

INOSSIDABILE

Edited and published by Centro Inox Servizi S.r.l.

Summary

For more detailed information please contact directly the names indicated at the end of each notification

PAGES 3/4

SOPHISTICATED DESIGN FOR KITCHENS ENTIRELY MADE IN ITALY (Design ricercato per cucine tutte italiane)

Decades of experience in working with stainless steel enables a well-known company from Veneto to produce “tailor-made” kitchen worktops. These units follow extremely refined and elegant stylistic dictates, characterized by decisive and strongly characterising lines, with the prerogative of supplying a complete product. Also in this case, stainless steel has shown its versatility for every application solution, combining the well-known properties of corrosion resistance and high mechanical characteristics with an unmistakable aesthetic value that is difficult to imitate. The products are manufactured entirely in EN 1.4307 (AISI 304L) stainless steel, starting from sheet and/or strip, with 2B or 2R (BA) finish, which are subjected to cutting, drawing, bending and welding processes.

There is also an “outdoor” line, dedicated not only to private residences but also to “leisure centres”, buildings that could also be located in marine areas. In these circumstances, EN 1.4404 (AISI 316L) stainless steel is used.

Realization: Barazza Srl - I-31025 Sarano di S.Lucia di Piave TV - Via Risorgimento 14, phone: +39 0438 62888, info@barazzasrl.it, www.barazzasrl.it

PAGE 5

COMBUSTION IS “RECYCLABLE” (La combustione è “riciclabile”)

The properties of burners must balance performance, durability and cost, as well as safety and low environmental impact, from the production of the raw material to the end of the product’s life. The article describes how stainless steels, and in this case ferritic ones, contribute to meeting these requirements.

For the burners mentioned in the article, AISI 409 (EN 1.4512), “441” (EN 1.4509) and AISI 444 (EN 1.4521) stainless steels are chosen.

To produce these burners, the company starts with strips and sheets with thicknesses varying from 0.5 to 1 mm, which are then mechanically cold-formed; the final assembly is carried out through various welding processes.

Realization: Beckett Thermal Solutions Srl - I-41043 Formigine MO - Via della Fornace 7, phone: +39 059 447911, info@beckettthermal.com, www.beckettthermal.com / **KARA ferritic**

stainless steels produced by: Aperam Stainless Services & Solutions Italy Srl - Massalengo Division - I-26185 Massalengo LO - Loc. Priora 4, phone: +39 0371 49041, info.italy@aperam.com, www.aperam.com

PAGES 6/7

FROM OUR MEMBERS NICKEL IN CLEAN ENERGY (Il nichel nelle energie pulite)

The report “The Role of Critical Minerals in Clean Energy Transitions” of the International Energy Agency highlights the importance of nickel for some of the clean technologies. Let’s take a closer look at what nickel is doing in three of the clean energy technologies.

Geothermal energy - In the power plant there may be as much as a hundred tons of nickel in the alloys used. These materials, all in their correct application, provide corrosion resistance, strength and clean surfaces for excellent heat transfer, resulting in cost-effective service. In the case of very corrosive waters, the use of nickel-containing alloys is critical.

The article cites the use of nickel-containing alloys (stainless steels and nickel alloys) in the Hellisheiði Power Station (Iceland).

Hydro-electric energy - Hydro-electric power is presently the largest source of renewable electricity. Nickel is used in these systems for some key components and it looks like it will play an even greater role in the future.

Wind power energy - The main use of nickel in wind power will be in small quantities to increase the strength and improve the toughness of low alloy steels. In the case of offshore installations, if something major fails, the costs and downtime can be enormous. Thus, reliability and long life are essential factors in making wind power economically feasible.

In the article, the success of the installation of two wind turbines in the Raglan Mine (Quebec, Canada) is reported.

ABOUT NICKEL INSTITUTE - Nickel Institute (NI) is the global association of leading primary nickel producers. Its mission is to promote and support the proper use of nickel in appropriate applications. NI grows and supports

markets for new and existing nickel applications including stainless steel, and promotes sound science, risk management, and socio-economic benefit as the basis for public policy and regulation. Through its science division NiPERA Inc., NI also undertakes leading-edge scientific research relevant to human health and the environment. NI is the centre of excellence for information on nickel and nickel-containing materials.

