



# f Mutual Interest

March 2009

Helping Our Service Center Marketing Partners Activate Their Ideas in Stainless

## Stainless Steel Sees “Energy” in Economic Stimulus Package

**W**ith some \$50 billion in energy and water projects; \$63 billion for housing and transportation; \$79 billion for state grants and \$14 billion for environmental projects, the American Recovery and Reinvestment Act (the \$789 billion economic stimulus package recently signed by President Barack Obama) contains a variety of provisions that could prove valuable to Outokumpu stainless steel end-users — primarily in the renewable energy industry. “The stimulus bill supports the top priorities that move the markets and segments that Outokumpu has been targeting for many years — clean air, fresh water, and alternative/renewable energy,” reported Mike

renewable equipment manufacturers; \$1.6 billion to finance development of clean-power generating facilities; and \$1.6 billion for biofuel technology development and climate change study on areas such as carbon capture technology — all of which are industries with a strong potential use of stainless steel.

Outokumpu grades best suited for industries earmarked for stimulus dollars include LDX 2101®, Outokumpu 2507 and 2205 Code Plus Two® — all recognized for corrosion resistance and price stability. Looking further down the road at another possible energy source, long-term solutions to nuclear waste storage could also result in a demand for thousands of tons of stainless plate.

In other areas of stimulus spending, such as road and bridge construction, stainless plate and bar — especially LDX 2101® for rebar — could be in greater demand. “The long-term life-cycle benefits of introducing stainless products will be enhanced by certain infrastructure investments,” said Stateczny. “Non-residential construction such as schools will certainly increase the usage of stainless products in a wide range of commercial applications, as well.” ■



The US stimulus package may create more demand for stainless steel plate and bar — including rebar — in road and bridge construction projects, for example.

Stateczny, Outokumpu’s Senior VP for Plate Products.

According to *Power Engineering* magazine, the stimulus package extends the placed-in-service date for biomass, geothermal, hydropower, waste-to-energy, marine and renewables for more than 10 years at a cost of more than \$13 billion. The stimulus bill provides tax credits of more than \$2 billion to support

### In this issue

- Weak 4th Quarter Earnings 2
- Demand for Asphalt Tankers 4
- Stainless for DEF Tanks 3
- Getting to Know Our People 3
- Customer Competence at Richburg 4
- 2009 Tradeshows 5
- Hexavalent Chromium Update 6
- Radioactivity Alert 6



## 4th Quarter Weakness Deflates Corporate 2008 Earnings

2008 began with a healthy demand for Outokumpu stainless steel, but the global economic crisis reduced demand at an accelerated pace beginning in October, as credit constraints affected both distributors and end-use customers. In the fourth quarter of 2008 Outokumpu's deliveries fell by 26%, which held 2008 deliveries to some 1.4 million tons (approximately the same level as in 2007). The sudden market downturn contributed to a fourth-quarter loss of US\$342.5 million (EUR 271 million) for Outokumpu, which included raw material-related inventory losses of US\$234 million (EUR 185 million). Overall, 2008 resulted in an operating loss of US\$79.6 million (EUR 63 million). Outokumpu continues, however, to have a strong operating cash flow and has taken actions to improve profitability. "Outokumpu's business units in general — and the North American units in particular — are well positioned to

weather this crisis and emerge stronger and more focused on our core products," predicted Mike Stateczny, Outokumpu's Senior VP of Plate Products. Outokumpu expects the stainless steel markets to remain weak for the first quarter of 2009. ■



## LDX 2101® "Hits the Road"

With road repair and construction a major part of the U.S. stimulus funding, as well as an ongoing necessity in much of the world, the demand for asphalt is almost certain to increase. Asphalt, which is a residue obtained from the distillation process of crude oil, is transported to construction sites in insulated road

tankers. Historically, these tankers have been made with stainless steel. Recently, three major European road tanker manufacturers, the Italian companies, F.lli Mazzariol S.r.l., Officine Meccaniche B.S. S.r.l., and Bomben Ferruccio & C. S.r.l., began using Outokumpu LDX 2101® for their asphalt hauling tankers, replacing

ASTM 304. In addition to asphalt, the new tankers carry fuel oils, chemicals, and liquid waste. LDX 2101® allows for stronger and lighter road tankers, and the duplex grade's low nickel content provides fabricators with a financial competitive edge. An added benefit; even with its high strength, LDX 2101® is easy to bend and form and has proven to have excellent machinability.

