

Statutes

In exercise of powers conferred by sections 50 and 75 of the Hyderabad Metropolitan Water Supply & Sewerage Act, 1989 (Act NO.15 OF 1989), the Hyderabad Metropolitan Water Supply and Sewerage Board with the previous approval of the Government hereby makes the following Regulations, namely:

PART - I PELIMINARY

Short title and commencement: 1. These Regulations shall be called Hyderabad Metropolitan Water Supply & Sewerage Regulations 1992.

1. They shall be deemed to have come into force at once with effect from the date of issue.
2. (1) DEFINITIONS: In these Regulations, unless the context otherwise requires:
 - "Air Gap" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or fitting supplying water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle in a water supply system.
 - "Available Head" means the head of water available at the point of consideration due to mains pressure on over head tank or any other source of pressure.
 - "Back Flow" means the flow of water or other liquids, mixtures or substances into the distributing pipes of a potable supply of water system from any source or sources other than its intended source.
 - "Back Flow Preventer" means a device to prevent back flow into the potable water system.
 - "Back-Siphonage" means the flowing back of used, contaminate or polluted water supply system due to a lowering of pressure in such system.
 - "Branch" means any part of the piping system other than a main.
 - "Barrel" means that portion of pipe in which the diameter and wall thickness remain uniform through out.
 - "Bedding" means a layer of concret or suitable material on the trench floor to provide continuous support for the pipes.
 - "Benching" means the sloped floor of a manhole or any inspection chamber on both sides and above the top of the channel. Also the sloped surface around a manhole cover between the outer edge of the cover and the road surface.
 - "Bod" denoting Biochemical Oxygen Demand means the quantity of oxygen used in the biochemical oxidation of organic matter under standard laboratory procedure at 20oC expressed in milligrams per liter.
 - "Channel" means the open water way through which sewage, or other liquid wastes admissible flow at the invert of a manhole or an inspection chamber.
 - "Cleaning Eye" means an access opening having a removable cover to enable obstructions to be cleared by means of a drain or any suitable rod.
 - "Commercial User" (Class-II) means any property occupied for a Non-residential purpose not within the definition or and "Industrial User (Class-III)" and which is connected to the waste water facilities.
 - "Connection" means the junction of a foul water drain, (other than a surface water drain) or sewer from building or building with public sewer, treatment works, cess-pool, soak away or other admissible water sources. (o) "Drain" means an open channel or a line or pipes including all fittings and equipments such as manhholes, inspection chambers traps, used for the drainage of a building or a group of buildings or yards appurtenant to a building within

the same premises.

- "Drainage" means the removal of any liquid by a system constructed for the purpose in a similar manner of conveyance of sewage.
- "Fittings" means coupling, flange branch, bend, tees, 'Y's elbows, unions, waste water plug, trap with ventilating shaf system, grease, gully and other traps, flush tanks, stop ferrule, stop tap, bid tap, pillar tap, globe tap, ball valve float operated valve cistern, including flushing cistern, storage tank, baths, water and accessories, meter, hydrant, valve and any other article used in connection with water supply, drainage and sanitation.
- "Garbage" means the solid animal and vegetables waste resulting from the domestic or commercial handling, storage dispensing preparation, cooking and serving of foods.
- "Ground Water" means water within the earth.
- "Industrial User (Class-III)" means any non-residential user and shall include any user that discharges waste water containing toxic or poisonous substances, any substance (s) causing interference in the waste water facilities of the Board and shall also include any Non-residential user, wjp.
 - Discharge the industrial effluent subject to the tolerance limits laid down by relevant Indian standards.
 - Discharges non-domestic flow of 100 kilo litres or more per average work day.
 - Contribute more than 5% of the average dry weather capacity of the waste water facility.
 - is determined by the A.P. State Pollution Control Board or an Engineer of the Board to have the potential to adversely affect the waste water facility of the Board.
 - "Interference" means inhibition or disruption of any waste water sewer system, waste water treatment process, sludge disposal system, or their operation, which substantially contributes to a violation of applicable discharge standards permitted by the relevant Indian Standards or specifications of the Hyderabad Metropolitan Water Supply and Sewerage Board or Andhra Pradesh State Board for prevention and control of water pollution:
 - "National Building Code" means, National Building Code of India 1983 part-ix plumbing services; section (1) water supply and section (2) Drainage and Sanitation of Bureau of Indian Standards as amended from time to time.
 - "Natural Outlet" means any outlet into a water course, pond, ditch, lake, or any other body of surface or ground water:
 - "Owner" means a person or persons who legally own, lease but includes an occupant of a private property with waste water facilities that discharge, or will discharge, to the Hyderabad Metropolitan water supply & Sewerage Board waste water facilities:
 - "Period of Supply" means the period of the day or night during which water supply is made available:
 - "Person" means any individual, firm, company, association, society, partnership, corporation, municipality, contonment, panchyats or other similar organization or any local authority or agency, or group or a public sector undertaking:

(z.1) "PH" means the logarithm of the reciprocal of the hydrogenion concentration expressed in grams per litre of solution as determined by the relevant Indian Standards:

