WASTEWATER TREATMENT

Strategies to optimize sludge management

FOGGIA

Platform for the anaerobic treatment of sludge derived from wastewater purification

The project is part of the circular economy, enhancing the residual energy content of organic sludge through the production of biogas and biomethane via anaerobic digestion. This is then purified and used for energy generation in a cogeneration section. Additionally, the project involves the production of either lignite through hydrothermal carbonization or a dried solid material for construction, and the production of purified water intended for irrigation purposes.

PROJECTS

TECHNICAL DATA

SLUDGE TREATMENT SECTION

Treatment capacity
50.000 t/year
Wastewater treatment and purification
300 m³/day
Potential biogas production
3.800.000 Nm³/year
Cogenerator
Electric power 1.200 kW
Thermal power 1.239 kW

CONTAMINATED SITES

Decommissioned industrial areas and remediation

MARINA MILITARE - AUGUSTA

Industrial decommissioning and environmental restoration

The Punta Cugno fuel depot includes five areas with tanks for the storage of approximately 240,000 tons of naval fuel, now disused and in poor condition, causing fuel residue leaks. The remediation activities include a general survey of the site and structures, identification and classification of waste, topographic surveys with drones (SAPR), quantitative and qualitative assessments of the waste present in the tanks, and analysis of the degradation state using ultrasonic thickness testing.

PROJECTS

TECHNICAL DATA

PUNTA CUGNO

Group I ~ 270,000 sqm, 8 underground tanks of 10,000 m³
Group II ~ 192,000 sqm, 6 semi-underground tanks of approximately 10,000 m³
Group III ~ 194,000 sqm, 5 tanks, capacity: 50,000 tons
Group IV ~ 131,000 sqm, 5 tanks, capacity: 50,000 tons
Group V ~ 36,000 sqm, 1 unfinished concrete tank

URBAN AND INDUSTRIAL WASTE

Recovery and enhancement of plastic, paper, aluminum

SMART STIR

Technological modernization of mechanical-biological treatment plants (STIR) for unsorted waste in the Campania Region

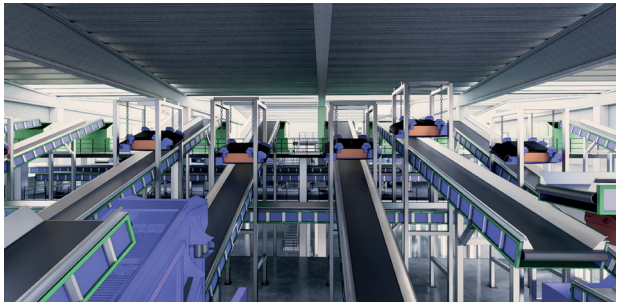
The project currently under development aims to revamp the treatment lines of the Stir facilities in Tufino, Giugliano, and Caivano. Today, the new regional objectives include the creation of highly automated lines that allow the recovery of plastic materials sorted by polymer type, as well as ferrous and non-ferrous materials.

PROJECTS

WORK IN PROGRESS

TECHNICAL DATA

Recovered materials
PET, HDPE, PP, PS, PVC: 12%
Iron aluminum 2%
RDF 46%



AIR QUALITY AND TREATMENT

Environmental monitoring

DRONES WITH SNIFFER SYSTEM

Field services and post-processing
Use of advanced equipment

We use technologically advanced drones, equipped with multispectral sensors capable of recording data related to humidity, pressure, temperature, and gases such as carbon dioxide, carbon monoxide, methane, and hydrogen sulfide, also recording the temperatures of the individual gases detected.

SERVICES

TECHNICAL DATA

MEASURED GAS RANGE OF MEASUREMENT

CO 0-2000 ppm **O_2** 0-25%
NO 0-250 ppm **NO_2** 0-30 ppm
SO_2 0-20 ppm **NH_3** 1-100, ppm
H_2S 1-100 ppm **ETO** 0-20 ppm
Cl_2 0-10 ppm **VOC**
Air quality Various
CO_2 1-5000 ppm **CH_4** 1-5%

We are an engineering company operating in the **ENVIRONMENTAL** sector, specializing in industrial waste-to-energy platforms, environmental remediation, water treatment, and renewable energy.

PROJECTS

WORK IN PROGRESS

INTERNATIONALIZATION

We operate in several countries, collaborating with government institutions and local industries. With this approach, we have established the OWAC Environmental Development Hub (OWAC_EDH) to connect specific expertise, research institutes, and the best technologies to address environmental issues in a cross-cutting and global manner.

CERTIFICATIONS

ISO 9001:2015
ISO 45001:2018
UNI/PdR 74:2019
ISO 14001:2015
UNI/PdR 125:2022

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PALERMO
October 1st - 4th

SIDISA 2024

XII INTERNATIONAL SYMPOSIUM ON ENVIRONMENTAL ENGINEERING