MADISON'S LUMBER REPORTER

Publisher KetaDesign Productions Editor

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Annual Subscription Prices E-mail/Fax: C\$364 Discounts available for multiple subscriptions

Published 50 times a year

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In Canada, add GST or HST



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News & Updates

US Construction Employment

Construction employment exceeded September levels in 29 states, dropped in 20 plus DC, and remained the same in Rhode Island, the US Bureau of Labor Statistics (BLS) reported on Tuesday. National construction employment rose 5,000 in October after sinking 8,000 in September. Similarly, most states with gains in October had lost construction jobs the month before, indicating that the industry is no longer in free fall but remains in flux. Compared with October 2009, construction employment rose in 11 states plus DC—the largest number of 12-month gains in two years—and fell in 39 states.

"The value of new construction starts edged up 2 per cent in October" but was down 3 per cent year-to-date from January-October 2009 levels, McGraw-Hill Construction reported on Friday, based on data it collected.

In a third sign of gradual improving conditions in construction, BLS reported on Tuesday that mass layoff events (involving 50 or more workers from a single employer) in construction fell 15 per cent from October 2009 to October 2010 and involved 12 per cent fewer workers.

Vietnam Forest Products' Imports

Import values of farm, forestry and seafood products increased relatively in the first 11 months of this year, according to Vietnam's Ministry of Agriculture and Rural Development.

Agricultural imports turnover in November earned US\$11.58 billion, an increase of nearly 37 per cent compared to last year's period. READ MORE

US Home Sales

US October new home sales fell by 8.1 per cent to an annualized rate of just 283,000, according to US Census Bureau data released Wednesday. This follows news Tuesday that existing home sales also dropped, by 2.2 per cent.

September new home sales were upwardly revised to 308,000. New home ales were off 28.5 per cent in year over year comparisons. Median home prices were off 13.9 per cent, to US\$194,900, against September's US\$226,300 – bringing prices back to October 2003 levels.

Unsold home inventories fell slightly to 202,000 units. The months' supply of unsold homes rose to 8.6 months, from 7.9 months in September. READ MORE

Glass Film From Wood

FPInnovations researchers at UBC have made an exciting discovery. While working on a better way to store hydrogen for the automotive industry, the scientists discovered a new silica product made using a nanocrystalline cellulose, derived from wood pulp. as a template which will have myriad applications across a wide range of industries

READ MORE



Prices are in U.S. dollars per 1,000 fbm

| Key Prices | | | | | | | |
|----------------------------|-----------|-----------|--------|-----------|--------|----------|--------|
| | This Week | Last Week | Change | Month Ago | Change | Year Ago | Change |
| WSPF KD R/L 2x4 | 276 | 276 | 0 | 255 | +21 | 224 | +52 |
| WSPF KD R/L 2x6 | 274 | 275 | -1 | 255 | +19 | 224 | +50 |
| WSPF KD R/L 2x8 | 280 | 280 | 0 | 280 | 0 | 234 | +46 |
| WSPF KD R/L 2x10 | 320 | 322 | -2 | 315 | +5 | 310 | +10 |
| WSPF KD PET 2x4 Stud | 250 | 250 | 0 | 235 | +15 | 225 | +25 |
| Douglas Fir Green R/L 2x4 | 235 | 235 | 0 | 195 | +40 | 235 | 0 |
| Douglas Fir Green R/L 2x10 | 320 | 315 | +5 | 265 | +55 | 275 | +45 |
| ESPF KD 2x4 8ft Stud | 308 | 310 | -2 | 285 | +23 | 285 | +23 |
| OSB Ontario 7/16" (CDN\$) | 200 | 200 | 0 | 205 | -5 | 195 | +5 |

Housing Starts, US

CONTINUED US new home sales rebounded slightly in September after hitting an all-time low in August. But in October, they dropped back down to their July level. Sales appear to be stabilizing at an annualized rate below 300,000.

The drop in existing home sales was likely caused in large part by the foreclosure and mortgage documentation mess. With new home sales, that argument isn't as strong. While potential buyers in general might be wary about banks practices and procedures surrounding mortgages, with existing home sales foreclosed property sales are relevant.

Many economists believe it could take three years for the industry to get back to a healthy annual rate of sales of around 600,000 homes.

Some analysts downplayed the drop in sales, saying that when the market is this low it is vulnerable to high volatility.

"Sales are bumping along the bottom, showing no real inclination to start recovering or, thankfully, to fall any further," said Ian Shepherdson, chief US economist at High Frequency Economics, to Associ-

Weekly News

ated Press. Buyers are worried that home prices could fall further. Some can't sell their current home to upgrade to a larger home, either because they have lost equity or they can't find prospective buyers who can qualify for loans under tighter bank lend-

ing standards. The market is declining even with mortgage rates near their lowest levels in decades. Distressed sales, including foreclo-

Distressed sales, including foreclosures, have been about one-third of the market, while first-time buyers have been as much as 50 per cent. Both are high by historic levels.

If the supply of previously foreclosed homes continues to dry up, housing prices might stabilize or even rise. That would provide long-sought relief for sellers, but could keep many potential buyers out of the market and put sales in a permanent slump.

Vietnam Forestry Imports

CONTINUED Vietnam's mports for November cost an estimated US\$7.7 billion, a rise of 5.5 per cent over Octo-



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ber, creating a trade deficit for the month of US\$1.25 billion, and US\$10.7 billion for the first 11 months of the year.

Total import revenue for the January-November period is estimated to reach US\$75 billion, a year-on-year rise of 19.8 per cent.

