Continuous biological wastewater treatment system

Product overview

The highly infectious wastewater inactivation system is a system that uses physical high-temperature heating to sterilize live and toxic wastewater in three-level (BSL-3) and four-level (BSL-4) biosafety laboratories or vaccine workshops. This system can Continuous and uninterrupted operation, small footprint, more practical for inactivation treatment of live and toxic wastewater with large output.

◎ Biological principle

Using Ultra High Temperature technology, the waste water is heated to 135 - 160 ℃ by using steam as the heating medium in the continuous flow state through the exchanger, and kept at this temperature for a certain period of time to reach the aseptic level.

◎ Equipment introduction

Heat exchanger: The core device of continuous equipment is the heat exchanger. Our company uses imported fully welded single-pipe heat exchangers, which cannot be disassembled to ensure the safe operation of the equipment. At the same time, the structure of the single pipe makes the waste water always flow in one direction in the pipe. If the pipe is blocked and the flowing water drops, the equipment will start the automatic cleaning program at this time.

◎ Valve design

The valves of the whole system adopt diaphragm valves, and there is no sealing ring between the valve body and the rotating shaft, so there will be no liquid retention or leakage.

◎ Selection of instruments and meters

Temperature probe with stainless steel protective sleeve; pressure gauge, hygienic clamp connection, with diaphragm.

◎ Piping system

All pipelines are welded to prevent liquid leakage.

◎ Main features of the equipment

◆ High security. No pressure tank is used, there is no safety valve, and there is no possibility of safety valve leakage. In the event of an accident, there is no overflow of accumulated waste liquid.
◆ Small footprint. It can treat waste water uninterruptedly, heat up and sterilize, and cool down quickly. It is suitable for laboratories and vaccine manufacturers with large waste water production.
◆ All pipelines of the equipment are well sealed, which is more suitable for the treatment of waste water in laboratories with high safety levels.
◆ Strong adaptability. Can be based on precise condition temperature without changing equipment.
◆ The equipment has multiple detection procedures to ensure trouble-free operation.
◆ Strong descaling ability of the system. The equipment is equipped with a CIP cleaning interface at the end of each process pipeline. If the flow rate becomes small due to blockage, automatic descaling can be performed.
◆ Advanced control system, simple and visual operation. Our company's control system adopts Siemens PLC control system, which adopts automatic control and switching for the whole process of inactivation, and realizes the whole state in real time through the touch screen, and has the function of printing the running data at the same time.