In 2007, Europe's leading manufacturer of road tankers, INDOX, also started replacing 304 with LDX 2101® for its tankers transporting

liquefied natural gas and liquefied nitrogen. In the U.S., the Brenner Tank Company created a new generation of cargo tanks made from LDX 2101® to transport chemicals and other hazardous materials. In making their decision, Brenner Tank officials cited Outokumpu's significantly higher tensile and yield strengths, increased pitting resistance and an improved ability to sustain temperature changes, along with significant cost savings. ■



Asphalt tanker manufacturers are replacing 304 stainless with Outokumpu's LDX 2101 grade for better cost competitiveness.

Photo courtesy of Mazzariol.

# New Diesel Emissions a Stainless Opportunity

For high-performance environments — such as in automotive and truck engines and corrosion-resistant storage tanks — stainless steel has proven to be a cost effective, strong, and environmentally sound material. With new Environmental



DEF tanks in diesel vehicles are ideal for Outokumpu LDX 2101, which is already being used by one European diesel manufacturer.

Protection Agency regulations taking effect on January 1, 2010 mandating reductions in nitrogen oxide from diesel exhaust, stainless steel will continue to be the material of choice for the manufacture of Diesel Exhaust Fluid (DEF) tanks as well as storage and pumping equipment.

Diesel truck and automakers have been preparing



for the new regulations by installing new technologies that practically eliminate nitrogen oxide from exhaust. Stainless steel, particularly duplex stainless steel, has become an attractive material for use with these technologies. In fact, a major European auto/truck manufacturer has been using Outokumpu's LDX 2101® for this application for several years.

## Highly Corrosive and Volatile Environment

An automotive grade of urea, the world's most widely used nitrogen fertilizer, is the basis of the DEF used in the nitrogen oxide removal process. Urea is corrosive to mild carbon steel and non-ferrous materials such as aluminum, copper, lead and zinc. Any contamination from the materials used in the auto or truck tank, internal or external storage tanks or in the fluid dispensing system and apparatus will inhibit the necessary chemical reaction. In addition, DEF tanks need to be "climate controlled" — both heated and cooled — which is a concern for both the engine designer and the storage operator. DEF stored in outdoor tanks, piping and dispensing systems in warm weather conditions are particularly vulnerable to these climate concerns. Stainless steel — specifically duplex stainless — is the ideal material for meeting the challenges posed in these high performance environments. ■

## Getting to Know Our People

Dr. Gary Carinci has been appointed President of TMR Stainless, which has provided market development counsel to Outokumpu and its predecessors, since TMR's founding in 1987. Dr. Carinci replaces Dr. Ralph Davison, one of the firm's founders, who assumes the position of Vice President, and will continue to focus on providing technical and market development services to TMR's clients.

Dr. Carinci joined TMR in 2002 and has over twenty year's experience in the stainless steel industry. Prior to joining TMR, he held a series of technical and supervisory positions at Allegheny Ludlum Corp. including research, product development, production control management, and director of technical services. He holds an undergraduate degree in metallurgy from Penn State and a PhD in metallurgy from Massachusetts Institute of Technology. ■



Gary Carinci has been appointed President of TMR Stainless.

## Customer Competence Improves at Richburg Facility

In 2007 Outokumpu conducted a survey of all employees worldwide. The results of one specific area of the survey raised the eyebrow of Lou Kern, Vice President of Long Products. “Our score for customer competence was not as high as I thought it should be,” Kern noted. So he and his management team at the Richburg, South Carolina facility created an action plan to specifically address “customer competence.”

One aspect of the plan included holding training sessions with all employees, which Kern personally developed and conducted. “This training session went beyond job specific requirements to provide an overall perspective of our business,” he reported. “When an employee is working on a contract with a customer, or on inventory control or material movement, we want “304L” to be more than a letter and a number on a piece of paper. We want our employees to visualize a 2-inch round and understand how and where it is used.”

A particular focus of the training was on customer knowledge — what employees know about their customers. “Service centers are our major customers,” Kern explained. “Employees need to be aware of what products they use and what markets they serve, as well as potential new end users for our products,” he indicated. The

training was followed up with testing to reinforce what was learned. The result was a 30 percent increase in customer competence from the 2007 survey to the 2008 survey.



Employees at Outokumpu’s bar facility participated in customer competence training. The result: a 30 percent increase in their understanding of customer requirements.

