

For architectural, including structural applications

Montanstahl: promoting stainless steel

Underscoring its role in the industry, Montanstahl celebrated the company's 25th anniversary in 2008 with two unique stainless steel items: a new head office building, built using Outokumpu's duplex LDX 2101® as a cladding material, and three stainless steel sculptures by Albanian artist Helidon Xhixha.

Outokumpu has been a long-time, steady stainless steel supplier for Montanstahl. Together the partners have promoted the use of duplex LDX 2101® as a suitable and competitive replacement for conventional austenitic grades. With corrosion resistance close to that of austenitic 1.4404 (316L), LDX 2101® has almost double the strength, which allows for major gauge and weight reductions. Achieving this with only 1.5% nickel (as compared to about 10% nickel in 1.4404), LDX 2101® offers appreciable price stability against fluctuating raw material prices.

Montanstahl's ceo Michael Stumm says about the

Swiss steel profile manufacturer Montanstahl specializes in customized products including special shapes and structural sections. Using both stainless and carbon steel, Montanstahl's emphasis is always on innovation and use of the best available technology.

company's new building: "We looked for a concept that would represent our company's character and products, and would offer a pleasant working atmosphere for our employees and customers.

Stainless steel structural sections available from Montanstahl

Actually we spend a lot of time in our offices so we should feel comfortable there. A Swiss farmers proverb says "only happy cows give good milk!". It is the same for people - working in a pleasant environment improves our performance."

He explains that they have found LDX 2101® to be a good cladding alternative, well meeting their requirements for corrosion resistance. The surface finish is Scotch Brite, a polished surface smooth enough to be almost maintenance free - only rainfall will be needed to keep the surfaces clean.

Art and architecture go

The entrance hall of Montanstahl's new head office building



hand in hand at Montanstahl, Stumm says. The wall cladding in the entrance hall of the building also makes wide use of stainless, consisting of 1.4301 (304). The three unique sculptures in front of the building, commissioned for the site, are fabricated from 1.4404. Hailed among the frontline contemporary artists of the day, artist Xhixha has a special relationship with stainless steel, which is his primary raw material in sculptures.

Stainless steel is a very versatile material and has a huge potential in architecture, building and construction. The structure of a building can be compared, Stumm says, to the structure of humans, which is made of bones and skin. The use of stain-

less steel as a skin, which equates to the outer cladding of the building, has been widely employed for decades. Early applications of stainless steel cladding such as the Chrysler Building in New York (1930) demonstrate that externally exposed stainless steel can retain both its functional performance and beauty after 80 years in use, with little or no maintenance.

But the potential of stainless steel structural sections, the bones of the building, has not been fully discovered yet. There are two main reasons for this. The first reason is that decision-making in the construction and property industries is mainly governed by material costs and stainless steel appears expensive at first



Montanstahl's new head office building

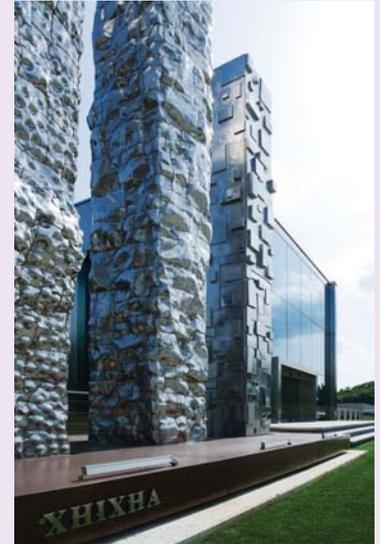
mental impacts and to inform decision-makers. When stainless steel construction products are considered in "whole life" terms, by taking account of their longevity and low maintenance, and the avoidance of product replacement, their true value becomes more apparent and, in many applications, stainless steel becomes the preferred, most sustainable material choice. The second reason has been the lack of adequate service and supply for stainless steel structural

sight when compared to other materials. However, life cycle assessment and the use of life cycle costing tools are increasingly being adopted by the construction industry, in order to measure environ-

sections. The small volumes per individual size and irregular consumption impacting on the producer side, and the limited supply sources, long delivery times, high prices and lack of knowledge on the consumer side, resulted in a lack of interest in "stainless bones". But the stainless steel

The three sculptures by Albanian artist Helidon Xhixha

market has undergone some significant changes in the past few years due to new suppliers and technologies. Montanstahl has made a considerable contribution towards increasing the



effective and environmentally friendly products has always been part of Montanstahl's business strategy. Doing this through eye catching sculpture and architecture combines the functional with the aesthetic.



Outokumpu's LDX 2101^(R) cladding material

popularity of stainless steel structural sections amongst European and US distributors and service centres by creating a unique supply and production network. Nowadays specialized service centres stock a wide range of structurals and almost any size according to DIN/EN or ASTM standards can be sourced in the market. This full range availability of standard sections is giving architects and structural engineers the opportunity to plan and complete any kind of project in stainless steel. Promotion of stainless steel structurals as cost