
CIRCULAR INNOVATION



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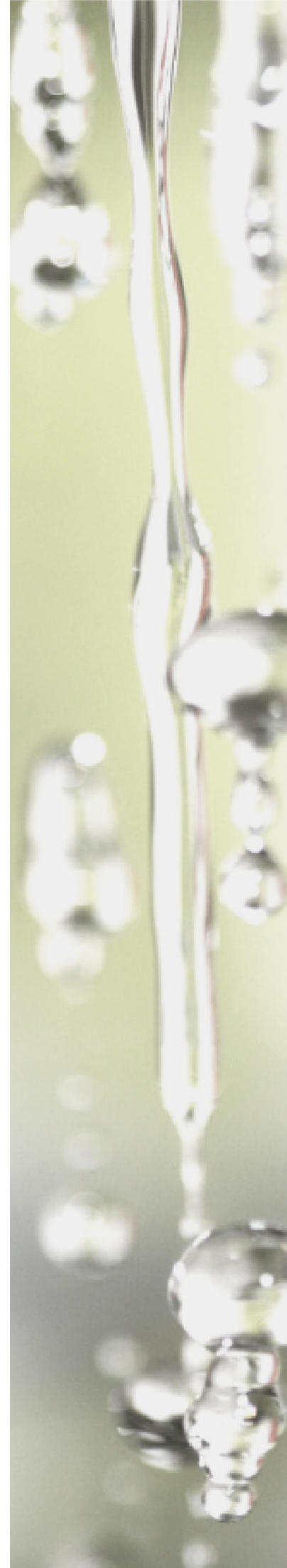
SODAI S.p.A. is an **environmental engineering** and **water management** company operating in the purification and treatment of primary waters and process fluids sector.

Our Clients are offered an integrated **Environmental Service thanks to our know-how developed and consolidated in more than 30 years of our experience.** Our mission is to optimize the purification efficiency and solve industrial problems concerning Sustainability.

What distinguishes us is our solid reputation and the quality of processes and technologies. In 2019 we have integrated the know-how and references of Italtveco group.

Today we are present in 28 countries being proud of having in our portfolio leading companies operating in different sectors such as Oil, Gas and Power, - in operating centers of ENI and ENEL -, Transport where, for over 15 years Sodai has owned and managed, the ownership to the discharge, its water treatment plants in Trenitalia and Trenord workshops.

**“Strength, heart, ingenuity.
An active and constant confrontation with the environment, aimed at pursuing the green spirit that permeates Sodai’s roots.”**



Partnership and exclusivity

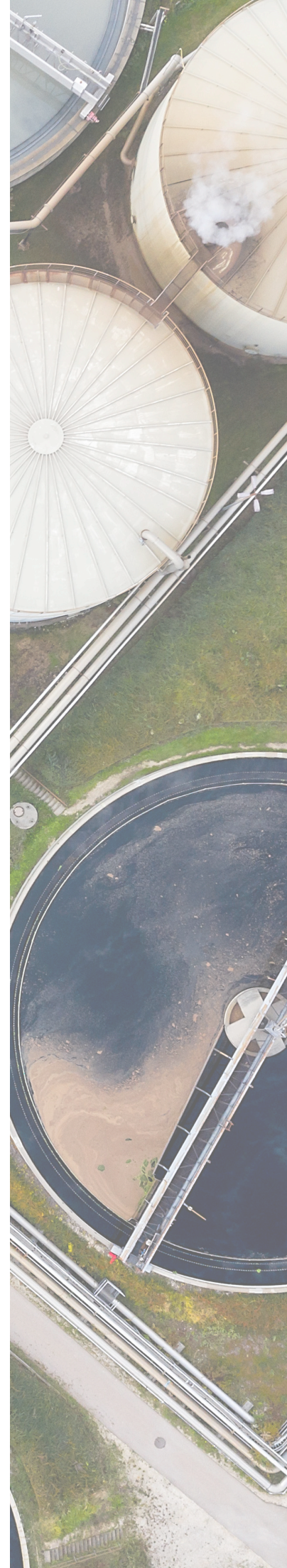


Believing in associative values as a base of the company growth, Sodai is associated with **Assolombarda** and **Assoreca**, members of **Confindustria** (Italian Entrepreneurial Association).

In 2012 Sodai incorporated the **EcoBioProcessing**, a Clean Tech Company specialized in the design and supply of Membrane Separation Systems and the most advanced treatment systems for gaseous waste, waste waters and industrial use processes.

Sodai holds an exclusive **Paques** license, a world leader in anaerobic treatment of high load wastewater and in the de-sulphurization of gases. The exclusive collaboration with Paques allows us to draw on the experience gained in over 40 years of activity in the construction of over 1,200 plants.

Sodai has always collaborated with the main National and International Polytechnics and University Institutes to complement its internal **Research and Development** path.



Quality, innovation and sustainability

Quality is the synonym of transparency and safety, two fundamental elements for the development of a reliable and satisfying service. Therefore, for several years, quality has meant to us the decrease of environmental risks together with the reduction of production costs.

- Certified by SOA, ISO 9001, ISO 14001, ISO 45001
- National Register Of Environmental Managers Cat.8E
- Accredited as an official NATO and UN supplier
- Qualified as a supplier, among others, of the ENI group, Saipem, Enel, Gruppo FS and Leonardo
- First in Italy to have traced the waste supply chain in the blockchain

Our innovative processes recover raw materials used in production and purified water from the industrial discharges: a new conception of the purification processes with zero impact and a high social and territorial value.

