

INOSSIDABILE

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Summary

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L'AQUILA – NEW WATER RESOURCES FOR A LAND THAT REVIVES

(L'Aquila – Nuove risorse idriche per una terra che rinasce)

This article is illustrated by some pictures, which show the set up stages of two large tanks designed for storing the waters of the drinking water supply network of L'Aquila. Thanks to the specific technology adopted for this project, these tanks, which are 6 m high and have 31 m diameter, could be completed and installed in 18 days only: 3 days for the erection of the prefabricated walls, and 15 days devoted to the vertical welding of the walls, while in the meantime the bottoms of the tanks were placed and welded in those days as well.

Aquawall, this is the name of the bearing double-wall panel - preliminarily lined with stainless steel - used for the construction of the two tanks. This patented technology allows protecting the welding also in its non-visible side, but most of all, guarantees the perfect adherence of stainless steel to concrete. Panels are joined end-to-end through a MIG welding process and the same technique has been used to join them to the bottom. There are 51 panels in size 1960x6000 mm in all. The stainless steel type used is 1.5 mm thick EN 1.4301 (AISI 304), for a total weight of 40,000 kg. Each tank is provided with 24 pillars. These pillars have a 500 mm diameter section each and have been TIG welded at works.

Customer: A.T.O. n. 1 – Via Del Falco 4 – I-67100 L'Aquila / **Contractors:** I Platani Srl - Gruppo Palmerini – Via Onna 1 – I-67100 Paganica AQ, phone +39 0862 445088, fax +39 0862 445067 / **Aquawall panel and bottom installation:** Della Cagnoletta Srl – Via Gerone 4 – I-23030 Albosaggia SO, phone +39 0342 510190, fax +39 0342 511501, www.dellacagnoletta.com **Aquawall patent:** Antoniolli Costruzioni – Via al Ponte 5 – I-23030 Lovero SO, phone +39 0342 770060, fax +39 0342 770044, www.costruzioniantonioli.com

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STAINLESS STEEL SHOWS OFF AT PAVILION B OF THE FAIR OF GENOA

(Al padiglione B della Fiera di Genova va in mostra l'acciaio inossidabile)

The new structure of Pavilion B at the Fair of Genoa, planned and designed by the architect Jean Nouvel, has been externally lined with blue metal panels, while the false ceiling has been lined with 0.5 and 0.6 mm thick panels made of perforated stainless steel sheet.

To line the ceilings, n. 11,481 perforated sheet panels made of EN.14301 (AISI 304) and EN.14401 (AISI 316) stainless steel have been used, whereas the lining of the external structure consists of EN 1.4401 (AISI 316) stainless steel panels, which are particularly suitable to be installed in sea environments, thanks to their high corrosion resistance. EN 1.4301 (AISI 304) stainless steel has been used, instead, for the pavilion interiors, as this material offers in any case excellent corrosion-proof characteristics, and has allowed to considerably cut down overall costs. Both material types have a BA (Bright Annealed) finish. The use of perforated sheets originates from the designer's idea to build a ceiling capable to reflect the colour blue of the seawater waves, and to convey to the visitors of the Fair the natural sensation of a walk across the sea. This solution, which guarantees at the same time high mechanical and corrosion resistance performances, gives the overall sensation of a continuous surface without breaks, and is capable to ensure lightness and appropriate sound-absorbing characteristics to the whole structure.

