



f Mutual Interest

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Helping Our Service Center Marketing Partners Activate Their Ideas in Stainless

Outokumpu Duplex Approved for Dairy

The U.S. Department of Agriculture (USDA) has approved three Outokumpu grades of duplex stainless steels for use in dairy applications. LDX 2101[®], along with Outokumpu grades 2304 and 2205 Code Plus Two[®] received certificates of approval following extensive corrosion evaluations based on the dairy industry's 3-A Format and Style Manual for 3-A Sanitary Standards and 3-A Accepted Practices.

The approval is only for Outokumpu's alloys. "The USDA evaluates a specific supplier's product, including its material composition and

production process," noted Dr. Jim Fritz, Senior Market Development Manager for TMR Stainless, Inc., a consultant to Outokumpu and to the stainless steel industry.

Engineers can now consider Outokumpu duplex grades for the advantages they bring in properties and cost savings to the dairy industry. The dairy industry has traditionally used austenitic grades 304 and 316

to meet strict health and sanitation standards in an industry that has faced government regulations for more than a century. "Austenitics have become more expensive with their higher nickel content than duplex grades," reported Elisabeth Torsner, Outokumpu VP Market Development/Technical Coordinator. "Now, with the addition of three duplex stainless grades to select from, designers and engineers have alternatives that offer twice the strength for thinner gauges — which means additional material cost savings — along with a range of corrosion-resistant properties to meet specific application needs."

Work is now underway in getting the Outokumpu duplex alloys officially listed in the 3-A Sanitary Standards technical tables, which will also mean their inclusion as a standard of the American National Standards Institute (ANSI). "Next we are going to get duplex stainless grades approved for the meat and poultry processing industry," Torsner confirmed.

Approval by the dairy industry follows the approval of Outokumpu duplex grades for drinking water applications by the National Sanitation Foundation. Duplex stainless steel is seen as a cost-effective material in replacing aging municipal water distribution piping systems. ■



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OUTOKUMPU

Outokumpu's Big Bar Gets Bigger

Outokumpu's Long Products facility in Richburg, South Carolina has expanded its capability in big bar, with a top end that is now at 10 inches in diameter, up from 8 inches. "Being able to roll and straighten bar up to 10 inches is key to our competitiveness," explained Lou Kern, Senior VP, Long Products. "We have a great size range now to support and expand programs with our current customers," he noted.



Richburg has also added a polishing line for big bar which increases our ability to polish bar up to 8 inches in diameter. The new polisher eliminates marks left from peeling. It is ideal for use as an extrusion billet when making specialty shapes or hollow bar. "These products are used in many process industries, and for energy markets which is quite hot right now," Kern indicated. ■



Outokumpu can now roll and straighten bar up to 10" in diameter.

Two Join Bar Team

A veteran sales manager and a recognized long products specialist have joined Outokumpu to help develop relationships with current and future customer contacts.

Ted Toscos, a 16-year veteran of Slater Steels in Fort Wayne, Indiana, joins the Bar Products commercial team as Central Regional Sales Manager. He will be responsible for growing



Ted Toscos (pictured left) and Phil Zivich (pictured right) are the newest members of the Outokumpu Bar team.

market share in a new sales region that includes Indiana, Michigan, Ohio, Kentucky, Tennessee, Virginia, West Virginia, Western Pennsylvania and Western New York State. At Slater, Ted was Manager of Customer Service and Inventory Control and Director of Production Planning. He also held positions in Inspection Departments, Quality Control, Manufacturing and Ultrasonic Testing.



In addition, Philip Zivich has joined the Long Products Business Unit as Rebar Product Manager for North America. With Outokumpu's startup of manufacturing rebar in Richburg, South Carolina, Phil will promote LDX 2101® stainless rebar as one of the most effective and cost-efficient means of dramatically improving the life of reinforced concrete structures. Phil holds a B.S. in chemical engineering and a minor in business administration from Case Western Reserve University in Cleveland, Ohio. His experience includes three years with Surtreat Midwest where he served as VP of Business Development, responsible for introducing new products and achieving sales of chemicals for concrete durability. Phil is a former Midwest Regional Sales Manager for MMFX Steel Corporation where he was responsible for sales of a non-stainless, corrosion-resistant steel for the concrete industry. He has presented papers at numerous conferences and is recognized as an industry expert. ■

Outokumpu Pipe: A Fitting Product for Industry

In industrial use, piping seldom runs in a straight line for very long. And if that pipe is carrying a liquid or gas which must be secured or uncontaminated, then a butt weld fitting is needed.

“It’s a type of fitting that is welded directly to the end of a pipe,

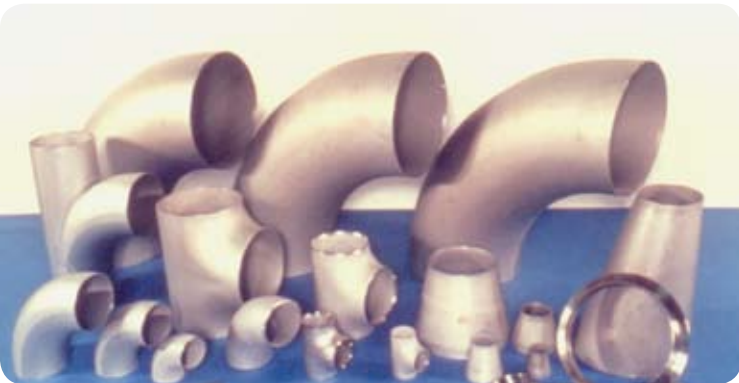
integral part of many other processing industries from food to pharmaceutical. More importantly, butt weld fittings are now being used in energy applications including oil and gas.

