



Electric power has always been the main clean energy source for economic construction and urban development, and it has attracted much attention. Nowadays, the electric power is mostly generated due to the combustion of fossil fuels besides a several of other new energy sources. Therefore, the stable operation of large generator sets and related equipment has become a guarantee for the normal operation of electric power production. With the increase in the production efficiency and other functions of such large generator sets and corresponding equipment, the standards for the water quality used are becoming more stringent.

With the continuous development of economy and science and technology, various water treatment technologies and processes are constantly being produced. Meanwhile, there are clear restrictions on water quality requirements in power plant water treatment. Such as, the phosphate content and pH value in water have stricter requirements than before. Moreover, there have been great breakthroughs in equipment, production, processes and testing methods. That laid the foundation for more scientific and rational chemical water treatment. The layout of equipment in traditional generating station is mainly in a unitized and decentralized state according to its use. This arrangement lacks the effective and reasonable use space and wastes resources way too much. Moreover, the long pipeline line causes excessive energy consumption during the transportation process. These are not for actual production and management needs. Nowadays, all type of factory layouts are gradually developing in three dimensions. Equipment is centrally arranged. This not only saves space but also increases the utilization of the equipment.

Traditional [chemical water treatment](#) systems usually use human-based on-site monitoring to achieve day-to-day management of the production site. Unnecessary accidents dued to human operation delays. With the development of push-button control, automation and computer technology, programmable logic controllers (PLCs) are widely used. Using PLC to realize data acquisition and control of each device. Chemical water treatment system enables centralized monitoring, operation, and control. The emergency response of the emergency situation is realized through the chain control.

Generating station water consumption is severe in actual production. Just to react to environmental requirements, water resources must be used effectively. Nowadays, some generating station with a higher degree of automation have basically achieved zero discharge of wastewater. This not only achieves the purpose of saving water but also avoids environmental pollution.

Common processes for chemical water treatment in traditional generating station include filtration and sedimentation, dosing and concentration, etc. These water treatment methods are relatively backward. As technology advances, some new water treatment technologies are

related to generating station. Like ion membrane, ultrafiltration, reverse osmosis and other technologies. These new technologies provide effective technical support for chemical water treatment in power station.

With the advancement of technology, various online detection technologies and detection accuracy have been developed and improved. This guarantees the online monitoring of the chemical water treatment system of the powerhouse. This is useful to the prevention of water quality beforehand. It effectively ensures the long-term normal operation of the equipment.