(z.2) "Plumbing" means the practice, material and fixtures used in the installations, maintenance, extension and alteration of all piping, fixtures, appliances and appurtenances in connection with "Water Supply" and "Sewerage":

(z.3) "Pretreatment" means the reduction of the amount of pollutants, the elimination of pollutants, or

the alteration of pollutant properties in waste water before discharge into the Hyderabad Metropolitan Water Supply and Sewerage Board waste water facilities:

(z.4) "Potable Water" means water, which is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the Authority:

(z.5) "Residential User (Class-I)" means all premises used only for human residency and that are connected to the waste water facilities of the Board:

(z.6) "Sanitary Waste Water" means waste water discharged from the sanitary conveniences of dwellings, office buildings, industrial plants or commercial or other institutions:

(z.7) "Soil Waste and Soil Pipe" means the discharge from water-closets, urinals, kitchen, slaughter houses, slop sinks, stable or cowshed gullies and similar appliances and the pipe which receives discharges from soil fitments, such as water-closets, urinals and slop sinks respectively:

(z.8) "Storage Tank" means a tank or a cistern for storage of water, which is connected to the water main by means of a supply pipe:

(z.9) "Storm Sewer" means a sewer for conveying storm, surface and other waters, but may be intended to be transported to a natural outlet not belonging to the Board:

(z.10) "Surface Water" means water that occurs when the rate of precipitation exceeds the rate at which water may percolate into the soil:

(z.11) "Suspended Solids" means the total suspended matter that either floats on the surface of, or is in suspension, water or waste water:

(z.12) "Toxic" means any of the pollutants designated by IS 2490 part-I and water (Prevention and Control of Pollution) Act, 1974 and Central Act 6 of 1974 as amended from time to time:

(z.13) "Trade Effluent" means discharge from any manufacturing process, other than soil waste or waste water:

(z.14) "Waste Water" means a combination of liquid and water carried wastes from residences, commercial buildings, industries, and institutions, together with any ground water, surface water or storm water that may be present:

(z.15) "Waste Water Facility" means the combination of waste water sewers and treatment facilities or sewerage and sewage treatment works of the Board.

(Z16) "Waste Water Sewer" means the structures; process, equipment and arrangements necessary to collect and transport waste water treatment facility:

(z.17) "Waste Water Treatment Facility" means the structures, process, equipments and arrangements necessary to treat and discharge waste waters including sewerage and sewage treatment works:

NOTE: The classification of "Class-I", "Class-II" and "Class-III", used in the part, shall mean "Residential User", "Commercial User" and "Industrial/Trade User" respectively who avail or intend to

avail waste water facilities provided by the Board. Words and expressions used in these regulations but not defined, shall have the same meaning, respectively assigned to them in the Hyderabad Metropolitan Water Supply and sewerage Act, 1989 (Act No.15 of 1989) and "Water Supply Rules" and "Sewerage Rules" issued there-under, and

Part-IX Plumbing Rules Section (1) water supply and section (2) Drainage and Sanitation, in National Building Code of India 1983 of the Bureau of Indian Standards as amended from time to time.

PART – II GENERAL WATER SUPPLY AND SEWERAGE CONNECTIONS

1. Application for connections:
 1. Every person who requires a new water supply connection or sewerage connection or both or any extension or alteration to the existing system in a premises, shall apply in writing in the Form and subject to such terms and conditions as may be determined from time to time by the Managing Director.
 2. The application shall be purchased from Manager (Engg) duly paying charges as fixed by the Managing Director from time to time. The rates, fees, deposits, pipeline service charges and other charges shall be as prescribed by the Board from time to time.
 3. Plan showing the premises indicating the nearest water supply main and sewer line of the Board.
2. Bulk Supply:
 1. In the case of large housing colonies or where new services or layouts are so situated that it will be necessary for the Board to lay new mains or extend an existing main, full information about the proposed housing scheme shall be furnished to the Board and also give information regarding their phased requirements of water supply and sewerage with full justification. Such information shall include site plans, showing the layout of roads, footpaths, buildings and boundaries and indicating thereon the finished line and level of the roads basement levels or footpaths and water supply and sewerage lines and appurtenances.
3. Completion Certificate:
 1. On completion of plumbing work for water supply or sewerage work or for both, in a premises a licensed engineer or plumber or an officer authorized by the Board in this behalf, shall give a certificate to the effect that the work is completed in the Form prescribed to the concerned Manager (Engg) in case of 15mm connection for domestic purpose and General Manager (Engg) in other cases for connecting the water mains or sewerage connecting the sewage waste water industrial effluents to the Board Sewer mains.
 2. For the purpose of issue of such certificate by an officer authorized by the Board under Sections 48 and 73 of the Act, an officer of the rank of a manager (Engg) and above or an officer or an employee of the Board possessing a minimum qualification of L.C.E or its equivalent in the Board is deemed to be an officer authorized for issue of completion certificate:

Provided that such an officer of the Board shall not be entitled to claim or receive any remuneration for the purpose of issue of such certificate.
4. Application for Grant of License to a Private Engineer or Plumber:
 1. Application for the grant of license to a private Engineer or plumber shall be made in such form and subject to such terms and conditions as may be prescribed in these regulations.
 2. The application shall be purchased by paying such amount as may be determined by an order of the Managing Director from time to time, by way of crossed demand draft from a scheduled Bank in favor of the Board.

