

HYDROITALIA – COLSEN S.r.l.

Complete technology for the thermophilic anaerobic digestion of industrial organic waste. Full treatment of digestate.

Industry sector and target group:

Designing and providing technologies for anaerobic digestion

Food and agricultural industry.

Processing industry.

Municipalities and waste-water treatment plants

Description:

Thermophilic anaerobic digestion technology able to treat a wide range of waste/industrial waste through innovative management system of the product. This technology allows a complete treatment of digestates ensuring the possibility of discharging directly the effluent into public sewage system into surface waters, in accordance with the parameters established by the regulations in force for waste waters (Table A e C, Dlgs. 152/06)



Innovative aspects & advantages:

Hydroitalia – Colsen technology allows to treat waste/industrial waste in a thermophilic digester with retention times shortest (20 days) than traditional mesophilic systems (40-60 days). This is achieved through the use of specific classes of bacteria (thermophilic bacteria) and through the implementation of innovative solutions for handling and heating the system. In addition, for the first time a complete system is provided for liquid digestate treatment able to ensure, at the same time, both a totally purified effluent and water recovery. The used technology gives digestate characteristics of stability and pasteurization so as to allow locations even nearby civil areas.

Sustainability aspects:

The possibility of treating industrial waste and production scraps gives this system characteristics of high sustainability, by decreasing the production of waste, by making easier the disposal and by making possible their transformation into a source of energy.

In addition, post treatment provides a complete purification of the digestate contributing in this way to mainly reduce transportations and purification problems and allowing to recover all the water in the liquid fraction of digestate.

Costs

Low operating costs and high profits thanks to a general reduction of costs for discharging/handling waste/industrial waste and thanks to the production of utilities (electric energy, thermal energy, and water).

Application examples:

Treatment of every kind of organic industrial waste: waste production from food industry, food scraps, slaughtering scraps, vegetable waste products, civil sewage sludge, municipal and industrial waste waters etc.

Company / R&D centre submitting the solution:

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