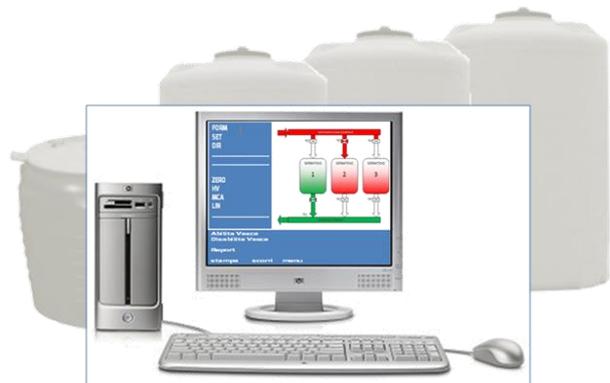


WDS waste disposal plant allow to manage discharges of wastewater from departments of Nuclear Medicine and Radiation Therapy Metabolic up to decay below the limits established by legislation.

They consist of a series of tanks where the liquid remain until the complete decay, and hydraulic and electronic groups that allow you to securely manage the system.



BASIC MODULES

- DARK WATER SORTING AND DEPURATION WASTE MODULE
- SORTING WATER MODULE
- DECAYS MODULE
- LEVELS MODULE
- OVERFLOW MODULE
- OUTLET MODULE
- ELECTRICAL AND PNEUMATIC POWER MODULE
- COMPUTERIZED MANAGEMENT MODULE
- SAMPLE AND GAMMA SPECTROMETRY MODULE

OPTIONAL MODULES

- UNLOAD LIFTING MODULE
- LOAD LIFTING MODULE
- IMHOFF LOAD LIFTING MODULE

DEPURATION MODULE

This module allows to sort the sewage from the Department into the first or the second Imhoff.

Inside the Imhoff converter takes the sedimentation of solids contained in the sewage and the biological stabilization of organic matter sedimented (anaerobic digestion)

The microcontacts located on the sorting valve indicate to the operator the Imhoff in use.

The level probes present on each Imhoff indicate to the operator when the Imhoff is clogged and must switch the flow on the second.



DECAYS MODULE

The module is generally composed of tanks in high density polyethylene, but other configurations are possible with different types of tanks. In the standard configuration, the volume of the tanks of decay is between 1,000 and 10,000 liters.

Unlimited configurations are possible, some of which may be obtained by connecting in parallel one or more tanks, depending on the space available. The tanks are provided with flanges for the installation of the pipe fittings, relating to the various functional modules. The residence time in the tank is determined by the amount of radioactivity present in the discharged liquid and by the half-life of radioisotopes present.



FUNCTIONALS MODULES

For the automated management of the plant are installed some functional modules which allow to manage the facility, the safeties and control of the functioning in every instant.

In particular will be checked continuously levels, the status of the valves, the status of the power supply, the load and the sampling of all modules of decay.

Additional functional modules are laid down in the case that there are differences in height to be overcome between the various components of the system.

All safety devices are sized to prevent flooding, overflowing drains or undue liquids not yet decayed.

The control system is possible at a distance.



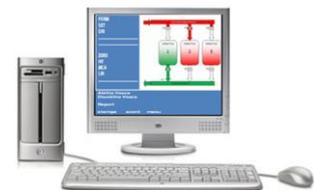
MANAGEMENT COMPUTERIZED MODULE

The Management Computerized Module allows the complete remote control of the Plant.

All the operations of sampling, measure, unload, exclusion tanks, are possible without the presence of the operator in the plant room.

The Management Computerized Module is composed of pages that represent schematically the system, and allow an intuitive management.

On the same control PC is installed a gamma spectrometry with multichannel analyser system.



MEASUREMENT SYSTEM WITH MULTICHANNEL ANALYZER

Allows to determine the type and the amount of radioisotope present in each tank of decay. The dedicated software allows the determination of the activity, and the concentration of each of the isotopes present through the analysis of the regions of interest. The data is sent to the PC via Ethernet.

The system includes a NaI (TI) 2 "x 2" probe with high voltage generator, preamplifier, amplifier and analog circuit for the stabilization of the spectrum without the use of radioactive sources.

Software for data acquisition, representation and analysis of the spectra.

Software for the energy and efficiency calibration of the probe.

Storage of measures and report generation exhaust.

