

# 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

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#### ... YOU ARE SUCH A TRUE FRIEND! (... sei proprio un vero amico!)

Editorial by Fausto Capelli

*I had met you in the late 1970s and had only heard of you sporadically during my university studies. With time, however, we became acquainted and even became friends.*

*The long period of study and experience gained alongside you, thanks to your great ability to help the environment, led me to believe that all your peculiarities make sure that you are fully defined as a true "green" material.*

The title of "environmentally friendly" material, stainless steel has earned it in the field, over the years, both in an "active" and also in a "passive" way: this much more global aspect is closely related to how much is released into the environment itself in terms of polluting elements. For the latter concept, we can also refer to both the energy consumption required for production and the CO<sub>2</sub> emissions at this stage, which turn out to be lower than for other materials.

It can therefore be said that stainless steel is the ideal ecological partner for the new "circular economy." The economic, environmental and social benefits of this fully recyclable material are obvious: less resource consumption, less waste generation, energy savings and lower CO<sub>2</sub> emissions.

*In conclusion, my dear friend, in today's global economy, I really think that you will be in the future more and more a friend to all the processors operating in a variety of sectors who will turn to you, in the name of eco-sustainability. Ad maiora!*

### COVER/PAGE 5

#### EFFICIENCY AND SAFETY IN FOOD PACKAGING

##### (Efficienza e sicurezza nel confezionamento dei cibi)

Presented in the article are the latest weighing and packaging equipment made by a Mantua-based company with a strong focus on eco-sustainability.

The packaging machine, shown in the article, is capable of making all the most common packages on the market, suitable for any food

product. Made with an EN 1.4301 (AISI 304) stainless steel frame, the profiles and design prevent any deposits, meeting the hygienic standards required by the "food" sector. The packaging machine can be combined with various weighing and dosing systems, such as the multi-head packaging machine, in AISI 304, shown on the cover.

Upon request, EN 1.4401 (AISI 316) can also be used for their manufacture.

**Manufacturer:** Comek Srl - I-46043 Castiglione delle Stiviere MN - Via Levadello 4/P, phone: +39 030 9698647, info@comek.it, www.comek.it/**Agent company:** Opassi Stefano Srl - I-20133 Milano MI - Via Sansovino 4, phone: +39 02 23951349, info@opessi.it, www.opessi.it

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#### FROM OUR MEMBERS

##### TECNOFAR: QUALITY FIRST (Tecnofar: quality first)

**Tecnofar's evolution: from supplier to partner** - This is the choice of Tecnofar, which for years now has been engaged in a process of transformation that has led the company to assume a strategic role towards its customers. Quality product, therefore, but also research, development, and the study of new solutions alongside customers: this is how Tecnofar attacks new markets and new sectors.

On the other hand, the ability to offer stainless steel welded tubes, even precision ones, allows production flexibility uncommon in the market.

**Integrated production cycle** - Today Tecnofar is able to guarantee an integrated production cycle, both in terms of welding and drawing, with the possibility of customizing the tube with a wide range of additional processing and offering different surface finishes.

The wide range of tubes offered and the ability to adapt to the technical requirements of different production segments are the obvious reasons for the success of Tecnofar, which has turned its payoff (Quality First) into a true internal philosophy.

**Green choice and innovation** - In recent years, Tecnofar has been in the process of renovating its production facilities toward an increasingly sustainable approach to its processes, in addition to having recently installed a photovoltaic system at its plants that can produce more than

200 MWh annually.

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#### STAINLESS STEEL TO SUPPORT ENERGY EFFICIENCY IN THE HEATING SECTOR

##### (L'inox a supporto dell'efficienza energetica nel settore riscaldamento)

**Introduction** - Cutting CO<sub>2</sub> emissions in the heating sector has become an unavoidable goal for a sustainable development. The demand for increasingly efficient technologies has become more and more pressing, and it is on the basis of this that a well-known company in the heat exchanger industry has verified the potential of ferritic stainless steel to support the development of energy efficiency and green hydrogen combustion.

Presented in the article is the characterization and subsequent validation, performed by this company, for the EN 1.4509 ferritic stainless steel, commercially known as "441," intended for application as a heat exchanger of a condensing cell.

**Forming and green applications** - "441", characterized by anticorrosive properties similar to those of an AISI 304 but more susceptible to hydrogen embrittlement phenomena than austenitic stainless steels, finds widespread application within the sector of heat generators dedicated to heating, also thanks to its better heat transfer coefficient.

The novelty lies in the work of the company, which has, however, recently proven the usability of this material in its current function and configuration for the realization of the heat exchanger coming in contact with combustion products only, not only for gas-operated equipment, but also with hydrogen-based mixtures.

The article describes the manufacturing steps required to obtain the pipe coil that, together with the other components, will make up the condensing cell.

"441" plays a key role in the application context of high-efficiency heat generators, which are capable not only of ensuring reliability and durability for a good level of home comfort,



but also of responding to and following the path of ecological transition, which sees an increasingly widespread use, not only of natural gas, but also of renewable ones.

*We thank Eng. Andrea Costa of Condevo SpA (www.condevo.com) for the material provided.*

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**A HELP FOR THE ENVIRONMENT  
ALSO FROM SHREDDERS  
(Anche dai trituratori un aiuto per  
l'ambiente)**

As already pointed out in the editorial that opens this issue, stainless steel is certainly an environmentally friendly material. In support of this statement, we bring here an application example for an equipment that can help the environment by going to process certain products, for example municipal solid waste, which, if not treated properly, could become environmentally harmful waste.

The shredding parts, the filter cylinder and the centrifuge screw shaft are made of EN 1.4301 (AISI 304) stainless steel. The use of stainless steel is essential for these components because of its inherent characteristics, which are critical as shredders often operate on hard materials and in environments that tend to be acidic.