NICKEL INSTITUTE - communications@nickelinstitute.org, www.nickelinstitute.org

COVER/PAGES 8/9/10

STAINLESS STEEL CARPENTRY: AN EXAMPLE OF THE USE OF LASER TECHNOLOGY... AND MORE, ALWAYS WITH AN EYE ON SUSTAINABILITY (Carpenteria inox: esempio di impiego di tecnologie laser... e non solo, sempre con un occhio alla sostenibilità)

Precisely on the occasion of the 70th anniversary of the founding of a well-known carpentry specialising in the working of stainless steel products, an overview of some of the main technologies used in the production of components and/or finished products is proposed.

Over the years, this company has accumulated an outstanding degree of technological know-how, with a staff of extremely specialised technicians who are able to meet the most varied and complex requirements.

The article shows two examples of processing. The first example concerns the fabrication of a structure consisting of tubular products. The drawing received from the customer is processed by the technical department: this is followed by nesting, which makes it possible to understand the raw material required. Then the exact number of bars calculated is loaded onto the dedicated cutting machine, equipped with a “laser-fibre” system. The cut component then falls onto a conveyor belt, it passes through quality control and it is ready for final assembly. The company is also able to cut tubular products using “CO₂ laser” technology.

Almost similar is the procedure adopted for stainless steel flat products. The operator in charge sees the nesting prepared by the technical office and calls up the number of the job to be sent for cutting. The automatic magazine picks

up the required sheet and proceeds to position it on the cutting table. Once the cuts have been made, the workpieces are unloaded and it is applied to them a special label stating the type of stainless steel, thickness and customer coordinates.

Other cold plastic deformation machining operations are also available, with advanced equipment.

We thank Cuneo Inox for the technical and photographic material provided.

PAGE 11

TAPS: INNOVATION AND CLASSICISM (Rubinetti: innovazione e classicità)

The article shows an innovative line of taps and related accessories, made of EN 1.4404 (AISI 316L) stainless steel. The realisation of these objects starts from pure geometric shapes that are combined with the aim of creating a line particularly close to the world of architecture.

This high-end line includes mixers taps of various types and shapes, also coloured (by means of PVD treatment).

Worthy of note is the presence of ad hoc devices that limit the flow rate, in compliance with the most current and rigorous regulations that aim to guarantee water and energy savings.

Realization: Zucchetti Rubinetteria SpA - I-28024 Gozzano NO - Via Molini di Resiga 29, phone: +39 0322 954700, info@zucchettidesign.it, www.zucchettikos.it

PAGES 12/13

STAINLESS STEEL FILTERS: ECO-FRIENDLY AND IDEAL FOR THE FOOD INDUSTRY

(Filtri in acciaio inox: eco-friendly e ideali per l'industria alimentare)

A company, specialised in the development and production of equipment and components for material handling and treatment plants, has recently presented a specific series of filters intended to be used in synergy with food storage or processing plants. The purpose of these systems is to filter dust from the air inside the plant before it is released into the atmosphere.

The filters are characterised by a cylindrical housing made of austenitic stainless steel, EN 1.4307 (AISI 304L) or EN 1.4404 (AISI 316L), as appropriate. The housing has a flanged connection containing the filter elements, which are also suitable for the food industry.

For the realization of the housing, the company starts with strips of different widths and characterised by a 2B or 2R (BA) finish and pre-satinated sheets, with thicknesses that can vary from 0.8 to 6 mm. Welding is carried out using the TIG technique with filler material and MIG. The automatic compressed air cleaning system of the filters is fully integrated in the opening cover, in order to facilitate the operators' work.