3. The concerned Chief General Manager (Engg) shall be authority competent to grant license to a private engineer or plumber and to enter into an agreement thereto:

Provided that an officer or employee of the Board in the ranked of a Manager (Engg) and above shall be competent to enforce the conditions of such agreement.

5. Eligibility for grant of License to an Engineer or Plumber:

1. In the case of an Engineer, he shall possess a degree or diploma in Civil or Mechanical Engineering from a University or a recognized Institution any other qualifications recognized by the State Government as equivalent thereto.

2. In the case of a Firm, a license can be granted if such firm employee a full time qualified Engineer possessing qualifications mentioned in sub-regulation (1) and produce sufficient proof thereof, to the satisfaction of the authority competent to grant license or to enforce the conditions of agreement:

Provided that the license granted shall automatically cease to be in force, if at any time during the period of currency of license and agreement, it is found that firm has not employed any such Engineer. In such an event and on such cancellation of the license, the deposit available with the Board shall be forfeited and the firm concerned may apply for a license afresh in the manner herein prescribed above.

3. A Chief General Manager (Engg) may black list an Engineer or plumber under these regulations after giving reasonable opportunity to explain for reasons of recurring breach of agreement or for any act not done in good faith or for any act which in the opinion of the Chief General Manager (Engg) is detrimental to the interest of the Board or the consumers or to the both as the case may be. No appeal shall lie against such order.

6. Conditions for License:

1. The licensee shall maintain an office at such place which may be suitable and convenient to the public.
2. The licensee shall furnish an Income Tax clearance certificate from the competent authority from time to time. He shall maintain a register of works in such form as may be prescribed by the Chief General Manager (Engg) who shall issue a certificate to that effect, and the licensee shall produce it to the Board Officers whenever required.
3. The licensee shall not undertake supply of materials or any services to any consumer.
4. The Chief General Manager (Engg) concerned may for the reasons to be recorded in writing reject any application for grant of license: provided that an appeal shall lie to Director (Engg) against such order whose orders on such appeal shall be final.
5. The Licensed Plumber shall not carry out the plumbing work.

7. Deposit is to be made for grant of license:

Where an application for grant of license is accepted the applicant shall deposit with the Board such sum as may be determined from time to time by an order of the Managing Director as a security deposit by way of crossed demand draft obtained from a Scheduled Bank drawn in favor of Board. He shall also pay such sum as may be determined in similar manner as Registration Fee and shall enter into an agreement with the Chief General Manager (Engg) concerned in such form and such terms and conditions as may be specified by an order of the Managing Director.

8. Renewal of License:

1. A license granted under these regulations shall remain in force up to the end of a Financial Year in which it is granted, and shall be renewed for every two years in the month of October of a year by an order of the Chief General Manager (Engg) concerned on payment of a renewal fee as may be specified from time to timer by an order of Managing Director by way of crossed demand draft from a Scheduled Bank in favor of the Board.

2. A person/firm holding a license on the date of issue of these regulations under the old rules and regulations, shall apply and obtain a fresh license under these regulations within such period as may be specified by an order of the Managing Director issued by way of a public notification in any of the News Papers in the Hyderabad Metropolitan Area.
9. Performance of Work:
1. No licensed Engineer or plumber to who license is granted only for the sole purpose of issue of completion certificate after verification and inspection of works done by an applicant in accordance with standard specifications prescribed there to, shall undertake execution of work in any premises.
 2. No licensed Engineer or plumber shall canvas in any form in favor of any applicant seeking a service connection. It shall not be lawful for any Licensed Engineer or plumber to arrange or cause to arrange for the boring of Board's Water main and for the connection of Board Sewer. Failure to comply with these regulations shall render the license for immediate cancellation of the license and forfeiture of the deposit.
The Chief General Manager (Engg) concerned shall with the previous approval of the Director (Engg) specify charges to be paid by the consumer-applicant from time to time to the Licensed Engineer or plumber towards fees for issue of a completion certificate. No licensed Engineer or plumber shall demand or receive more than the fees so specified failing which the license shall be cancelled, agreement annulled and security deposited.

