and so provide benefits at lower cost and in larger scale in the near future."

Countries need to develop appropriate policies to promote renewable energy technologies based on their level of development and deployment. The IEA described what these should be in its book "Deploying Renewables 2011: Best and Future Policy Practice" located at <http://www.iea.org/W/bookshop/add.aspx?id=414>.

MANUFACTURING & TECHNOLOGY NEWS (ISSN No. 1078-2397) is a publication of Publishers & Producers, P.O. Box 36, Annandale, VA 22003. On the Web at: www.manufacturingnews.com.

PHONE: 703-750-2664. FAX: 703-750-0064. E-MAIL: editor@manufacturingnews.com.

Annual Subscription Price: \$495. Frequency: Twenty times per year.

Editor & Publisher: Richard A. McCormack (richard@manufacturingnews.com)

Senior Editor: Ken Jacobson, 202-462-2472 (ken@manufacturingnews.com)

Web Technical Coordinator: Krishna Shah (krishna@manufacturingnews.com)

Business Manager: Anne Anderson (anne@manufacturingnews.com)

Electronic distribution of a PDF version of this publication within an organization is available at a reasonable rate.

Subscribers have access to the Manufacturing & Technology News Web site, which includes a keyword searchable archive of the past 13 years of Manufacturing & Technology News. PDF versions of the publication are available for download. Register in the "Subscribers Only" section at www.manufacturingnews.com for electronic delivery.

COPYRIGHT 2011, PUBLISHERS & PRODUCERS: "Newsletters Are The Purest Form Of Journalism."