Perforated stainless steel sheets: Graepel Italiana SpA – Via Fondi 13 – I-46018 Sabbioneta MN, phone +39 0375 220101, fax +39 0375 220262, www.graepel.it, info@graepel.it / **Customer:** Ente Fiera di Genova Spa / **Contracting company:** geom. L. Medusei, ing. S. Merigo – Coop Sette – Via San Biagio 75 – I-42024 Castelnuovo di Sotto RE, www.coopsette.it / **False ceiling project and construction:** dr. Davide Fumagalli – Metalltech Srl, Longhi Group – Via Crocette 12 – I-24066 Pedregno BG, phone +39 035 658301, fax +39 035 50994355, www.metalltech.it, info@metalltech.it / **AISI 304 deep drawing stainless steel supplier:** Thyssenkrupp Nirosta GmbH

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FROM OUR MEMBERS

RODACCIAI: STEADY QUALITY, STEADY INNOVATION

(Rodacciai, costanza nella qualità e nell'innovazione)

An ever-expanding and growing company. Rodacciai S.p.A., with more than fifty years of life behind itself, is an ever-expanding and growing company, which boasts a tradition of dynamism and

innovation.

Over the last decades, its expansion has further strengthened through the buyout of the Olarra Aceros Inoxidables steel mill, and the opening of branches and associated firms in all geographical areas of the world. The growth of the company has revealed itself through ever-growing production volumes and made-to-measure products capable to fully meet any customer requirement.

A group that makes continuous investments. Despite this heavy recession period, Rodacciai continues to remain faithful to its investment programmes. The machinery stock of the drawing mill based in Bosisio Parini (Lecco), has been enlarged and modernized, and includes today the most advanced machines available on the market: combined drawing machines, peeling machines, welding product drawing lines, three induction heat-treatment lines for bars annealing, quenching and tempering, machines for the production of concrete stainless steel reinforcing bars. It is worth mentioning in particular the new line assigned to bars control, which includes three induced current machines and a Rowa ultrasound machine of the latest generation manufactured by General Electric / Krautkraemer. Even greater investments have been made in the neighbouring rolling mill of Sirono (Lecco), where an improvement and development programme has been launched since 2007. This programme has led to the development of a fully-automatic furnace loading process, and above all, to a complete remaking of the second part of the line. In addition, the new Danieli reels for rolling up and cooling coils up to 3,000 kg weight and 62 mm diameters (a size that for years only Rodacciai was able to produce) is presently in an advanced installation stage, as well as a new cooling plate to be installed next year.

A product range not limited to stainless steel. Rodacciai production includes round hexagonal and square section bars in the rolled, drawn, peeled-rolled and ground condition and coils in the drawn, annealed or work-hardened condition. Rodacciai has been operating in the stainless steel industry for over 40 years and now has further strengthened its market position through the acquisition of Olarra within the group.

■ The stainless steel bars of the "Plus" series are characterized by excellent machinability thanks to the special process undergone by steel during the casting stage.

■ Drawn products in coils are used for different applications in the area of austenitic and ferritic stainless steels, and also for the production of Class A2 and A4 fasteners, manufactured by the associated company Bulnava in the factories of Suello (Lecco) and San Giuliano Milanese (Milan).

■ Welding products comprise the whole range of products required by the market and include steel wires and bars used as support material in resistance welding, MIG, TIG and SAW.

■ Improved adherence steel bars and coils for reinforced concrete reinforcements, made of austenitic and duplex steels, are the latest products developed by Rodacciai. Rodinox® is a special improved-adherence stainless steel wire developed for concrete reinforcements, which is capable to meet the strictest requirements: corrosion resistance in different aggressive environments, high ductility without any embrittlement phenomena, resistance to low temperatures without embrittlement or cracks, non-magnetism. Rodinox® is produced in different versions, depending on application requirements, and is a certified product. In this connection, Rodacciai obtained the Ministry of Infrastructure approval for the production of improved adherence stainless steel wire B450C under Ministerial Decree Jan. 14, 2008.

In addition to standard stainless steels, Rodacciai produces other special products, such as improved-workability *free-cutting steel* and *special steel for case-hardening, quenching and tempering and for surface hardening*.

Certified products. Since 1990, the Quality System of Rodacciai is certified according to ISO 9001 standards. In the subsequent years, the company has obtained further certifications in compliance with the Pressure Equipment Directive (PED) for pressure containers, as well as several other product certifications.