PART -III WATERSUPPLY

1. Adequacy of Pressure:
 1. It shall be the responsibility of the competent authority to sanction water supply connection to any premises whether for domestic purposes or for any purpose. Before doing so, the competent authority shall verify and assess the availability of water and available head in the distribution lines of the locality and prepare an estimate of the number of domestic connections, (excluding bulk consumers) that can be granted in that locality from those distribution lines. The period for which such assessment and estimation shall be prepared is for a period of one year on each occasion commencing from the month of November and ending with October of the next year when the storage of water in the reservoirs is known.
 2. The authority competent to sanction a water supply domestic service connection shall not, except with the previous approval of the Chief General Manager (Engg) concerned or Director (Engg) and managing Director sanction domestic service connections during a period exceeding the number so assessed and estimated for a locality under regulation (1) above.
 3. While granting domestic service connection for any purpose, the authority competent to sanction shall clearly inform the applicant that supply of water shall be at the ground level of a premises but not at any other elevated level whatsoever.
2. Materials, Fittings and Appliances:
 1. Standards: All materials including meters and ferrules used in a premises where it is proposed to sanction domestic service connection or any of the appliances described in these regulations shall conform to part-V Building materials mentioned in National Building Code of India, 1983 of the Bureau of Indian Standards as amended from time to time.
 2. Materials for pipes - pipes may be made of any of the following materials conforming to relevant ISS and the barrel shall be of uniform thickness: namely:
 - Cast Iron, Vertically cast or centrifugally (Spun) cast:

- Steel with cement mortar inlining and out coating:
 - Reinforced concrete:
 - Prestressed concrete:
 - Mild Steel tubes or tubulars (Galvanized):
 - Copper:
 - Brass:
 - Wrought Iron:
 - Asbestos Cement:
 - HDPE:
 - PVC:
3. Lead piping shall not be used to convey domestic water supply, Lead piping, may however be used for flushing and over-flow pipes.
 4. For temperature limitations in the use of IDPE and PVC pipes to convey water, reference may be made to accepted standards.
3. Conveyance of Water from Board's Main and Distribution of Water within the Premises:
 1. Basic Principles - Wholesome water supply provide for drinking and culinary purposes shall not be liable to contamination from any less satisfactory water. There shall therefore, be no cross - connection whatsoever between a pipe or fitting for conveying or containing wholesome water and a pipe or fitting for containing impure water or water liable to contamination or of uncertain quality or water which has been used for any purpose. The provision of reflux or non-return valves or closed and sealed stop valves shall not be construed a permissible substitute for complete absence of cross-connection.
 2. The design of the pipe work shall be of such standard that there is no possibility of back flow towards the source of supply from any cistern or appliances, whether by siphonage or otherwise, and reflux or non-return valves shall not be relied upon to prevent such back flow.
 3. Where supply of wholesome water is required as an alternative or stand-by to a supply of less satisfactory water or is required to be mixed with the latter, it shall be delivered only into a cistern and by a pipe or fitting discharging into the air gap at a height above the top edge of the cistern equal to twice its nominal bore and in no case less than 15 cm. It is necessary to maintain definite air gap in all appliances or taps used in water closets.
 4. All pipe work shall be so designed, laid or fixed and maintained as to be and to remain completely water-tight, thereby avoiding waste of water, damage to property and the risk of contamination of the water conveyed, all changes in direction in horizontal and vertical planes shall be negotiated by the required specials not by bending the pipes mild Steel or Tubular (Galvanized) are subjected to corrosion leading formation of holes in a period of above 10 years. The consumer shall replace the pipes and specials after taking the permission from the officer whom is empowered to sanction a water supply connection , failure of replacing defective pipes and specials shall entail disconnection of water supply.
 5. No piping shall be laid or fixed so as to pass into or through any sewer, scour outlet or drain or any manhole connected therewith nor through any ash pit or manure pit or any material of such nature that would cause or likely to cause undue deterioration of the pipe, except where it is technically not feasible. Where the laying of any pipe through fouled soil or impervious material is unavoidable, the piping shall be properly protected from contact with cast iron tube or by some other suitable means as approved by the authority. Any existing piping or fitting laid or shall be removed immediately by the consumer and relied by him in conformity with the above requirements and to the satisfaction of the authority.(6)
Underground piping shall be laid at such a depth that it is unlikely to be damaged by traffic loads and vibrations. It shall not be laid in ground liable to subsidence, but where such ground cannot be avoided, special precautions shall be taken to avoid damage to the piping.

Where piping has to be laid across recently disturbed ground, the ground shall be thoroughly consolidated so as to provide a continuous and even support. The minimum depth for 15mm, 20mm, 25mm and 40mm dia pipes shall be not less than 45cm, 50cm and 60cm respectively. For other sizes it shall be not less than one metre.(7) In designing and planning and layout of the pipe work, due attention shall be given to the maximum rate of discharge required, economy in labor and materials, protection against damage and corrosion, water hammer, protection from frost if required and to avoidance of airlocks, noise transmission and unsightly arrangement.(8) To reduce frictional losses, piping shall be as smooth as possible inside. Methods of jointing shall be such as to avoid internal roughness and projection at the joints, whether of the jointing materials or otherwise.(9) Change in diameter and in direction shall preferably be gradual rather than abrupt to avoid undue loss of Head. No bend or curve in piping shall be made so as to materially diminish or alter the cross section.

