WATER TREATMENT

Alba Escoruela
Valeria Gil
Daniel Martí
INDEX

• Water treatment process
• Main water treatment plants
• Pinedo’s water treatment plant
• El Saler’s water treatment plant
• Quart-Benàger’s water treatment plant
• Statistical figures
WATER TREATMENT PROCESS
PRETREATMENT
In the first step a progressive selection is made to eliminate the foreign bodies which are in the water. Chlorine gas or diluted permanganate potassium are used in the first phase of cleaning.
COAGULATION-FLOCCULATION:
In a second step we must separate the particles floating in the water in order to remove them. In order to favor the sedimentation of particles occurs at dosing of chemicals, while agitation is done in order to facilitate the mixing thereof with untreated water. In the first stage of this phase, known as the coagulation we proceed to the destabilization of the charge on the particles present in the untreated water.

In the next step, called flocculation, proceeds to the dosing of a chemical called flocculant, and is aimed accelerate the aggregation process and destabilized particles in the coagulation step, forming larger clusters with a higher speed sedimentation.
DECANTATION
Once the water is focculated, it goes to the sedimentation containers. They are called decanters, where the flocs are separated because of the gravity action. The mud settled at the bottom of the decanter is extracted through the purge line.
The mud from the purge of the decanters, as well as the washing filters are carried to the mud thickener. The concentrated sludge is pumped up to a centrifugal equipment which allows to reduce the amount of water which is in the sludge, thereby the volume of water is reduced and it makes easier to handle and its transport is cheaper.
Once the containers are full, they are carried to a landfill.
FILTRATION ON A BED OF SAND:
The decanted water still contains microflocs that are retained in the filter sand bed.
DESINFECTION AND PUMPING
At the end of the process water is provided with chlorine dosage to ensure it is drinkable. Finally, water is pumped to the network water distribution.
MAIN WATER TREATMENT PLANTS IN SPAIN
EL SALER'S WATER TREATMENT PLANT
QUART-BENÀGER'S WATER TREATMENT PLANT
In the chart corresponding to 2007, Spain is one of the last countries in water treatment.

However, nowadays they are doing new plants and more moneys is invested to make water drinkable and treated water is used more frequently.