Sales organization. Rodacciai philosophy has always been based on the company's ability to bring products just in the place in which they are required: for this reason, the company has opened over time several branches in Italy, in European countries and also in some major non-European countries, for the purpose of better following its customers and meeting their requirements.

Rodacciai S.p.A.

Head Office: Bosisio Parini LC, Italy – phone +39 031 878311, info@rodacciai.com, www.rodacciai.com

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TECHNICAL GASES FOR WELDING AND CUTTING PROCESSES: A GENERAL OUTLINE

(Gas tecnici per la saldatura e il taglio; panoramica generale)

Oxygen, nitrogen, argon, carbon dioxide, hydrogen, and hundreds

of other gases: whether distilled from the atmosphere through physical processes, or collected from production cycles, gases are basic elements in the technological progress of modern age. From the food industry to the automotive industry, from metal working processes to environmental and medical applications, gases are used today in all production processes. In particular, they represent an absolutely necessary element in steel welding and cutting processes. At high temperatures, all metals commonly used in welding and cutting operations become oxidized on contact with the air. Therefore, all the different processes in this connection provide for some kind of protection above the weld pool. This protection becomes even more important during the welding stage, in which the main functions of employed gases consist in:

- Protecting the bath from the contact with the air
- Controlling and/or changing the type of metal transfer
- Ensuring welding arc stability
- Limiting welding costs
- Affecting the metal deposit penetration properties
- Giving joints the required mechanical characteristics
- Affecting welding smoke levels
- Characterizing the shape and the aesthetical aspect of the weld
- Supporting the plasma arc.

The main types of gases, and the basic functions they perform, have been identified for TIG welding, MIG/MAG welding, plasma welding, cored wire welding, laser welding, plasma cutting and laser cutting processes.

This article was written in cooperation with Metallfabrication team of SIAD Spa – www.siad.com – www.metallfabrication.it

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STAINLESS STEEL IN STORAGE TANKS FOR THE THERMAL INDUSTRY

(L'acciaio inox per i serbatoi di accumulo nel settore termico)

Solar radiation, despite its scarce density, remains the most abundant and "clean" energy source available on the surface of the earth. The simplest plants to be installed in order to exploit this clean energy are the "solar heating" systems, which allow producing heat by exclusively using solar energy. The most frequent applications of this technology consist in warm water production for health and medical purposes and for heating buildings and houses. Solar heat generation systems typically include a solar panel (or collector), a boiler or storage tank, and the pipes forming the heat exchanger, in the case of an indirect solar system.

The collector absorbs the solar radiation, which is transferred in the form of thermal energy to a fluid that gets warm. The warm water coming out of the collector is stored into a well-insulated boiler, and is ready to be used. Stainless steel is used in each application, but it proves to be the most suitable and effective material especially for making the internal walls of the boiler, which come continuously into contact not only with the warm water produced by the boiler itself, but also with the external water flowing from the intakes. Among the firms operating in this particular area, we wish to mention a company producing AISI 316L stainless steel tanks, boilers, heat exchangers and basins to be used both in traditional thermal applications and in applications in the field of products especially developed for the solar heating industry.

The tanks of the solar heating systems are usually made of austenitic stainless steel, because of its high corrosion resistance characteristics and its mechanical properties, and in particular, of EN 1.4404 (AISI 316L). Today, the use potentials of stainless steels in the solar heating industry are ever-growing, due to the fact that now it is possible to use also ferritic steels, as an alternative to austenitic steels. This alternative has been tested with excellent results also by this company, which recently chose to use 444 (EN 1.4521), a ferritic stainless steel characterized by a very high corrosion resistance (comparable to 316L stainless steel) and by more effective mechanical properties than those provided by traditional austenitic steels.