6. No boiler for generating steam or closed boilers of any description of any machinery shall be supplied direct from a service or supply pipe. Every such boiler or machinery shall be supplied from a feed cistern.
4. Consumer Pipes:
 1. In the case of a premises wherein flats are constructed, a single consumer pipe shall be granted and provided at the ground level so that the water is let into a sump within such premises at a suitable and convenient place. Water shall be drawn by individual owners/ occupants of flats from that sump only by way of making suitable local arrangements at the cost of owner/occupier of a flat.
 2. The consumer pipe within the premises shall be laid under-ground with a suitable cover and bedding to safeguard against damage from traffic and extremes of weather.
 3. No boosting (by booster pumps), direct from service pipe (communication and consumer pipes) shall be allowed.
 4. Consumer pipes shall be so located that they are not unduly exposed to accidental damage and shall be fixed in such positions as to facilitate cleaning and avoiding accumulations of dirt.
 5. All consumer pipes shall be so laid as to permit expansion and contraction or other movements.
5. Prohibited connections:
 1. A consumer pipe shall not be connected to any down take pipe.
 2. No pipe for the conveyance or in connection with water supplied by the Board shall communicate with any other receptacle used for conveyance other than water supply by the Board.
 3. Supply pipe and distributing pipe shall not be connected.
 4. No service or supply pipe shall be connected directly to any water-closet or a urinal. All such supplies shall be from flushing cisterns which shall be supplied from storage tanks of a premises through down take pipes and shall not have any direct communication with the supply pipes.
 5. No service or supply pipe shall be connected directly to any hot water system or to any other apparatus used for heating.
6. Laying of pipes on site:

The mains and pipes on site shall be laid in accordance with standard specifications and there shall be not any back flow and back flow preventer fixed.
7. Laying Service Pipes:
 1. Service pipes shall be connected to the mains by means of right-hand screw down brass ferrule or T.branches. The Ferrules shall conform to accepted standards. The ferrule shall be

connected to the consumer pipe through a flexible pipe. The boring shall be provided near to crown of the pipe or RCC, AC & HDPE pipes, saddle pieces shall be provided near the boring.

2. Precaution against contamination of the main shall be taken when making a connection, and where risk exists, the main shall be disinfected. The under ground water service pipe and the building sewer or drain shall be kept at a sufficient distance not less than 2 meters apart so as to prevent contamination of water. Water service pipes or any under ground water pipes shall not be run or laid in the same trench as the drainage pipe. Where this is unavoidable, the following conditions shall be fulfilled:
 - The bottom of the water service pipe, at all points, shall be at least 30 cm. Above the top of the sewer line at its highest point:
 - The water service pipe shall be placed on a solid shelf excavated at one side of the common trench:
 - The number of joints in the service pipe shall be kept to a minimum.
 - The materials and joints of sewer and water service pipe shall be installed in such a manner and shall possess the necessary strength and durability so as to prevent the escape of solids, liquids, and gases therefrom under all known adverse conditions, such as corrosion, strains due to temperature changes, settlement, vibrations and superimposed loads.
 - Sleeve pipe shall be provided for water pipe at such points for avoiding contamination.
3. The service pipe shall pass into or beneath the buildings at a depth below the external ground level of not less than 75cm and at its point of entry through the structure should be accommodated in a sleeve which should have previously been solidly built-in. The space between the pipe and the sleeve shall be filled with bituminous or other suitable material for a minimum length of 15cm. at both ends.
 - Pipes laid through Ducts, chases, notches or Holes-Ducts or Chases in walls for piping shall be provided during the building of the walls. If they are cut into existing walls, they shall be finished sufficiently smooth and large enough for fixing the piping.
 - Piping laid in notches or holes shall not be subjected to external pressure.
 - Lagging of pipes - where lagged piping outside buildings is attached to walls, it shall be entirely covered all round with water proof insulating material and shall not be in direct contact with the wall. Where it passes through a wall, the lagging shall be continued throughout the thickness of wall.
8. Jointing of Pipes:

Jointing may be done outside the period of supply with any one of the pipes and with any one of the methods prescribed in the Indian Standard Specification specified in the National Building Code of India, 1983 of Bureau of Indian Standards as amended from time to time.
9. Storage of Water:

Storage of water by consumers other than bulk consumers in a premises shall be in accordance with the Bye-laws made under section 51 of Act.
10. Hot Water Supply System:

In a premises this system shall be in accordance with Bye-laws made under section 51 of Act.
11. Cleaning and Disinfection of the Supply System:

All water mains, communication pipes, service and distribution pipes used for water for domestic and drinking purpose shall be thoroughly and efficiently disinfected before being taken in to use and also after every major repair. The method of Disinfection shall be subject to such method or methods as may be prescribed by an order of the Director/Engineering. They shall also be periodically cleaned at intervals, depending upon the quality of water and communication pipes and the storage cisterns shall be thoroughly cleaned at least once every

year in order to remove any suspended impurities that may have settled in the pipes or the tanks.22. Periodical Disinfection of Storage Tanks, Reservoirs, and Down take Distribution Pipes: Reservoirs, storage tanks and down take pipes should be disinfected periodically in such a manner as may be prescribed in the Bye-laws made under section 51 of the Act.

