

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

COVER PAGES 3-4

TAKING CARE OF ONESELF WITH STAINLESS STEEL

(Prendersi cura di sé con l'acciaio inossidabile)

Taking care of one's health is an important part of many people's daily routine and to accomplish that, more and more often natural products are considered. A company based in Lodi (Italy) is specialized in the production and in the commercialization of such products. Among the many plants, there is a laboratory dedicated to the extraction and the purification of essences and scents, entirely made of stainless steel. Because of the ambitious intentions of this project, the selection of this material was practically mandatory: specifically, they used EN 1.4404 (AISI 316L) for all the zones in contact with the products and for the relative accessories, and EN 1.4301 (AISI 304) for the other laboratory components, such as the structure. The easiness in the cleaning of the extractors and the possibility to sterilize the plant represent two of the many reasons stainless steel was chosen.

Customer: L'Erbolario srl – I-26900 Lodi LO – Viale Milano 74 – tel. +39 0371 4911 – erbolario@erbolario.com – www.erbolario.com

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TANKS FOR THE PHARMACEUTICAL SECTOR

(Serbatoi per il settore farmaceutico)

In the article, some applications of stainless steel are presented for a sector particularly attentive not only to the type of material to use, but also to the relative production: it has to guarantee the greatest inertia towards the treated substance. In the pharmaceutical sector, along with the parapharmaceutical sector and the food industry, stainless steel represents an ideal partner for any kind of plant or accessory. Dissolution tanks for sterile liquids are made in EN 1.4404 (AISI 316L) and EN 1.4301 (AISI 304). AISI 316L is used for all the components in contact with the product to be mixed.

Manufacturer: Novinox Srl – I-20834 Nova Milanese MI – Via S. Martino 10 – tel. 0362 40048 – info@novinox.com – www.novinox.com / *Welding materials supplied by:* Arvic Metalli Srl – I-20121 Milano MI – C.so Garibaldi 49 – info@arvicmetalli.it – www.arvicmetalli.it

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FROM OUR MEMBERS

APERAM: DRIVING THE FUTURE -

PASSION, AGILITY, INGENUITY HAVE THE POWER TO CHANGE OUR WORLD (Aperam: Driving the Future – Passione, Agilità e Ingegno hanno il potere di cambiare il nostro mondo)

The Aperam Group operates in more than 40 foreign countries, and is one of the most important global actors in the field of stainless steel. The Group has a staff of about 10,000 persons all over the world, and its six production facilities based in France, Belgium, and Brazil have jointly a production capacity of 2.5 Mt of flat sheets. In addition, Aperam is a leading manufacturer of special high added-value products, which include electrical steel and nickel alloys. The structure of Aperam includes three divisions: **Stainless & Electrical Steel, Services & Solutions, Alloys & Specialities.**

Aperam in Italy - Aperam Stainless S. & S. Italy, the Italian branch of the Aperam Group, markets the flat products of its steel mills and the thin thickness (starting from 0.07 mm) precision strips produced. It is present through its **Direct Sales Division** and through the two **Service Centres of Massalengo (Lodi) and Podenzano (Piacenza)**. These cutting and finishing centres are equipped to process both *hot-rolled and cold-rolled* sheets up to 2000 mm width, in thickness ranging from 0.3 mm to 14 mm, strips starting from 5 mm width, and edge strips up to 3 mm thickness. The efficient and widespread sales network help and counsel customers about the products to be developed during pre and post sale.

Excellence in quality and services for our customers - The wide range of products offered by **Aperam Stainless S. & S. Italy** meets all customers' requirements in terms of aesthetical characteristics, thanks to different finishing options, which include:

- "High-end BA";
- **satén finishing**, among which **Scotch-Brite® finish**;
- **floor plate finish** (for thickness ranging from 3 to 10 mm).

In addition, through the registered brand **UGINOX®**, a wider, complete, and innovative range of surface finishing options is offered, to meet all architectural requirements and styles. Aperam is the first company, among the European producers, to offer an e-commerce platform to its clients, digitizing the supply chain

Safety and quality system - The culture of safety is a fundamental principle for Aperam, which pays its utmost attention to the pursuit of the "zero accidents" objective for the safety of all its staff.