Manufacturer: Bassi Srl – Viale del Lavoro 50 – I-37060 Buttapietra VR, phone +39 045 6660499, fax +39 045 6661733, sales@bassiniox.it, www.bassiniox.it / **Stainless steel supplied by:** ThyssenKrupp Acciai Speciali Temi SpA – Viale B. Brin 218 – I-05100 Termi, phone +39 0744 490282, fax +39 0744 490879, www.acciaitemi.it

"LEDTREE": FROM INTUITION TO FORM

(“Ledtree”: dall'intuizione alla forma)

"Ledtree" is a street lamp to be used in urban and out-of-town furniture applications, characterized by an attractive design inspired by nature. This solar street lamp is self-powered by photovoltaic panels, and is shaped as a stylized tree. The central post consists of a stainless steel tube made of EN 1.4301 (AISI 304), with 88.7 mm diameter and about 3.4 m height. At the height of about 2.5 m,



three AISI 304 stainless steel modules are applied. These modules are made of 60 mm and 33.7 mm diameter tubes, and are oriented at a 120° angle from the post. This solution has been specially studied to ensure 360° complete lighting. Should these street lamps be installed in coastal areas near the sea, the post and the three modules will be made of EN 1.4401 (AISI 316) stainless steel. Each street lamp includes 3x20 W low-energy LEDs. Nine solar panels are placed above the LEDs. Each panel is formed by several photovoltaic cells placed within a double glass layer, which protects them against bad weather conditions. Electric power production is provided by the nine photovoltaic panels, and each street lamp is controlled by a junction box, which recharges the accumulator and automatically lights up the lamps. A lighting flow adjustment system allows reducing electric consumption by 30%. Moreover, the LEDs are immediately powered and the light provided by them avoids any light pollution.

Planning and industrial design: Erredesign di Elisabetta Redaelli - Via per Elio 5 - I-23848 Oggiono LC, info@erredesign.net, www.erredesign.net / **Manufacturer:** MCE Spa Rossetti Light - Via delle Industrie 6 - I-21040 Gomate Olona VA, info@rossettilight.com, www.rossettilight.com

STAINLESS STEEL SUPPORT STRUCTURES FOR PHOTOVOLTAIC MODULES

(Inossidabili strutture di supporto per moduli fotovoltaici)

Photovoltaic power plants, which exploit the sun rays to produce electric power, employ special panels, which must be correctly oriented and tilted so that their surface may reach maximum exposure to solar radiations. These panels are supported by special structures, which have to be expressly designed and built depending on the place in which they will be installed. The Multipan and Fixpan systems we are presenting in this article make use of elements generally made of EN 1.4016 (AISI 430) stainless steel, and are obtained from suitably cut and bent sheets, while the other parts are made of EN 1.4301 (AISI 304) stainless steel. The Multipan fixing system for photovoltaic modules allows installing them on any kind of flat support, and reaching an optimal (30°) inclination angle and the most appropriate orientation. The system consists of stainless steel triangular support structures including a central reinforcement strut, which are fixed by means of bolted joints. These triangular structures are connected by aluminium profiles on which the photovoltaic modules are positioned. Cross tie-rods are fitted to the back side of the system, thus ensuring wind blast resistance and stability to the whole structure. The Fixpan fixing system allows instead installing the structure on sloping roofs with any kind of cover, and easily reaching an optimal inclination angle. This fixing system is formed by anchoring brackets assembled to the roof frame by means of bolts, which support the aluminium longitudinal frame members on which the photovoltaic modules are positioned.

Manufacturer: VMCE Srl - Via Dell'Agricoltura 12 - I-37051 Bovolone VR, phone +39 045 6680070, fax +39 045 6680267, info@vmce.it, www.vmce.it - **President:** Andreoli Claudio, andreoli@vmce.it - **Sales Manager:** Zeno Faccion, faccion@vmce.it

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A STAINLESS STEEL CORE TO CREATE A ROMANTIC ATMOSPHERE AND ENJOY THE PLEASURE OF A ECOLOGICAL FIREPLACE

(Ecoamini: un'anima inossidabile per creare atmosfere romantiche e godere del piacere del fuoco)