12. Inspection and Testing:

All pipes, fittings and appliances shall be inspected, before delivery at the site to see whether they conform to accepted standards. All pipes and fittings shall be inspected and tested by the manufactures at their factory and shall be tested hydraulically under a pressure equal to twice the maximum permissible working pressure or under such greater pressure as may be specified. The pipes and fittings shall be inspected on site before laying and shall be sounded to disclose cracks. Any defective items shall be clearly marked as rejected and forthwith removed from the site. The form of inspection and testing shall be as prescribed in these Regulations.

13. Testing of mains after laying:

1. After laying and jointing, the mains shall be slowly and carefully charged with water, so that all air is expelled from the main by providing a 25mm inlet with a stop-cock, allowed to stand full of water for a few days if time permits, and then tested under pressure. The test pressure shall be 1kg/cm² or double the maximum working pressure, whichever is greater. The pressure shall be applied by means of a manually operated test pump, or in the case of long mains or mains of a large diameter, by a power driven test pump, provided that the pump is not left un-attended. In either case due precaution shall be taken to ensure that the required test pressure is not exceeded. Pressure guages shall be accurate and shall preferably have been recalibrated before the test. The pump having been stopped, the test pressure shall maintain itself without measurable loss for at least five minutes, the main shall be tested in sections as the work of laying, proceeds. It is an advantage to have the joints exposed for inspection during the testing. The open end of the main may be temporarily closed for testing by fitting a water-tight expanding plug of which several types are available. The end of the main and the plug shall be secured by struts or otherwise, to resist the end thrust of the water pressure in the mains.
2. If the section of the main tested terminates with a sluice valve, the wedge of the valve shall not be used to retain the water, instead the valve shall be temporarily fitted with the blank flange, or in the case of a socketed valve, with a plug, and the wedge placed in the open position while testing. Suitable end support shall also be given.

14. Testing of Service Pipes and Fittings:

When the service pipe is complete, it shall be slowly and carefully charged with water allowing all air to escape avoiding all shock or water hammer. The service pipe shall then be inspected under working conditions of pressure and flow. When all draw-off taps are closed, the service pipe shall be absolutely water-tight. All piping fittings and appliances shall be checked for satisfactory support, and protection from damage, and corrosion. Because of the possibility of damage in transit, cisterns shall be retested for water-tightness or arrival at site, before fixing.

15. General Specifications:

Subject to the provisions in the Act, and Rules and Regulations there-under, the quality of materials and work shall be in accordance with standard specifications prescribed in "Part IX-plumbing service section -I. Water supply in National Building Code of Indian Standards as amended from time to time.

PART - IV SEWERAGE

1. Sewerage Connection compulsory:

Every premises provided with water supply service connection of the Board shall be compulsorily provided with Sewer connection connected to the Sewer of the Board, if Sewer is available within a distance of (35) metres from such premises.

No person shall install and carry out any bore sanitary or drainage installation or any such works in connection with any thing existing or new building or any other premises in the Hyderabad Metropolitan area without obtaining prior sanction of competent authority specified in the Sewerage Rules under the Act for grant of a sewerage service connected to any such premises.

2. Adequacy of Capacity:

1. It shall be the responsibility of the competent authority to sanction house service sewerage connection to any premises to verify and assess the availability of adequate load to convey Sewage in the sewerage system of an area and prepare an estimated number of house sewerage connections that can be sanctioned. The period of such assessment for a specified localities shall be such as may be specified by the Chief General Manager (Engg) concerned.
2. In the case of an alteration or addition to an existing structure or sewerage system of a building or a premises, this clause shall be deemed to have satisfied if the plans as furnished convey sufficient information for the proposals to be readily identified with previous sanctioned plans and provided that the location of tanks and other fittings are consistent with the structural safety of the structure or building or premises.

3. Site Plan:

A site plan of the premises on which the building is to be situated or any such work is to be carried out shall be prepared and drawn to a scale not smaller than 1 : 100 for plot areas less than 1500 sq.m and 1 : 500 for plot area for more than 1500 sq.m.

4. Open Drains:

Open drains of a premises shall not be connected to the sewerage system of the Board.

5. Description of Materials, Fittings, Appliance and their Specifications

1. The detailed description of work of a premises where sewerage connection is sought or and a specification of materials proposed to be used there to shall be furnished in such form as may be prescribed by an order of the Managing Director.
2. Standards and specifications for materials, fittings and sanitary appliances of materials , used in the construction of any of the works or any appliances shall conform to part V Building material of National Buildings code of India, 1983 Bureau of Indian standards, as amended from time to time.

6. Licensing of Engineers and Plumbers:

The requirements and stipulations or authorization in certain cases prescribed in Part-III of these regulations for plumbing services for Water Supply shall MUTATIS MURANDIS apply for licensing of Engineers and plumbers under this part (Sewerage) also.

