

Product Name :
Activated Sludge Process**Product Code :**
FUDE0070**Description :**

Activated Sludge Process

Technical Specification :

The activated sludge process is the most important biological process in water treatment. CE 705 enables this process to be demonstrated.

A pump delivers raw water contaminated with dissolved organic substances (organic matter) into the aeration tank. Aerobic microorganisms (activated sludge) in the aeration tank use the organic matter as a source of nutrition, biodegrading it in the process. Since aerobic microorganisms need oxygen, the raw water is aerated in the aeration tank. The activated sludge is mixed with the raw water by stirring machines. In the secondary clarifier the activated sludge is then separated from the treated water by sedimentation. A portion of the activated sludge is returned to the aeration tank (return sludge). The treated water is collected in a tank.

It is also possible to convert ammonium into nitrate (nitrification) and nitrate into nitrogen (denitrification). For denitrification a zone without aeration can be created in the aeration tank by installing a partition wall.

The following flow rates are adjustable: raw water, return sludge, internal recirculation for pre-denitrification and air. Oxygen concentration, pH value and temperature can be controlled.

A software program is provided to display the operation states and measure data. A process schematic shows the current operating states of the individual components and the measured data.



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