The ecological fireplace, an innovative furnishing element with a simple, linear and elegant design, is an environment-friendly and inexpensive complement, as it makes use of a specific fuel, bio-ethanol, which is an organic denaturated ethyl alcohol. This fireplace can be easily installed because it does not require to be specifically connected to a chimney or to an electric power or gas system. It has a heating capacity of 3.5 KW/h and a very high thermal effectiveness exceeding 95% of the overall irradiating heat produced. The combustion block is made of EN 1.4301 (AISI 304) and consists of assembled laser-cut sheets. The combustion block has 3.5 lt capacity, 4.8 kg weight, and an autonomy of 9 hours. The surface finishing (either Scotch-Brite or satin finish) is hand made in order to improve and enhance the refined and winning design of this furnishing element.

Manufacturer: Nativo - Via Saga 7/d - I-37121 Negrar VR, phone +39 045 7501094, fax +39 045 7502199, info@nativoverona.it, www.nativoverona.it

HOW MANY "HUGS" DO YOU WANT? SHAPE YOUR PERSONAL HEAT BY YOURSELF

(Quanti "Abbracci" vuoi? Crea la tua forma del calore)

"Hugs" is a new-generation radiator featuring an endless variety of shapes, thanks to its innovative multi-modular design and its twisting and turning capacity. And because you are allowed to change your mind, the shape of the radiator can be modified, even after having been installed. Simple to assemble, there are no installation limits depending on the position of the water connections (wall/wall; wall/floor; wall/ceiling; floor/ceiling).

You can choose among four, five or six "Hugs", each formed by a 4-unit module. The radiator can include 16, 20 or 24 units (each of 3 cm diameter and 30 cm bending radius) and is provided with lockable rotating pressure-proof joints all made of EN 1.4301 (AISI 304) and EN 1.4401 (AISI 316) stainless steel. Tubes and perforated bars in thicknesses ranging from 3 to 15 mm have been used for manufacturing these radiators. In addition, they are made of stainless steel because of its durability and inalterability over time.

"Hugs" is a 99% recyclable, eco-friendly radiator, which makes use of a reduced quantity of water, ensuring at the same time energy savings and a high heat output. Available in polished or

brushed finish and in water or electric versions (with remote control option).

Manufacturing company: D.A.S. Radiatori d'arredo - Via Brenta 4 - I-20048 Carate Brianza MI, phone +39 0362 912200, fax +39 0362 975294, info@dasradiatori.darredo.com, www.dasradiatori.darredo.com / **Designer:** arch. Marco Poletti - Studio Poletti - Via G. Bellezza 17 - I-20136 Milano, phone/fax +39 02 58301777, info@polettistudio.it

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INSULATING WITH STAINLESS STEEL (Coibentare con l'inox)

The equipment we present is an integral part of a brass-coated wire production plant, a special type of wire used for tyre reinforcement ("steel cord"). This equipment, through a special air/steam exchanger, produces 120°C hot air. This over-heated air feeds in turn some blowers, shaped as a "Venturi tube", which dry the wire after several electro-chemical coating treatments, which foresee the following coating stages: alkaline copper plating and zinc electro-plating.

The plant manufacturer decided to exclusively use stainless steel for insulating the plant, because this material choice allows better countering the effects of a highly corrosive work environment. The type of stainless steel used for this equipment is EN 1.4301 (AISI 304) in 2B finishing and in thicknesses ranging from 0.6 to 0.8 mm.

Plant design, planning and construction: Coseco Srl - Via Como 6 - I-20020 Solaro MI, phone +39 02 96798098, info@coseco-online.com, www.coseco-online.com / **Insulation:** Coifer Srl - Via Leonardo da Vinci - I-24043 Caravaggio BG, phone +39 0363 51597/53976, fax +39 0363 53011, www.coifer.it

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STAINLESS STEEL IN SOUND-ABSORBING BARRIERS: THE ROME-NAPLES RAILWAY LINE

(L'acciaio inossidabile nelle barriere fonoassorbenti: la tratta ferroviaria Roma-Napoli)

The installation of soundproof or sound-absorbing barriers, especially alongside inhabited places, is aimed at reducing noise propagation produced by road, motor-way, railway traffic, or by industrial districts. In planning these barriers it is also necessary to carefully choose the materials to be used basing of some basic standards, which include soundproof and sound-insulation performances, design and durability.

