INOSSIDABILE

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Summary

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

a detrasher where gross impurities (staples, spins, clips, bits of wood, plastic, adhesives and glue) are separated from it.
Thick paste depurator / tank depuration – A high density cleaner, centrifugally separates the heavy polluters from the mixture. Another cleaner permits elimination of almost all the sand, protecting the depurator holed tanks of the next phase.
Splitting – The mixture is split into two flows: short fibre and long fibre, separately submitted to further depuration processes, followed by re-treatment of the previous phases.
Depuration with a slotted screen – This really important phase is to remove stickies and all the small pollutants still present in the mixture.
Hot plant - Here the mixture is thickened and transferred to the mixing tunnel, where steam and minute amounts of chemicals are injected and it reaches temperatures of up to 95-100°C. The water squeezed out is sent to the stand tank (the water cycle is closed as much as possible).
These are complex working phases during which machinery is submitted to high temperatures, to contact with chemicals and to different wear situations. It is, therefore, logical that many of the plant parts and all the connecting pipes (welded pipes with diameters varying from just a few millimetres to 800) should be in stainless steel. The most used type is EN 1.4301 (AISI 304) but, on request, EN 1.4401 (AISI 316) is also used.
Top middle – Plant controlling screens, measurers and control valves.
Bottom middle – Pipes connecting the different plants.

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▌Piping: Rivit Spa – Via Palladio 129 – I-36030 Caltrano VI, phone +39 0445 359330, fax +39 0445 359339, info@rivit.com, www.rivit.com

PAGE 11

STAINLESS "ELASTIC" TO PLAY WITH
(Un "elastico" inossidabile per giocare)

Children's open-air games must guarantee safety both from an accident-proof and from a cleanliness and hygiene point of view.
If we consider environmental aggressiveness, the absence of maintenance, possible vandalism and loads that are greater than they are supposed to be (e.g. when used by adults) choice can only go one way: stainless steel which also assures adequate mechanical resistance.
This game structure line, called "Elastic", is made up of straight and curved tubular elements (diameters of 35, 38 and 60 mm) and fittings in stainless steel EN 1.4301 (AISI 304) as well as supports and profiles in laminated pine. All elements are bolted and protected at their ends by stainless steel laser cut and bent fixing plates.
Thanks to the elasticity of stainless steel components, these structures can bend, bounce and adapt themselves, just like natural trees.

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PAGES 12/13

AN ENTIRELY TRANSPORTABLE STAINLESS STEEL PREFABRICATED DEPURATOR.
(Un depuratore prefabbricato interamente trasportabile in acciaio inossidabile)

The depurator of San Martino di Castrozza, a tourist resort in the Trento province, has a potentiality of 42 m^3/h. During the summer and winter seasons, due to the heavy tourist flow, the plant proved to be insufficient. To handle the environmental and hygiene-sanitary situation which was decidedly compromised, immediate intervention was needed. They opted for a temporary membrane (MBR) depurator, with a capacity equal to the existing one, that could then be recovered once its task was over and used in the future for the necessary upgrading of other depurators. The needs for Life Cycle Cost and compatibility with use led the designers to choose stainless steel as their base material.
The new depurator is housed in two transportable, closed containers, in a self-supporting structure, in EN 1.4301 (AISI 304) stainless steel, lagged to stand the rigid winter temperatures.
Each reaction tank measures 12.00x2.50x2.88 m internally and weighs 7,120 kg, while the relative service module measures 6.05x2.31x 2.50 m internally.
The membrane housing is also in stainless steel EN 1.4301. These parts weigh about 6,000 kg, while the whole structure, excluding the membrane modules, weighs approximately 13,000 kg.
Connecting up all users was implemented through 200 m of lagged DN80 piping, still in EN 1.4301 (AISI 304) stainless steel.
For normal use, the new prefabricated depurator will be used up to the designed potentiality (42 m^3/h, equal to about 3,500 inhabitants). Above this level, the rest will be treated by the existing depurator.
Top left – The two stainless steel containers with the oxygenising tanks.
Top right – Inside the second sector (aeration with average bubbles) of one of the containers: we can seen the membrane housing stainless steel boxes.
Bottom left – Installation.
Bottom right – Inside the service module with machinery protected by stainless steel cupboards.