Our circular economy approach has planned “TAKE-MAKE-REUSE” cycles which reduce and transform waste into reusable materials.

The recycling of water is no longer a choice, it is a necessity.

- Low environmental impact
- Reduction of production costs for clients
- Recovery of raw materials destined for disposal
- Low workers' health and safety risks



Solutions

Plants and Services

01

Tailor-made plants

SODAI deals with the study, design and construction of “Tailor-made” systems, able to respond to the different needs of the customer. Studies, design and realisation of plants able to respond to different needs of the client: desalination, potabilization, purification, water reuse, zero liquid discharge and treatment of process fluids are only a few of Sodai’s technologies which the company continues to specialize in.

03

Plant management

Flexibility, technologies, competence to ensure a reliable and efficient service H4,7/7. An integrated approach towards environment enables the company to offer an Integrated Full Risk Management, at a certain fee, which optimizes purification efficiency and minimizes management costs. Having an only interlocutor whom to entrust the complete responsibility of their plants minimizes risks and guarantees compliance with the regulations.

02

Standard plants

The construction of containerized “Standard” or skid-mounted plants, assembled and tested in our workshop, sent to final destinations and started up with plug&play solutions. The plants present on the world market for many years guarantee excellent operating results. Modularity, easy installation, fast commissioning, remote monitoring and assistance.

04

Global service

An only point of reference for all types of water and fluid process treatment, able to offer integrated turnkey solutions for design, construction and management, also in terms of long-term loan/rental. A Company able to replace itself in the civil and penal responsibilities to the Customer, thanks to the taking in charge of the Environmental authorizations, as well as making investments directly for the construction of new plants, in an all-inclusive fee/tariff.

Main references

OIL&GAS

Among the gained experiences in the Oil&Gas sector and the green fuels production, in the prospective of decarbonisation and energy transition, Sodai has designed, constructed and manages up to now the biggest Italian zero discharge purification plant of waste waters deriving from the production of second generation Bioethanol. The plant, the only one of its kind in the world and built with new technologies, treats primary and waste waters of the Versalis di Crescentino (VC) - 200 m³/h – recovering and recycling the total amount of water.

Sodai, present since 2014 at the Eni refinery in Sannazzaro de Burgundi, has implemented with its technologies and manages the TAF, Demi and Water Reuse plants, with particular attention also to the recovery of the functionality of the membranes.

TEXTILE INDUSTRY

In the textile sector, Sodai has studied, designed and realised, among others, the waste water purification plant and the high-concentration soda process at the Italian plant of Alcantara. Thanks to the innovative technologies developed by the R&D Department, the plant ,apart from water, is able to recover and purify caustic soda from the process fluids and return it back into the production so as to guarantee both an important saving of raw materials and water resources, as well as the containment of discharges: a real example of Circular Economy with a really interesting pay back for the final customer and for the environment.



TRANSPORT

Sodai, since 2004, has been the consolidated partner of Trenitalia and Trenord for the water management of the rolling stock maintenance workshops. The ownership of assets, the ownership of authorizations for discharges, AUA and AIA, together with an integrated full risk management at a rate, are an example of Management and Integrated Solutions which are innovative and easily replicable even for new Clients, with guaranteed satisfaction.

ORGANIC MATRIX

As part of the enhancement of organic matrix, with particular reference to the digestate sector, Sodai builds plants with its own Deepest® technology, in an “Integrated Solution” mode. The DEEPEST® membrane system allows to separate the mainly organic and nitrogenous components, in particular from OFMSW digestate, in the anaerobic digestion phase. These matrixes can be effectively directed to the composting phase in which they become a source of carbon and nitrogen. In particular, the nitrogenous fractions can also be subject to specific dedicated treatments aimed at the production of fertilizers.

PHARMACEUTICAL AND COSMETICS

Sodai manufactures ultrafiltration membranes, in AISI with an internal titanium liner, which have unique properties of their kind and with top-level performance, superior to any other type of membrane. Sodai has already successfully applied this particular type of membrane, among others, in the pharmaceutical sector, also in the water process, as in the case of the treatment of fermentation broths.





DESALINATION

Thanks to a continuous research, Sodai can offer the best technological solutions of desalination plants. With an over 30-year-old international experience we have designed and built Inverse Osmosis desalination plants both for sea and salty water among them the Mossi&Ghisolfi plant in Texas for the production of potable and industrial water used for the production of PTA and PET. The plant, built with advanced technologies treats 40.000 m³/day.

Solutions for the recovery and enhancement of salts have already been developed by Sodai's R&D sector, in the prospective of Circular Economy and in compliance with the increasingly stringent regulations, worldwide, on discharges into the sea.

ROWPU

The ROWPU (*Reverse Osmosis Water Purification Unit*), are containerized systems for potabilization and waste water treatment designated for municipalities and communities or used in emergency camps by Humanitarian Organisations. The easy installation enables immediate operativity of the plant and its modularity makes a parallel installation possible thus being able to reach a required potential. The plants are equipped with a plumbing and electric system, they are insulated, air-conditioned and with indoor lighting. Sodai has been a supplier of ,amongst others, the US Army since 2003 in Iraq and Afghanistan, the UNO in Central Africa and on loan plants in Italy, South America and East Europe.



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