Among the materials used for manufacturing these soundproof panels, and capable to meet these requirements, stainless steel surely excels.

The examples reported in this article are manufactured by a firm specialized in soundproofing projects aimed at cutting down noise levels in work environments as well as in open-air environments, such as, for instance, the Vesuvian section of the Rome-Naples high-speed railway line, where pre-painted 1.2 mm thick stainless steel (Vernest®) panels have been chosen. These panels combine the typical characteristics of a stainless steel base with the advantages provided by an organic pigment coating, such as high corrosion resistance in aggressive environments, durability over time, excellent soundproofing capacity, stiffness, while ensuring at the same time, a considerable aesthetical impact.

Pre-painted stainless steel, being free of the so-called "blistering" phenomena that may occur in particular in soundproofing panels, which include a considerable amount of perforated and sheared surfaces, is characterized by high functional and aesthetical durability, which can be explained by the extremely high corrosion-resistance levels reached by stainless steel. This characteristic makes therefore stainless steel much more effective than any other alternative material.

Manufacturing company: SITAV Engineering SpA - Via Pianezza 202 - I-10151 Torino, phone +39 011 4532114, fax +39 011 4556850, acustica@sitav.com, www.sitav.com / **Stainless steel supplied by:** ThyssenKrupp Acciai Speciali Terni SpA - Viale B. Brin 218 - I-05100 Terni, phone +39 0744 490282, fax +39 0744 490879, www.acciai.terni.it

STAINLESS STEEL CHIMNEYS

(Canne fumarie di acciaio inossidabile)

The standard EN 1856-1:2009 "Chimneys - Requirements for metal chimneys - Part 1: System chimney products" was lately approved. The great novelty introduced by this standard consists in the possibility to use in chimney production different stainless steels from those that had been provided for in the previous edition of this standard. The specific "L99" code will be used for the designation of these products. However, as the new version of this standard must be still harmonized, the CE marking cannot be applied, for the time being, to L99 products.

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PROCEEDINGS OF THE CONFERENCE: STAINLESS STEELS - STANDARDS, DIRECTIVES AND LAWS

(Atti del convegno: "Acciai Inossidabili - Normative, Direttive, Legislazioni")

The proceedings of the conference organized by Centro Inox and Unisider are now available (in Italian only) under the following titles: **The Normative Background: UNI/EN/ISO/ASTM Standards - Roles, Interaction, and Developments** (G. Corbella - Unisider), **Inspection and Control Papers** (EN 10204) - **Value and Importance of the Different Certification Types** (B. Stefanoni - IGQ), **Flat Iron and Steel Product Standards** (G. Di Caprio - Stainless steel specialist, AIM), **Long Iron and Steel Product Standards** (M. Cusolito - Rodacciai), **Welded**

Tube Standards (S. Toscano - Marcegaglia Div. Inox), **Seamless Tube Standards** (C. Fiora - Salzgitter Mannesmann Stainless Tubes), **Non-Compliance and Frauds - Legal Aspects** (L. Sommariva - University of Bergamo, Faculty of Economics), **The Problem of Radioactivity** (F. Bregant - Federacciai), **PED and CPD Directives** (C. Cappelli - Unisider), **Food-related Legislation** (V. Boneschi - Centro Inox). **For additional information:** Centro Inox - Piazza Velasca 10 - I-20122 Milan - Italy, phone +39 02 86450559/69, fax +39 02 860986, eventi@centroinox.it

CONFERENCE: "MIDDLE EAST METAL & STEEL EXHIBITION 2010"

February 18 - 20, 2010

Cairo International Convention & Exhibition Centre, Egypt
Metal & Steel 2010 is an international platform for suppliers of raw materials, semi-finished products, end products and surface treatments, as well as for manufacturers of machines, equipment and accessories for the production, subsequent processing, and refinement of metal & steel commodities. Centro Inox will support this event and will actively participate in it with its own stand.