7. Sewerage and Sanitation requirements:

1. General: There should be atleast one water tap and arrangement not connected to a consumer pipe for sewage in the vicinity of each water-closet or group of water closets in all buildings or structure or premises.
2. Each family dwelling unit on premises abutting on a sewer shall have, atleast, one water-closet and one kitchen type sink. It is desirable that a bath or shower should be installed to meet the basic requirements of sanitation and personal hygiene.
3. All other structures for human occupancy or use on premises for any purpose or activity abutting on a sewer shall have adequate sanitary facilities but in no case less than one water-closet and one other fixture for cleaning purposes.

8. Residences:

1. Dwelling premises with individual convenience shall have atleast the following fitments:
 - One bath room provided with a tap
 - One water-closet and
 - One NAHANI or sink either in the floor or raised from the floor.
2. Where Only one water-closet is provided in a dwelling, the bath and water-closet shall be separately accommodated.
3. Dwellings without individual conveniences shall have the following fitments:
 - One water tap drainage arrangements not connected with consumer pipe in each tenements.
 - One water closet and one bath for every two tenements and the regulations shall be suitably relaxed where pour flush intrines are connected to Board Sewers under "Low Cost sanction Program".
 - Provided that other specifications being satisfied with there is no objection if bath and W.C. are provided in one room.
 - Water Taps not connected with the consumer pipe in common bath rooms and common water-closets. The connection of rain water pipes and surface drainage to the sanitary sewers is prohibited under section 64 of the Act.
9. Buildings other than Residences and Traffic Terminal Stations Including Airport, Railway Stations Etc:

The requirements for fitments for drainage and sanitation in the case of building structure or premises other than residences and including traffic terminal stations shall be in accordance with the specifications prescribed in Part IX Plumbing service section 2 Drainage and Sanitation contained in National Buildings Code of India, 1983 Bureau of Indian Standards as amended from time to time. Sewers from hotel kitchen and restaurants shall be connected only after removal of grease by installation of a grease trap by the owner or occupier.
10. Disposal of Sewage:

The methods and restrictions of disposal of sewage from a premises shall be in accordance with the standard specifications prescribed in Part IX plumbing services, Section 2 drainage and sanitation contained in National Building Code of India, 1983 of the Bureau of Indian Standards as amended from time to time.
11. General Specifications:

Subject to provisions prescribed in the Act and Rules and Regulations made thereunder, the quality of materials and work shall be in accordance with service section 2 Drainage and Sanitation contained in National Buildings Code of India, 1983 of Bureau of Indian Standards as amended from time to time.

PART – V

INDUSTRIAL/TRADE EFFLUENT AND OTHER GENERAL CONDITIONS

1. Fees and Charges:
 1. All the fees and charges payable under these regulations shall be as specified by the Board from time to time.
 2. All fees, other charges and penal charges under these regulations which are due, shall be payable on the receipt of notice of charges before a specified date. Uppaid charges shall be subject to penalties and interest charges as prescribed by the Board from time to time.
2. Inspection:
 1. An Engineer of the Board shall be allowed to enter premises at all reasonable times for the purpose of inspections, observation, measurement and sampling of the waste water discharge

to ensure that the discharge to the Hyderabad Metropolitan Water Supply and Sewerage Board waste water facilities is in accordance with provisions of these regulations and relevant specifications of the Board.

2. An Engineer of the Board shall be allowed to enter all private premises at all reasonable times through which the Board waste water sewers are passing for the purposes of inspection, observation, measurement, sampling, repairing and maintenance of any such waste water facility within the said private properties.
3. Use of Waste Water facilities & Sewerage system of the Board:
 1. Waste Disposal : It shall be unlawful for any person to place, deposit, or permit to deposit in any insanitary manner on public or private property within the Board service area or in any area under the jurisdiction of Board, any human excrement.
 2. Waste Water Discharges : - Waste Water discharges to the Board's waste water facilities area not authorized unless approved by an Engineer of the Board in accordance with provisions of these Rules/Regulations issued under the Act. Parameters like Biochemical Oxygen Demand, suspended solids PH etc., shall be considered
4. Private waste water disposal:

Private system required : All houses, buildings, or premises that are are required by other Authority to have sanitary or industrial waste water facilities, are also subject to the jurisdiction of these regulations and are located where a proper waste water sewer is not available as specified by the provisions of regulations 39 of these Regulations, shall be equipped at the owner's expense with suitable waste water facilities connected to a private waste water disposal system, which complies with the provisions of these Regulations.