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DUPLEX STAINLESS STEELS: HEAT TREATMENT AND ANOMALIES

(Acciai inossidabili duplex: trattamenti termici e criticità)

Austeno-ferritic (duplex) stainless steels are characterized by a good corrosion resistance and elevated mechanical characteristics. The volume fraction between the two phases (austenite and ferrite) can vary depending on the chemical composition and the heat treatment carried out.

Properties / heat treatment - Duplex stainless steel fabrication has as primary purpose the correct dosage of austenite and ferrite stabilizers, in order to obtain the right austenite-ferrite phase balance and hence the desired structure. The heat treatment for duplex stainless steels is the annealing heat treatment, which allows to bring in solution those precipitates / intermetallic phases, otherwise harmful towards the mechanical properties and the corrosion resistance.

The success of this heat treatment is determined by the cooling rate of the treated products from the annealing temperature (1080 °C - 1100 °C). In this sense, the cooling media is water.

Anomalies - The processing stages can lead to the formation of deleterious phases and compounds. The most important ones are:

- σ and χ phases: σ phases can lead to an increase in the brittleness of the structure, while χ phases represent a precursor in the formation of σ phases;
- **Chromium nitrides**: their formation is the consequence of the increase of nitrogen in the chemical composition. They cause embrittlement and the decrease in corrosion resistance;
- **Aluminium nitrides**: they influence the mechanical properties of duplex stainless steels, going to decrease their resilience;
- **Secondary austenite**: it is due to the ferrite decomposition at low temperatures;
- **Spinodal ferrite**: the spinodal decomposition of the ferrite causes an increase in the hardness of duplex stainless steels.

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FROM THE SHEET TO THE KITCHEN (Dalla lamiera alla cucina)

In the article, there are reported the steps conducted by a firm based in the province of Brescia (Italy) for the production of two utensils meant to be used in the kitchens. Both of them are obtained starting from a 1 mm thick EN 1.4301 (AISI 304) sheet. The bread basket

is produced from the deep drawing of a disk (342 mm in diameter). Then, a laser cut allows the product to obtain the required design. For the round tray, the sheet is laser cut in order to obtain disks having a diameter of 370 mm. Then, the undesired parts are removed and, finally, the object is deep drawn to obtain the final product.

Manufacturer: Zani Serafino srl – I-25066 Lumezzane Gazzolo BS – Via Zanagnolo 17/b – tel. 030 871861 – info@serafinozani.it – www.serafinozani.it / **Designer:** Konstantin Grcic

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STAINLESS STEEL: AN IDEAL PARTNER FOR ICE-CREAM SHOPS

(L'acciaio inox: partner ideale per le gelaterie)

Ice cream should be stored in the dark and at a constant temperature, because otherwise it would oxidise and hence the organoleptic properties would fail. So, some ice-cream shops prefer to preserve all their products in ice-cream containers (carapina). In this sense, a company based in Milan produces and sells ice-cream containers and their relative accessories made in EN 1.4301 (AISI 304). The choice of stainless steel for this application is not random: this material is well known for its corrosion resistance, for its hygiene qualities and for its low bacterial retentiveness.

Manufacturer: Priolinox SpA – I-20146 Milano MI – Via delle Tuberose 10 – tel. 02 48303268 – priolinox@priolinox.it – www.priolinox.it

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FLASH COURSE - STAINLESS STEEL: FOCUS ON WELDING

(Corso flash: Acciai inossidabili – focus saldatura)

Hotel Ascot – Via Lentasio 3 – Milan – 7 May 2019 – 9.00 a.m. - 1.00 p.m.

Centro Inox and the Italian Institute of Welding will organise a flash course dedicated to stainless steel welding. Some topics of particular interest related to “welding” will be discussed, chosen from the practical application experiences of the Institute and those deriving from technical advice reaching Centro Inox from the most diverse sectors of application. The interventions will be carried out by teachers from Centro Inox and from the Institute.