For additional information: www.metalsteleg.com

PRESENTATION OF THE BOOK: "ACCIAIO E SUOI CORRETTIVI"

Edited by Alfonso Galvani, this is the latest publishing initiative of Assomotracing. An information handbook, in Italian, which represents a very useful technical instrument for all those who operate in the area of stainless steel metallurgy and related applications. This handbook will prove very useful also to those who do not have an in-depth technical-scientific knowledge of this matter. Centro Inox has granted its cultural support to this book.

For additional information and booking: SupportiGrafici snc, phone +39 051 648002, fax +39 051 944916, mail@supportigrafici.it

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THE STEAMBOAT DOCKS ON STAINLESS STEEL IN THE ISLAND OF BURANO

(A Burano il vaporetto approda sull'inox)

Among the souvenirs and the memories of a journey in Venice, there is an image that cannot be missing: the docks of the steamboats transporting hundreds of Venetians and tourists every day.

An important renewal programme concerning these landing wharfs provides for the construction of several new docks in place of the old ones, which have become insufficient to sort the intense passenger traffic of the city. This programme concerns in particular the terminals of Burano (already completed), Pietà in Riva degli Schiavoni, Giardinetti Reali a San Marco, San Nicolò e Santa Maria Elisabetta at the Lido of Venice (which are all under construction). An innovative characteristic is the possibility to make a selection between city dwellers and tourists. These structures are in fact characterized by a "technological" and "modern" design, which intends to minimize their impact on the environment but not to camouflage their presence, and by the use of materials requiring little maintenance, which take into account the particularly aggressive lagoon environment in which they are placed.

The first landing wharf has already been built in the island of Burano: the main carrying structure, consisting of a metal frame, is entirely made of EN 1.4404 (AISI 316L) stainless steel. The horizontal covering plug of both the box and the platform, as well as the vertical plugs, have been made of a micro-ventilated sandwich structure formed by metal, wood and insulation panels. The external lining of the covering and of the wall plug consists in a wrought and matte pre-coated zinc-copper-titanium alloy sheet. Wide clear surfaces are provided by windows and doors provided of EN 1.4404 (AISI 316L) stainless steel profiles. This special non-magnetic Cr-Ni-Mo alloy is used particularly in sea environments, as it has an extremely low carbon content and ensures excellent localized corrosion resistance properties.

Project: arch. P. Fugali and L. Gasparini - Via Zanella 22 - I-30173 Venezia, phone/fax +39 041 5341164, www.archi-iau.com / **Customer of the Burano and Santa Maria Elisabetta terminals:** Insula SpA - Marittima Fabbriato 248 - I-30135 Venezia, phone +39 041 2724354, fax +39 041 2724244, info@insula.it, www.insula.it - on behalf of the Municipality of Venice, www.comune.venezia.it / **Customer of the other terminals mentioned in the text:** PMV SpA, Mestre VE / **Burano Terminal** ■ **Construction:** associazione temporanea di imprese Spagnol Srl - Via Fratte 7 - I-33080 Fiume Veneto, and Martinelli Agostino - Via dei Fabbri 25 - I-33085 Maniago PN ■ **Stainless steel doors / windows frames:** Secco Sistemi SpA - Via Terraglio 195 - I-31022 Preganziol TV, phone +39 0422 497712, fax +39 0422 497705, info@seccosistemi.it, www.seccosistemi.it ■ **Alloy for applications in sea environments:** Sistemacciaio ■ **Technical manager and project supervisor:** ing. Luigi Zeno and ing. arch. Ivano Turlon for Insula SpA ■ **Project and site manager:** ing. Juris Rossi per Insula SpA ■ **Photographs:** Cristian Guizzo

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