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▌Tanks manufacturer: Calinox – Zona Artigianale 2 – I-39040 Cortina Strada Vino BZ, phone +39 041 817395, fax +39 0471 817720, calinox@brennercom.net

AUTOMOTIVE CIRCLE INTERNATIONAL
Auto technicians meet to discuss lightweight, low cost construction solutions
(I tecnici dell'auto a convegno per discutere soluzioni costruttive leggere e a basso costo)

On June 2 and 3 2005, the 14th European Lightweight Car Body Conference organised by the Automotive Circle International (www.automotive-circle.de) took place in Germany (Bad Nauheim, Frankfurt) under the title "Low-Cost Concepts VERSUS Lightweight Innovations". This is a permanent meeting fixture for the automotive sector, where technicians from the most important car manufacturers compare the most innovative technological solutions aimed at reducing the weight and costs of cars.
To confirm the growing interest in stainless steel as structural material, in three speeches stainless steel was the subject of the paper: Porsche AG for the Carrera GT (shock absorbing components); Saab and Volvo for a bumper system using high resistance stainless steel; Pininfarina for the vehicle called "Nido" in which stainless steel has been used massively for all the under-structure with really high safety standards in the case of crashes.
Furthermore, the Fiat Research Centre in its speech effectively illustrated the economic aspects linked to the technological-productive choices for a commercial vehicle.

PAGES 14/15

BEAUTIFUL, ELEGANT AND HYGIENIC: THAT'S HOW A STAINLESS STEEL POT IS BORN
(Bella, elegante e igienica: così nasce una pentola inox)

The pot described is 20 cm in diameter and belongs to the new line called "Oasi" (fig. 1). Simple and linear, it features a curl inside the rim to harden it. The curl is hermetically closed by a food silicone seal.
How is the pot body made: you start from a EN 1.4301 (AISI 304) cold rolled disk, 412 mm in diameter, 1 mm thick, 2B surface finishing, got from a coil (lubricated), with a mechanical 120 ton press.
By drawing the disk with a 250 t oleo-dynamic press, you obtain a can with a 240 mm diameter, 130 mm high and a drawing range of 7 mm (fig. 2).
It is then lengthened taking the diameter from 240 to 202 mm, and the height to 170 mm. This is followed by washing/degreasing to eliminate all traces of lubricants.
Production of the thermal diffusion base: the disk for the production of the base, which contains a 99.5% pure aluminium tablet, is in ferritic stainless steel EN 1.4105 (AISI 430) with a diameter of 202 x 0.8 mm thickness and is cut from coils by a 110 t mechanical press. The disk is placed on a 60 t press and drawn, obtaining a semi-finished product measuring 162 mm in diameter, 6.8 mm high. The braze welding operation is carried out by induction machines (fig. 3), raising the base's temperature to 560° C.
Creation of the curl rim: the can with the welded base is taken to the curling machine where the first deforming of the rim will take place followed by annealing, to eliminate work hardening due to the preceding phases, by a second washing and by curling (fig. 4).
The final finishing phases: the following phases are those for external and internal satin finishing and of the base, and handle welding.
Production of the lid: to produce the lid, you start from a EN 1.4301 (AISI 304) disk 280 mm in diameter, 1 mm thick and 2B surface finishing.
The first operation is the drawing one, with a 100 ton hydraulic press, followed by: flanging, parting of excess material, internal and external satin finishing, welding of the knob and washing.
Production of handles: the handle (fig. 5) is produced by using a laser cut stainless steel EN 1.4301 (AISI 304) plate, 22 x 5 mm. The handle is always satin finished.

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▌Design: Tarcisio Zani, Manager Design Department.

PAGE 16

STAINLESS WATER BLADES
(Inossidabili lame d'acqua)

The "Water-blade" series, designed by Peter Jamieson, combines pleasant aesthetics and innovative design with size flexibility and good functionality. The particularly square, angular lines were inspired by a blade, both for the tap itself and for the water movement.
Traditional taps are mounted on a stainless steel EN 1.4301 (AISI 304) support with polished or brushed finishing. These modular supports can be equipped with shower holder and other fittings like toothbrush holder etc.
The chamfering of the taps' concave corners, the particular sober line, together with the hygiene aspect and how easy they are to clean make this tap series a particularly successful product.
Bottom left – Water-blade tap for basin, with object-holding shelf.
Top right – Water-blade tap for shower. The jet, gentle to the body, reminds you of a waterfall.

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