Realization: WAMGROUP SpA - I-41032 Ponte Motta di Cavezzo MO - Via di Sotto 9/A, phone: +39 0535 740111, www.wamgroup.com

Stainless steel produced by: Aperam Stainless Services & Solutions Italy Srl - Massalengo Division - I-26185 Massalengo LO - Loc. Priora 4, phone: +39 0371 49041, info.italy@aperam.com, www.aperam.com

PAGE 14

ADVANCED COURSE ON STAINLESS STEELS. METALLURGY-EXPERIENCES - APPLICATIONS. IV EDITION

(Corso avanzato sugli acciai inossidabili. Metallurgia - Esperienze - Applicazioni. IV EDIZIONE)

7 - 9 - 14 - 16 - 21 - 23 November 2023

Centro Inox organizes, in collaboration with AQM (Technical Services Center for Companies) and with the sponsorship of Federacciai, the Italian Institute of Welding and Politecnico di Milano, the fourth edition of the Advanced Course on Stainless Steel. The aim of this six-day course is to provide a detailed technical preparation on these materials. The topics covered, compared to the previous edition, have been updated and supplemented with innovative topics. The first and last day will be held in person at the AQM headquarters, while the other days will be run remotely.

Days and topics covered:

7 November 2023 - FROM METALLURGY TO PROPERTIES

9 November 2023 - TECHNICAL DELIVERY CONDITIONS: LONG, FLAT, WELDED TUBES - INSPECTION DOCUMENTS - REGULATORY REFERENCES

14 November 2023 - FINISHES AND TREATMENTS

16 November 2023 - WELDING AND JOININGS

21 November 2023 - CORROSION: CAUSES, TYPICAL MORPHOLOGIES, OPTIMAL SELECTION CRITERIA

23 November 2023 - SUSTAINABILITY AND INNOVATION/PRACTICAL APPLICATIONS IN THE AQM LABORATORY

Registration is online at the AQM website. The complete programme is available on Centro Inox website: www.centroinox.it

For further information and registration:

Centro Inox - phone: +39 02 86450559

e-mail: eventi@centroinox.it

AQM Srl - phone: +39 030 9291784

e-mail: training@aqm.it

PAGE 15

ACCADUEO 2023

(ACCADUEO 2023)

BolognaFiere, Bologna - 11÷13 October 2023

The 16th edition of ACCADUEO will take place at the exhibition centre of Bologna from

11 to 13 October 2023 (Hall 25/26).

Centro Inox, patron of the event, will be present with an exhibition stand (Hall 25, stand C111) and will organise, on 13 October, the meeting "Winning the challenge of reducing water losses with stainless steel. New applications and experiences, cost/benefit analysis". The meeting programme is available at www.centroinox.it.

For further information:

www.accadueo.com

DRINKING WATER QUALITY: ITALIAN LEGISLATIVE DECREE NO. 18/2023 PUBLISHED

(La qualità dell'acqua potabile: pubblicato il D.Lgs. 18/2023)

The Italian Legislative Decree No. 18/2023 was published to implement Directive (EU) 2020/2184 on the quality of water intended for human consumption (DWD - Drinking Water Directive), repealing the previous decree (D.Lgs. 31/2001).

Among the changes made, the minimum requirements to define water fit for human consumption (e.g. composition, maximum chloride content, pH, conductivity, hardness, etc.), listed in the Annexes of the Decree, have been revised.

PAGE 16

ACCESSORIES FOR PLEASURE BOATING

(Accessori per nautica da diporto)

Two interesting innovations for the pleasure boating sector are presented in the article. The first consists of a flush-mounted base that can be installed, flush with the deck, to accommodate various accessories that can be removed at the touch of a button. The components used are made of EN 1.4404 (AISI 316L) stainless steel, mechanically polished to a mirror finish.

The second example is a self-supporting manually extendable three-stage gangway, again made of EN 1.4404 (AISI 316L) stainless steel. The gangway takes up very little space when closed but, when open, it achieves the same result as a traditional 2 metre gangway.

Realization: Nautinox Srl - I-20059 Casarile MI - Via Antonio Meucci 14/16, phone: +39 02 90093718, info@nautinox.it, www.nautinox.it

CENTRO INOX

The Italian Stainless Steel Development Association

Via Rugabella, 1 - 20122 Milano - Italy
Telephone +39 02 86450559 - +39 02 86450569
Fax +39 02 86983932

redazione.inossidabile@centroinox.it
www.centroinox.it

The subscription to the quarterly INOSSIDABILE, outside Italy, is free of charge.