The use of stainless steel is also required to meet HACCP standards, which are essential for compliance with hygiene and safety in the management of meals and their waste.

**Manufacturer:** Ecofast Italia Srl - Tecnologie ambientali - I-20162 Milano MI - Piazza Martelli 5, phone: +39 02 66111618, info@ecofast.eu, www.ecofast.eu

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**COOLER FOR ALIMENTARY PASTAS  
(Raffreddatore per paste alimentari)**

The hygienic aspect of stainless steels is certainly always at the forefront when it comes to food. One of the leading companies in the pasta food industry has created a cold-air cooler completely constructed of stainless steel, capable of lowering the temperature of the product (pre-cooked spätzle) from 50 to 4 °C in 15 to 20 minutes depending on the format. The plant, in total, is 9 meters long: the spätzle are loaded onto the cooler by means of a vibrating draining table, with a structure made of EN 1.4301 (AISI 304) stainless steel and a perforated surface in contact with the food made of EN 1.4401 (AISI 316) stainless steel. All other elements of the main structure of the machine are made of AISI 304 stainless steel, including the pipes used in the cooling system, the fans that move the flow of cold air, the conveyors, guides and conveyor belt supports.

**Manufacturer:** FoodTech Srl - I-35012 Camposampiero PD - Via Martiri della Libertà 6, phone: +39 049 9303590, info@food-tech.it, www.food-tech.it

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**SEMINARS DEDICATED TO THE  
INTEGRATED DRINKING WATER  
CYCLE CONTINUE**

**(Proseguono i seminari dedicati al ciclo integrato dell'acqua potabile)**

The precious good of water, especially drinking water, in the recent period of drought that Italy has just gone through, creates more and more attention among the “insiders” who have the task of capturing, storing, treating and distributing this good. In this context, the activity of Centro Inox continues with increasing determination in order to raise awareness among all the levels of this sector, about the performance that stainless steels can guarantee, in terms of durability, maintenance-free and hygiene.

The latest meeting was held on July 27 in Parma for IREN, with an illustration of plants that used stainless steel products and an overview of some technological “philosophies” followed in the Far East.

**PRESENTED THE VOLUME  
“L'ACCIAIO INOX”: WATCH THE  
VIDEO INTERVIEW**

**(Presentato il volume “L'Acciaio inox”:  
guarda la videointervista)**

The volume “L'Acciaio Inox” (“Stainless Steel”) is now available, a practical compendium on stainless steels published by Centro Inox Servizi Srl and written by Eng. Fausto Capelli. The 380-page book is available at a cover price of 39 Euros + postage.

The video interview of the presentation of the volume is available on the Centro Inox’s website and on its social channels (LinkedIn and Facebook).

**For further information and for the purchase:** Centro Inox - phone: +39 02 86450559 - e-mail: centroinoxservizi@centroinox.it

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**TRAINING COURSE: MOCA  
DISCIPLINE. STAINLESS STEEL AND  
REG. 2023/2006.**

**(CORSO DI FORMAZIONE: DISCIPLINA  
MOCA. Acciaio inossidabile e Reg  
2023/2006)**

**10 ÷ 11 October 2022**

Within the framework of the regulations on Food Contact Materials (FCMs, MOCA in Italian) and the relative sanctions framework, the fulfilments of the companies that manufacture or transform stainless steel for the FCMs sector are compulsory and the regulations concerning controls entail the application of heavy sanctions in case of non-compliance. Centro Inox produced in collaboration with IGQ a specific Guideline for the construction of a quality assurance and control system, as required by the Regulation (EC) 2023/2006.

The course, now in its fourth edition, has the

aim of presenting and illustrating in detail the topics that define the framework of the minimum competences necessary for those who operate within the “MOCA supply chain”. The course, organised by Centro Inox and IGQ, will be held entirely remotely and has a limited number of participants. The full programme and registration details are available on our website: [www.centroinox.it](http://www.centroinox.it).

The fifth edition of the course is scheduled for December 2022.

**For further information and subscription:**

Centro Inox - phone: +39 02 86450559 - e-mail: [eventi@centroinox.it](mailto:eventi@centroinox.it)

**REVISION OF EN 10357 PUBLISHED  
(Pubblicata la revisione della EN 10357)**

Revision 2022 of the European standard EN 10357 “Austenitic, austenitic-ferritic and ferritic longitudinally welded stainless steel tubes for the food and chemical industry” has been published, replacing the previous edition of 2013.

The main technical changes concern dimensions and tolerances for tubes and requirements in terms of surface characteristics and roughness.

The European standard was prepared by CEN/TC459/SC10/WG11, coordinated by Eng. Viganò (Centro Inox) and which has Italian secretariat managed by UNSIDER

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**ICARUS BECOMING A SUNDIAL  
(Icaro che diventa meridiana)**

The dream of flight, mythologically represented by the figure of Icarus, is perhaps the one that has always most occupied the human mind and soul. Only a wise artistic sensibility could combine the figure of Icarus attempting to fly, with an instrument dedicated to the passage of time.

Thus, the sculpture “Icaro Meridiana” (“Icarus Sundial”) was born, presented in Sardinia last June, which also has the function of a sundial. For the realization of this work (180x60x120 cm in size), 400 meters of EN 1.4401 (AISI 316) stainless steel welded tube were used, appropriately curved on a framework of EN 1.4301 (AISI 304) stainless steel profiles.

**Artist:** Andrea Forges Davanzati - [www.andreaforgesdavanzati.com/](http://www.andreaforgesdavanzati.com/)

**Tubes furnished by:** Trafiltubi - I-20090

Novegro di Segrate MI, [www.trafiltubi.com/](http://www.trafiltubi.com/)

**Photographs:** Daniela Zedda

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