

- .15 **Storage and Service Reservoirs.**
 - .151 Surveys; design.
 - .152 Surface.
 - .152.1 Earth.
 - .152.11 Open.
 - .152.12 Covered.
 - .152.2 Masonry; concrete.
 - .152.21 Open.
 - .152.22 Covered.
 - .153 Elevated.
 - .153.1 Tanks.
 - .153.11 Wood.
 - .153.12 Iron; steel.
 - .153.13 Masonry; concrete.
 - .153.14 Other materials.
 - .153.2 Standpipes.
 - .153.21 Wood.
 - .153.22 Iron; steel.
 - .153.23 Masonry; concrete.
 - .153.24 Other materials.
 - .154 Adjuncts.
 - .154.1 Inlets.
 - .154.2 Outlets.
 - .154.3 Overflows.
 - .154.4 Drains.
 - .154.5 Regulators; automatic valves.
 - .154.6 Other devices.
 - .16 **Canals, Conduits and Aqueducts.**
 - .161 Surveys; designs.
 - .162 Open canals.
 - .162.1 Unlined.
 - .162.2 Lined.
 - .162.3 Flumes.
 - .162.31 Wood.
 - .162.32 Metal.
 - .162.33 Other materials.
 - .163 Closed conduits.
 - .163.1 Tunnels.
 - .163.11 Unlined.
 - .163.12 Lined.
 - .163.2 Aqueducts.
 - .163.21 Stone; brick.
 - .163.22 Concrete.
 - .163.3 Pipe lines.
 - .163.31 Wood.
 - .163.32 Iron; steel.
 - .163.33 Other materials.

(For mains and services, see 628.17 below).

