

Griñón drinking water treatment plant

IN SERVICE SINCE

- 2008

BACKFITTING

- Alberche River (Picadas reservoir)
- Batres well field
- Guadarrama well field

WATER SOURCE

- 0.94 m³/s

WATER TREATMENT

STAGES OF THE PROCESS

- Preoxidation-prechlorination
- pH adjustment (reduction)
- Elimination of odours and flavours (PAC)
- Coagulation-flocculation
- Subsidence
- Rapid sand percolation
- Final pH adjustment
- Disinfection

REAGENTS USED

- Sodium hypochlorite for preoxidation and prechlorination
- Hydrochloric acid to reduce pH (precipitation of arsenic)

- Powdered activated carbon (elimination of odours and flavours)
- Aluminium salts during the coagulation phase
- Flocculation aids
- Sodium hydroxide in the pH adjustment phase
- Ammonia and hypochlorite solutions (chloramines) in the final disinfection phase

RELEVANT TECHNICAL DATA

- 1 microflocculation line with 1 fast-mixing chamber of 87.5 m³ and 2 flocculation chambers in series of 386 m³ each
- 2 physicochemical treatment lines, comprised by a total of 2 fast-mixing chambers of 87.5 m³ each, 2 flocculation chambers with a unit volume of 785 m³, 2 lamellar clarifiers with a volume and unit area of 1,106 m³ and 2,003 m² respectively
- 8 sand filters with a unit area of 93.19 m² and a total area of 745 m²

TREATED WATER TRANSPORT CHANNEL

- It supplies storage tanks in Getafe and Batres in addition to the Griñón network



SLUDGE TREATMENT

TREATMENT CAPACITY

- 2,600 m³/day:
 - 2,500 m³/day from filter washing
 - 100 m³/day from settling tank purges

STAGES OF THE PROCESS

- Subsidence: by means of 2 lamellar clarifier units
- Thickening: by means of 2 flotation units
- Mechanical dehydration: by means of 2 centrifuge units
- Storage in a 15 m³ capacity silo

RELEVANT TECHNICAL DATA

- 2 lamellar clarifiers with unit volumes and areas of 44 m³ and 14.5 m³, respectively
- 2 floaters with a unit capacity of 8 m³/h
- 2 sludge centrifuges with a flow rate capacity of 5 m³/h

FINAL SLUDGE DRYNESS

- 15-20%