“Knowledge of our customers and our customers’ requirements — and how they view us — are all very important aspects for every employee to know,” Kern said. “Not only does this knowledge improve our ability to work together with our customers, but it translates into fewer errors and more opportunity for input and improvement.” ■

## Tradeshows Slated for 2009

**"**Outokumpu's participation in tradeshows in North America is the perfect example 'of mutual interest' with our distribution partners," noted Maureen Meeker, Manager of Marketing Communications and Advertising for Outokumpu. "We have the opportunity to promote the use of stainless steel to a wide variety of industries and to explore new applications that we can report back to service centers through our sales staff and through our publications," she indicated. "Our

to market together

This year's conference and tradeshow schedule is far ranging, beginning in March in Atlanta, Georgia with the NACE International Conference and Exposition for the corrosion engineer and science community. This year two representatives of Outokumpu will present papers at NACE: Rachel Pettersson on "high temperature corrosion under simulated biomass deposit conditions," and Sara Randstrom on "corrosion properties of stainless steels as reinforcement in concrete." As in years past, Outokumpu will exhibit at the conference and host a breakfast for materials specifier customers. This year's conference and exposi-

tion will attract some 5,000 industry professionals and more than 350 exhibitors.

Other 2009 conferences include:

■ **Concrete International**, March 15-19 San Antonio, Texas. The use of LDX 2101® rebar will be a major emphasis at

this conference, along with the use of stainless plate in construction of new concrete manufacturing facilities.

■ **Precision Machining Technology Show**, April 28-30 Columbus, Ohio. North America's only production machining-focused show offering hands-on technical sessions for highly skilled production technicians in industries such as aeronautics, agriculture, automotive, and computers. Representatives from Outokumpu's bar product line will be among 200 exhibitors, promoting PRODEC®, 303 HST®, and LDX 2101® grades.

■ **Fuel Ethanol Workshop**, June 15-18 Denver, Colorado. The 25th anniversary of this conference will run concurrent with conferences on distiller grains and an advanced biofuels workshop. Outokumpu will be attending and promoting LDX 2101®.

■ **American Membrane Technology Association**, July 13-16 Austin, Texas. This is a major conference on desalination and related technologies with attendees representing utility managers, engineers, consultants, and researchers. Outokumpu will be exhibiting and will be promoting 2205 Code Plus Two® and Outokumpu 2507.

■ **PowerGen International**, December 8-10, Las Vegas, Nevada. With the power industry experiencing tremendous growth, over 18,000 attendees are expected at this show. Outokumpu will be attending and promoting all product forms and grades. ■



Ralph Davison of TMR and Madonna Ashbrook of Outokumpu at the Outokumpu booth at NACE 2009.

message to all these conference attendees is how quality stainless steel — in particular our duplex grades — is an investment in the future."

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Outokumpu is a global leader in stainless steel. Our vision is to be the undisputed number one in stainless, with success based on operational excellence. Customers in a wide range of industries use our stainless steel and services worldwide. Being fully recyclable, maintenance-free, as well as very strong and durable material, stainless steel is one of the key building blocks for sustainable future.

What makes Outokumpu special is total customer focus – all the way, from R&D to delivery. You have the idea. We offer world-class stainless steel, technical know-how and support. We activate your ideas.

## Hexavalent Chromium Update

Elisabeth Torsner, Outokumpu VP of Technology and Market Development led a coalition on OSHA's Permissible Exposure Limit for hexavalent chromium. Environmental groups lobbied to decrease the Permissible Exposure Limit for hexavalent chromium to a level that is so low that stainless welding would become impossible. "We argued for a lower but reasonable level," Torsner stated, "and OSHA listened. Now we protect worker's health and our welding customers can stay in business." As a result of the lobby efforts, hexavalent chromium PEL will remain at 1 microgram/meter cubed. ■

## Alert on Radioactivity

In early 2009 a German manufacturers association reported that certain finished stainless steel products on the market in that country had been found to contain radioactive cobalt. The association suspected that the steel had come from a source in India, and alerted its members requiring them to initiate necessary measures in order to verify whether their stainless steel products are indeed contaminated.



As a result, Outokumpu recently published a press release stating: **The products Outokumpu sells are free from radioactivity.** The press release further explained, we have implemented strict controls of radioactive contamination at all of our steel making plants. All incoming scrap and raw materials are screened for radioactivity via a radiation detection system. Samples are also taken in the production process, with procedures detailed in the ISO 9001 and ISO 14001 management systems under which we operate to ensure that levels of radioactivity are well below the recommended levels to protect human health. ■

**OUTO  
KUMPU**