“Pulp and paper for the most part required a lighter wall thickness (S10s) which we have produced for many years”, Cockbain noted. “Over the past years, we have been expanding our production towards heavier wall thickness (S80s), and high strength/low nickel Duplex grades to better serve the energy sector’s demands.”

Applications for Outokumpu’s butt weld fittings are expanding beyond pulp & paper to pharmaceuticals and oil & gas.

rather than threaded, clamped or bolted,” explained Rick Cockbain, Outokumpu’s VP of Sales and Marketing for the product. Outokumpu produces butt weld fittings in several European locations and in North America in Brockville, Ontario, Canada.

Supplied for decades to various service environments in the pulp and paper industry, Outokumpu butt weld fittings are now an



Duplex Cuts Cost of Reactors

Duplex stainless steel is being used with greater frequency in process vessels known as reactors, which are important to a number of industries, especially bio-fuels. “Very often these are high pressure environments in which a reaction is taking place, which requires a combination of strength and corrosion resistance,” explained Elisabeth Torsner, Outokumpu VP Market Development/Technical Coordinator, who presented a paper on the use of duplex stainless in reactors at the 2008 Stainless Steel World conference in Houston, Texas. The 13 ft. diameter, 120 ft. long reactor pictured here is constructed from Outokumpu LDX 2101®. The high

getting to know our applications



Photo Compliments of The Roberts Company (R/A)

strength of duplex stainless steels makes it possible to design the reactors with a much thinner wall thickness to save on materials, compared to austenitic grades. “On one European project, two reactors were constructed using 100 tons of Outokumpu grade 2304,” Torsner recalled. “The designers made a calculation of how much material they would need to construct the same reactors in austenitic grades and found that it would have required 150 tons of the austenitic grade — a 33 percent weight reduction and savings in material costs.” ■

North American Design Guide for Structural Stainless Underway

For more than a decade, European design engineers wishing to create structures and elements using stainless steel have had a significant advantage over their counterparts in other regions of the world — because of the existence of a European design manual for structural stainless steel. This provincial difference will be rectified over the next few years as a group of stainless steel producers, fabricators and industry institutes and associations are joining together to create a similar handbook for North American engineers. The handbook is expected to help make stainless structural design simpler and more straightforward.

“In Europe designers are using much more stainless steel in all sorts of construction projects and one of the reasons is the design manual for structural stainless,” noted Elisabeth Torsner, Outokumpu VP Market Development/Technical Coordinator. The European design manual contains chapters on various aspects of fabrication and design of specific applications under European construction codes, from I-beams to section joints to corrugated wall panels.



Of particular importance, the manual has a series of appendices that provide valuable design calculations and examples. “All together this makes it much easier for designers and engineers to use stainless in construction,” Torsner reported. “Constructing with stainless in North America requires engineers to literally begin from the ground

up — utilizing what is referred to as ‘first principles,’” she added. “The European manual performs a good deal of the ‘leg work’ necessary for successful architectural design in stainless.”

Photo is courtesy of BMW Group and Josef Gartner GmbH.



A new design manual will now make it easier for North American architects to design buildings that incorporate stainless steel — like the BMW Welt in Munich, Germany.

Just published in the European Code is a stainless steel hollow sections handbook, with similar calculations for hollow sections as construction elements utilizing tube and pipe in square, rectangle, elliptical or round forms. “These manuals will help overcome a major hurdle in using stainless steel as a construction element,” Torsner predicted. ■

REACH Issues Clarification on Slabs

As reported in *Of Mutual Interest* (June 2008), a European program has begun to evaluate and register the toxicity of all chemical substances manufactured or imported into Europe. The program is called REACH, which stands for the Registration, Evaluation, Authorization and restriction of CHemical substances. The program recognizes three types of substances: raw materials, preparations, and

articles. Substances designated as articles are exempt from registration. A recent announcement on a REACH ruling has now been made categorizing stainless steel slabs as articles. “All products that customers buy from Outokumpu are designated as articles and are exempt from the registration,” explained Elisabeth Torsner, Outokumpu VP Market Development/Technical Coordinator. ■

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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.

Special Grades Production Increased



Outokumpu is expanding operations in Europe and North America with a total investment of some US 2.9 billion dollars (2 billion euros) over the next five years in existing production facilities and in acquisitions. In the area of raw materials, the Outokumpu Group will double our annual production capacity of ferrochrome to 530,000 tons by early 2011, making Outokumpu self-sufficient in its need for primary ferrochrome.

The production of special grades, particularly duplex grades, will be expanded at our Avesta and Degerfors, Sweden plants and at our hot-rolled plate facility in New Castle, Indiana. Value-added special grades and ferritic grades will make up half of Outokumpu's total production. Our product offerings in long products will widen, as well.

“This expansion allows us to invest in best-in-class manufacturing capabilities for products in which we see great potential, and, indeed, already have a very strong global position,” noted Mike Stateczny, Vice President of Plate Products.

Outokumpu has won some 20% of the global market share of Plate Mill Plate and is a strong leader in duplex grade stainless deliveries with approximately 50% of the global market share. Demand for duplex grades is estimated to grow annually by more than 20% — faster than that of other standard stainless grades. “Stainless steel is important to virtually everything that the world needs — like clean air, clean water, and alternative energies such as bio-fuels,” Stateczny explained. Among other growth opportunities for duplex and value-added tailor-made plate, according to Stateczny, are tanks, pressure vessels, piping, transportation, civil engineering and architectural structures. ■