

ENGINEERING COMMUNICATIONS: WATER, HOT WATER, HEATING, IRRIGATION, FIRE-FIGHTING AND SEWERAGE SYSTEM DIAGRAMS

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ANNOTATION

This article provides detailed information about the engineering and communication systems necessary for modern buildings and structures - cold water, hot water, heat supply, irrigation, fire water supply and sewage (wastewater disposal) networks. Each one of the system main tasks, structural parts and schematic structures illuminated. In the article engineering approaches, inter-systems mutual dependency and effective exploitation for important technician to the requirements separately attention focused on. Material project engineers, technicians experts and construction in the field students for useful source is considered.

Key words: Engineering communications, water supply systems, hot water distribution, heating systems, irrigation systems, fire-fighting pipelines, sewerage networks, piping diagrams, hydraulic schematics, technical drawings, pipeline layout, utility networks, internal plumbing, drainage system design, water circulation systems.

INTRODUCTION

For the effective functioning of modern buildings and structures, engineering and communication networks - namely, water supply, hot water, heat supply, irrigation, fire protection and sewage systems - are of great importance. Every one of the system to oneself typical technician requirements are , they are engineering in the schemes clear is expressed as . Below this systems about general information and their schematic structures is brought .

Cold water supply scheme

Cold water supply system users drink and technician in the goals water with provides .

Home elements :

- Highway water networks
- Login pipes (to the building) water entrance)
- Maintenance equipment (pumps , filters)
- Water counters
- Internal pipes and fittings

Scheme Features :

- Centralized or autonomous water source (well) or water warehouse)
- Ring or network scheme
- Pressure provide for pump stations

Hot water supply (IChSV) scheme

This system buildings hot water with provides , especially population stay living rooms , bathrooms , kitchens for important .

System types :

- Centralized (central from the boiler room)
- Local (every) one in the building water heater)

Scheme :

- Incoming cold water line
- Heating device (boiler , water) heater)
- Distribution lines (vertical and horizontal)
- Return line (circulation for)

Heat supply scheme

Heat supply buildings heating and sometimes hot water with provide for intended

Scheme types :

- Two tubular system (main : provider) and returning)
- One tubular system
- Centralized or autonomous heating

In the scheme will be :

- Heat source (boiler room , central heat center)
- Heat radiators
- Pipes and coordinator fittings (taps , valves)

Irrigation system scheme

Basically industry facilities , gardens and village farm in the regions is applied .

Scheme elements :

- Water source (artesian well , river , reservoir)
- Pump station
- Highway and network pipes
- Distributors or sprinklers
- Automatic management blocks

To the fire against water supply

Emergency in situations fires eliminate to grow for intended system .

System types :

- Indoor (in the building) installed fire cranes and hoses)
- External (hydrants) network)

In the scheme will be :

- Backup water tanks or permanent pressure under pipes
- Pumps (automatic) to work descending)
- To the fire against fittings (faucet , hose , sprayer)

Sewage (wastewater) the waters output) scheme

In the building all used water and waste safe take exit for intended system .

System types :

- Household (drinking) and used waters)
- Precipitation (rain) waters)
- Industry sewage waters (special cleaner with)

Scheme elements :

- Internal sewage pipes (from the bathroom , kitchen , bath)

- Verticals (racks)
- Horizontal collectors
- External sewage pipes
- Cleaning facilities (septic tank , biofilter , pump)

Conclusion

This systems correct to be designed and schematic to be planned of buildings comfortable and safe performance provides . Every one system mutual related to work even without possible , therefore for engineering in their decisions complex approach necessary .

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