EACOM Secures \$50 Million

Montreal's EACOM Timber Corporation reported Thursday that it entered into a three-year, \$50 million revolving credit facility agreement with GE Capital in Canada. The facility will be used to fund working capital and general corporate purposes.

Under the terms of the facility, amounts drawn and to be repaid are determined by a borrowing base calculation that fluctuates. That portion of the \$50 million commitment that is not drawn will be subject to a stand by fee and upon closing, EACOM was required to pay a closing fee. The facility is secured by a first priority, perfected security interest on all existing and future assets of EACOM.

Madison's Announces . . .

In this digital era of iphones and netbooks, *Madison's Canadian Lumber Directory* continues to be your source for the full scope of data on Canadian lumber, panel, and pulp and paper producers and remanufacturers. A key desk reference for the forest industry since 1952, *Madison's Canadian Lumber Directory* has undergone a radical transformation.

In keeping with the digital age, the *Directory* is available in a new online format. The up-to-date information you are accustomed to, rather than being in a printed book, now comes to you **instantly** through *Madison's Online Canadian Lumber Producer Directory*.

Diligently updated with a full overhaul in the spring, *Madison's Online Directory* is the most current information on Canada's forest industry. It's at your fingertips instantly – **no waiting** for a printed book!

Wood Technology Breakthrough Nanocrystalline Cellulose

The July 30, 2009, issue of your *Madison's Lumber Reporter* featured the exciting research now in progress by

by Kéta Kosman

FPInnovations and Professor Mark MacLachlan of

the UBC Wood Science department of Chemistry on nanocrystalline cellulose (NCC) at the University of British Columbia in Vancouver.

NCC is a renewable, recyclable and abundant nanomaterial made from the cellulose fibres produced in the wood pulp manufacturing process. Potential applications include optically-reflective films, high-durability varnishes, and innovative bioplastics of interest to a variety of sectors and markets such as the aerospace, automotive, chemical, textile and forestry industries. Businesses pursuing "green" technology are keenly following the development of these bi-products of the forest industry.

A doctoral candidate in chemistry, Kevin Shopsowitz, at the University of BC recently stumbled upon a discovery that lead to the creation of glass films that have applications for energy conservation in building design, optical filters, sensors, or for molecule separation in the pharmaceutical industry. The original purpose of the research was to use NCC to create stable materials that could provide a better method of storing hydrogen for the automotive industry.

PhD student Kevin Shopsowitz spilled some of the nanocrystalline in cellulose solution onto a bench top in the lab. When the solution dried, the residue was a "beautiful" iridescent film. A new idea struck.

Mark MacLachlan, associate professor in the chemistry department at UBC, Shopsowitz, post-doctoral fellow Hao Qi, and Wadood Hamad of FPInnovations then mixed the NCC from the wood pulp with a silica, or glass, precursor and then burned away the cellulose. The resulting glass films are composed of pores, or holes, arranged in a helical structure that resembles a spiral staircase. Each hole is less than 1/10,000th of the diameter of a human hair.

The pores in the helix give the films a wide range of applications. When certain liquids are added to the film, the liquid gets trapped in the pores and changes

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the optical properties of the films which can reflect specific wavelengths of light, such as ultra violet, visible or infrared.

Other researchers have done similar investigations, but until the collaborative work research between FPInnovations at UBC, none had figured out how to use NCC for such an application and what precise range of acidity (pH) the cellulose solution needed to retain NCC's original chirality – its molecular "What is fundamentally new about this process we have created is that the NCC acts as a template; it is used as a cast, which engages silica in fine parameters, in the right combination, so the final composition is able – so to speak – to absorb the specific pattern of the template. The silica produced at the end contains no NCC, all the NCC was burnt out and the remaining mesoporous inorganic solid (the silica) is a cast of a chiral



Nanocrystalline Cellulose (NCC) Film Showing its Unique Optical Properties --Much Like Butterfly Wings SOURCE: FPInnovations

alignment – and cast it onto the silica it was mixed with.

"By functionalizing the pores to make them more selective to particular chemicals, we may be able to develop new sensors that are very sensitive for detecting substances in the environment," said Shopsowitz in a UBC press release.

To reduce the energy needed to cool buildings, windows could be treated with the transparent films that reflect infrared light – the light that heats up a building. Right now, metal particles are often used to do this but they tint the windows brown. The colour on the films won't fade out over time.

"If you have a blue film or a red film it will remain that colour forever because there is nothing chemical on it that can get bleached," Mark MacLachlan said to the Vancouver Sun. "It's just pure glass. It's the nanostructure of the glass that gives the colour."

"NCC is synthesized from, derived from wood pulp. As a nanomaterial, it is very high tech, actually it is similar to carbon nanotubes on several levels, however it is obtained from completely renewable materials," explained Wadood Hamad to *Madison's* in a phone interview. "And it is practically as safe as table salt."

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nematic liquid crystal formed from NCC ," detailed Hamad.

The NCC templates could conceivably be recycled, said Hamad in answer to Madison's question.

"While the quantities of wood pulp needed for this process may be low compared to an average pulp mill output, the value is extremely high," said Hamad. "These very high end, high value applications are significant. All together they could create fairly high demand for NCC production from wood pulp."

"For these different kinds of high end uses, the returns on NCC will be much greater than the traditional marketplace for wood pulp."

Hamad likened NCC to microcrystalline cellulose, which is used in pharmaceuticals.

"Every single pill on the planet has to be made with microcrystalline cellulose, or some cellulose compound, because it has good drug release and delivery aspects. This latest application of NCC to produce mesoporous silica films with tuna ble chirality is, at the moment, a lab discovery. But, it could quite realistically be scaled up," concluded Hamad. "This is very novel. It is up to the boards of companies to decide which innovations to go after."