PROGRAMME:

8.30 a.m. – 9.00 a.m. – Registration of participants

- Participants welcome and introduction to the works
- The anomalies in welded joints for austenitic/ ferritic/ duplex/ superduplex/ superaustenitic stainless steels
- The negative consequences of the anomalies: susceptibility towards corrosive attacks
- The importance of the shielding gas
- Coffee break
- The inspections, including suitability tests for food contact materials (Italian Ministerial Decree DM 21/03/73)
- Regulatory approach on quality levels for imperfections in arc-welded joints (ISO

5817), electron and laser beam welded joints (ISO 13919) and brazed joints (ISO 18279)

- Debate

For further information and registration:

www.centroinox.it

eventi@centroinox.it

Tel. +39 02 86450559 / +39 02 86450569

MADE IN STEEL

(Made in Steel)

Fieramilano Rho, Milan – 14 + 16 May 2019

The 8th edition of Made in Steel, the leading Conference & Exhibition in Southern Europe dedicated to the global iron and steel industry, organised by Siderweb – the steel community, will be held from Tuesday 14 to Thursday 16 May 2019.

Centro Inox will be present with an exhibition space (stand E29 Pad. 22) and on 15 May 2019 it will organise a meeting dedicated to the most important and current issues related to stainless steel.

For further information:

Made in Steel Srl – tel. +39 030 2548520

info@madeinsteel.it – www.madeinsteel.it

Centro Inox – tel. +39 02 86450559

eventi@centroinox.it – www.centroinox.it

SCHOOL CANTEENS - SAVONA: GOODBYE FOR EVER, PLASTIC CUTLERY

(Mense scolastiche – Savona: addio alle posate di plastica)

After Milan, Scandicci (province of Florence) and Nice (France), also the municipality of Savona took an important step in terms of eco-sustainability. Starting from 28 January 2019, only stainless steel cutlery are used in the primary school canteens, in substitution to the disposal plastic one.

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INTER-COMPANY TRAINING COURSE ON STAINLESS STEEL

(Corso di formazione interaziendale sugli acciai inossidabili)

Milan – 14-21-28 June 2019

Location: Riconversider training room – Viale Sarca 336 – Milan (Italy)

The recently renewed metal-mechanical collective labour agreement (CLA) regulates the exercise of the right to continuous training, giving the company the task of identifying and planning training courses during the three-year period going from 1 January 2017 to 31 December 2019.

Riconversider, training and consulting body of Federacciai, and Centro Inox developed a proper training proposal having stainless steel as the subject, aimed at all companies of the steel and metal-mechanical sector, through an inter-company path structured in 3 modules of 8 hours each, usable entirely or by single module, according to need.

For further information and registration, please contact the Riconversider organizational office:

Fabio Pia – tel.+39 02 66146-607 -

fabio.pia@riconversider.it

Giulia Zabrin – tel. +39 02 66146-654 -

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STUDY DAY ON MOCA (FOOD CONTACT MATERIALS) – 26 NOVEMBER 2018: THE PRESENTATIONS AND THE VIDEOS OF THE SPEECHES ARE AVAILABLE

(MOCA – Giornata di studio del 26 novembre 2018: disponibili le memorie e il video degli interventi)

The study day on MOCA (Food Contact Materials, FCMs), organized by Centro Inox and held at the University of Milan on 26 November 2018, aroused great interest among the insiders. For this reason, Centro Inox decided to make available the videos of the speeches and the relative presentations. Their cost is as follows:

- Ordinary cost: € 130.00 + VAT

- Reserved cost for the affiliated and subscribed members of Centro Inox Servizi srl: € 100.00 + VAT

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CENTRO INOX WEBSITE IS UPDATED (Il sito del Centro Inox si aggiorna)

Starting from this February, the website of Centro Inox has a new look, being enriched with two new sections. The first one, present directly in the homepage and accessible to everyone, is the “News” section: it is possible now to follow in more detail the activity of the Association and the one of its members and affiliated members. Moreover, the users will be informed of events, training courses and other topics involving the stainless steel sector.

The other new section is reserved to the members of Centro Inox and to the affiliated and subscribed members of Centro Inox Servizi srl. A reserved technical area allows to access to many technical publications owned by the Association.

On the website homepage, now the users can find a section dedicated to “Who does what – some orientations”. In this “virtual showcase”, several manufacturers and suppliers of complementary products, involved in the stainless steel sector, can be found.

For further information about the services offered by Centro Inox Servizi srl and about the subscription to “Who does what – some orientations”:

Centro Inox servizi srl:

www.centroinox.it/it/centro-inox-servizi-srl

Who does what – some orientations:

www.centroinox.it/it/chi-fa-che-cosa-alcuni-orientamenti

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