 - .164 Adjuncts.
 - .164.1 Gates; valves.
 - .164.2 Relief valves.
 - .164.3 Air valves.
 - .164.31 Inlet.
 - .164.32 Outlet.
 - .164.4 Blowoffs; drains.
 - .164.5 Other adjuncts.
- .17 **Mains and Services.**
 - .171 Surveys; designs.
 - .172 Mains.
 - .172.1 Cast iron.
 - .172.2 Wrought iron; steel.
 - .172.21 Seamless.
 - .172.22 Welded.
 - .172.23 Rivetted.
 - .172.24 Lock bar.
 - .172.25 Other types.
 - .172.3 Wood.
 - .172.31 Bored.
 - .172.32 Stave.
 - .172.4 Other forms of mains.
 - .173 Joints.
 - .173.1 Turned and bored.
 - .173.2 Flanged and bolted.
 - .173.3 Leaded.
 - .173.31 Poured.
 - .173.32 Lead wool.
 - .173.4 Wood wedges.
 - .173.5 Leadite.
 - .173.6 Other materials.
 - .174 Coatings.
 - .174.1 Angus Smith solution.
 - .174.2 Asphaltic preparations.
 - .174.3 Jute wrapping.
 - .174.4 Other methods.
 - .174.5 Electrolysis.
 - .174.51 Causes.
 - .174.52 Prevention.
 - .175 Accessories.
 - .175.1 Gates; valves.
 - .175.2 Hydrants.
 - .175.3 Hatch boxes for cleaning.
 - .175.4 Other details.
 - .176 Services.
 - .176.1 Lead; tin-lined lead.
 - .176.2 Tin.
 - .176.3 Wrought iron; steel.
 - .176.31 Black.
 - .176.32 Galvanized.
 - .176.33 Cement lined.
 - .176.4 Other materials.
 - .177 Appurtenances.
- .177.1 Shut-off cocks.
- .177.2 Other appliances.
- .18 **Removal of Impurities.**
 - .181 Sedimentation.
 - .181.1 Plain.
 - .181.2 With coagulant.
 - .182 Storage, effect on quality.
 - .183 Filtration.
 - .183.1 Slow sand filtration.
 - .183.11 Sedimentation basins.
 - .183.12 Filter beds.
 - .183.121 Drainage systems.
 - .183.13 Operating devices.
 - .183.131 Cleaning devices.
 - .183.131.1 Scrapers.
 - .183.131.2 Sand washers.
 - .183.131.3 Blaisdell machine.
 - .183.131.4 Other devices.
 - .183.14 Clear water basins.
 - .183.2 Rapid filtration.
 - .183.21 Coagulation basins.
 - .183.211 Chemical mixing devices.
 - .183.212 Chemical feeding machinery.
 - .183.22 Filter beds.
 - .183.221 Drainage systems.
 - .183.222 Washing systems.
 - .183.222.1 Blowers.
 - .183.222.2 Air storage tanks.
 - .183.222.3 Air piping.
 - .183.222.4 Mechanical agitators.
 - .183.23 Operating devices.
 - .183.24 Clear water basins.
 - .184 Disinfection; sterilization.
 - .184.1 By copper sulphate.
 - .184.2 By hypochlorite of lime.
 - .184.3 By hypochlorite of soda.
 - .184.4 By liquid chlorine.
 - .184.5 By ozone.
 - .184.6 By ultra-violet rays.
 - .184.7 By other methods.
- .19 **Special Water Works Appliances.**
 - .191 Trenching machinery.
 - .192 Cleaning apparatus for mains.
 - .193 Jointing machines.
 - .194 Tapping machines.
 - .195 Other devices.
- 628.2 **SEWERAGE.**
 - .21 **Preliminary Investigations.**
 - .211 Surveys; maps; plans; profiles.
 - .212 Borings; test pits.
 - .213 Population.
 - .214 Measurements; gaugings.
 - .215 Other data.
 - .22 **Sewerage Systems.**
 - .221 Isolated.
 - .221.1 Privies; latrines.
 - .221.2 Earth closets.
 - .221.3 Cesspools.
 - .221.4 Incinerators.
 - .221.5 Other devices.
 - .222 Collective.
 - .222.1 Pneumatic.
 - .222.11 Berlier.
 - .222.12 Liernur.
 - .222.13 Other systems.
 - .222.2 Water carriage.
 - .222.21 Separate.
 - .222.22 Combined.
 - .23 **Design.**
 - .231 Size.
 - .231.1 Sanitary sewers.
 - .231.2 Storm water drains.
 - .231.21 Formulas.
 - .231.22 Rational methods. (For rainfall data see 628.114).
 - .231.3 Infiltration; leakage.
 - .231.4 Other data.
 - .232 Shape.
 - .232.1 Circular.
 - .232.2 Egg-shaped.
 - .232.3 Horseshoe.
 - .232.4 Parabolic; semi-elliptical; catenary; basket handle.
 - .232.5 Rectangular.
 - .232.6 Other shapes.
 - .233 Velocity.
 - .233.1 In sanitary sewers.
 - .233.2 In storm water drains.
 - .233.3 Erosion.
 - .233.4 Grades.
 - .233.5 Other data.
 - .234 Ventilation.
 - .234.1 Sewer air; "sewer gas"; explosions.
 - .234.2 By omitting house traps.
 - .234.3 By use of perforated manhole covers, etc.
 - .234.4 By special shafts, etc.
 - .234.5 By connection to chimneys.
 - .234.6 By mechanical methods; fans.
 - .234.7 By other means.
 - .24 **Sewer Sections.**
 - .241 Pipe.
 - .241.1 Clay.
 - .241.2 Concrete.
 - .241.3 Jointing materials.
 - .241.31 Cement.
 - .241.32 Asphalt.
 - .241.33 Sulphur and sand.
 - .241.34 Cement and tar.
 - .241.35 Other materials.
 - .242 Brick; stone.
 - .243 Concrete.
 - .244 Wood.
 - .245 Other materials.
 - .246 In combination with other structures.
 - .25 **Appurtenances.**
 - .251 Manholes; lampholes; ventilating shafts.
 - .251.1 Regular.
 - .251.2 Drop.
 - .251.3 Special.
 - .252 Catch basins; gullies; inlets.
 - .253 Flush tanks.
 - .254 House connections.
 - .255 Outlets.
 - .256 Other appurtenances.
 - .26 **Special Structures.**
 - .261 Stream crossings.
 - .261.1 Bridges.
 - .261.2 Inverted siphons.
 - .262 Overflows.
 - .262.1 Weirs.
 - .262.2 Regulators.
 - .262.3 Other types.
 - .263 Flood and tide gates.
 - .264 Reservoirs; tank sewers.
 - .265 Pumping stations.
 - .265.1 Automatic.
 - .265.11 Compressed air.
 - .265.12 Electric.
 - .265.13 Other types.
 - .265.2 Non-automatic.
 - .265.21 Steam.
 - .265.22 Electric.
 - .265.23 Gas, gasoline or oil.
 - .265.24 Other types.
 - .266 Other special structures.
 - .27 **Special Construction Appliances.**
 - .271 Excavators.
 - .272 Material handling devices.
 - .273 Forms; centres.
 - .274 Jointing appliances.
 - .275 Unwatering devices.
 - .276 Other appliances.
 - .28 **Operation and Maintenance.**
 - .281 Cleaning.
 - .281.1 Scraping.
 - .281.11 Hand.
 - .281.12 Power.
 - .282 Flushing.
 - .282.1 Tank carts.
 - .282.2 By hand with hose.
 - .282.3 By damming sewage.
 - .29 **Other Material Regarding Sewerage**
 - 628.3 **SEWAGE DISPOSAL.**
 - .31 **Composition of Sewage.**
 - .311 Physical.
 - .312 Chemical.
 - .313 Bacteriological.
 - .314 Other data.
 - .32 **Disposal by Dilution.**
 - .321 Surveys; designs.
 - .321.1 Soundings.
 - .321.2 Current and tide observations.
 - .321.3 Stream flow.
 - .321.4 Other data.
 - .322 Outlets.
 - .322.1 Single.
 - .322.11 Non-submerged.
 - .322.12 Submerged.
 - .322.2 Multiple.
 - .322.21 Non-submerged.
 - .322.22 Submerged.
 - .323 Other data regarding disposal by dilution
 - .33 **Screening.**
 - .331 Coarse screens.
 - .331.1 Bar screens.
 - .331.2 Fabric screens.
 - .331.3 Horizontal.
 - .331.4 Inclined.
 - .331.5 Other types.
 - .332 Fine screens.
 - .332.1 Stationary.
 - .332.2 Moving.
 - .332.21 Cylindrical.
 - .332.22 Band.
 - .332.23 Other varieties.
 - .333 Other types of screens.