 1. Construction permit: Before beginning construction of a private waste:

water disposal system, the owner shall first obtain a written construction permit signed by an Engineer of the Board authorized in this behalf. The application for such permit shall be made on a form specified by the Board which the applicant shall supplement by any plans, specifications and other information relevant to waste water discharges as are deemed necessary by the Board. A permit and inspection fees at such rate as may be specified by the Board shall be remitted by the Owner at the time the application is filled.
 2. Design requirements: The type, capacities, location and layout of private

waste water disposal system shall comply with all requirements of the Law inforce. Septic tank or cesspool discharges require the use of sub-surface disposal for which specific permission of the Engineer of the Board shall be obtained.
 3. Operating Permit:

Before beginning of operation of a private wastes

water disposal system, the owner shall first obtain a written operation permit signed by an Engineer authorized for the purpose. The operation permit shall not become affective until the installation is completed to the satisfaction of the Engineer and so certified by him. The satisfaction of the Engineer and so certified by him. The Engineer shall be allowed to inspect the work at any stage of construction and in any event, the applicant for the operating permit shall notify the Engineer when the work is ready for final inspection and before any underground portions are covered. The inspection shall be made within 15 (fifteen) days. During normal office hours after receipt of notice. The Engineer may at the cost of the applicant, open the underground portion of work if already covered at the time of inspection.
 4. Connection to H.M.W.S.&.S.B system when available: At scuh time

as a waste water sewer becomes available to a premises served by a private waste water disposal system, a direct connection shall be made to the waste water sewer within thirty days of such sewer facilities being made available and notice there on given to the occupier/owner by the Engineer and any septic tank, cesspools, and similar waste water disposal facilities shall be emptied and filled with suitable material.

5. Sanitary operation required: The owner or occupier shall at his own cost,

operate and maintain the private waste water disposal facilities in a sanitary condition at all times in accordance with the conditions of the operating permit. Such facilities shall be subject to inspection by the Engineer at any time.

6. Additional requirement or other terms and conditions: No stipulation

contained in these regulations shall be construed to interfere with any additional requirement or other terms and conditions that may be imposed by the Municipal Corporation of Hyderabad or any other local authority.

5. Building Sewers and connections:

1. Connection Permit:

- No unauthorized person shall uncover, make any connection with or opening into, Use, alter or disturb any waste water sewer without prior written permission of the Engineer of the Board.
- There shall be three Class of permits for connections to the Hyderabad Metropolitan Water Supply & Sewerage Board waste water facilities – Class I Residential, Class II Commercial and Class-III Industrial purposes. The permit application shall be supplemented by waste water information as may be required for the purpose. A permit and inspection fee shall be paid to the Board at the time at such rate or rates as may be prescribed by the Board or Managing Director from time to time.

2. Connection costs: The costs and expenses incidental to the building sewer installation and connection to the Board's. The owner shall indemnify to the Board from any loss or damage that directly or consequently may result from the installation of building sewer.

3. Building Sewer Design : The size, slope, alignment, construction materials, benching in inspection chambers, trench excavation and back fill methods, pipe placement jointing and testing methods used in the construction and installation of a building sewer shall conform to the National Building Code and other requirements of the Act.

4. Building Sewer Elevation : Whenever practical, the building sewer shall be brought to a building at any elevation below the basement floor. In buildings in which any building drain is too low to permit gravity flow to Board's waste water sewer, waste water discharged through such building drain shall be lifted by an approved means in accordance with technical feasibility at the cost of the owner or occupier and discharge through a building sewer to the Board sewer.

5. Surface Run off and Ground Water Drains : No person shall connect roof, play and or parking lots, road ways or other surface run off or rainy water or ground water drains to any sewer connected to Board's waste water facility.

6. Conformation to applicable Codes : The connection of a building sewer into a waste water sewer shall conform to the relevant requirements of the National Building Code. The connections shall be made gas-tight and water tight and verified by proper testing and shall be so certified by a Plumber, Engineer licensed in this behalf or an Engineer of the Board authorized under section 73 of the Act.

7. Connection inspection : The applicant for a building sewer or other drainage connection permit shall notify the Engineer when such sewer or drainage connection is ready for

inspection before its connection to the board facilities. Such connection and testing, as deemed necessary by the Board shall on payment of specified fee, be made by and under the supervision of the Engineer of the Board.

8. Excavation Guards and property Restoration : Subject to such conditions as may be prescribed by Municipal Corporation of Hyderabad or any other local authority, excavation by owner or occupier of a premises for building sewers, installations shall be adequately guarded with the barricades and lights to protect the public from hazard streets, footpaths and other public property. It shall also be restored in a manner satisfactory to the Board, Municipal Corporation of Hyderabad, Roads & Buildings Department, concerned Local body authority at the cost of the owner or occupier.
6. Protection of capacity for existing users:
The Board shall not issue a permit a new sewer connection to the Board's waste water sewers or waste water treatment facilities unless there is sufficient capacity in the sewerage lines or treatment works of the Board including those committed by an agreement.
7. Conditions to use the City's Waste Water Sewers
 1. Restricted Discharges :
Subject to the provisions of section 54 of the Act, no person shall discharge or cause to discharge waste water to any of the Board waste water facility any substance, materiel, water, or waste in quantities or concentration that are in excess to those stipulated in Is 2490 Part I for "Tolerance limits for Industrial effluent for discharge into Public Sewers", as amended from time to time.
 2. However the general requirements are that they shall not :
 - Create a fire or explosion hozard including, but not limited to gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas;
 - Cause corrosive damage or hazard to structures, equipment personnel of the waste water facilities;
 - Cause obstruction to the flow in sewers, or other interference with the operation of waste water facilities, due to accumulation of solid or viscous materials;
 - Constitute a rate of discharge or of substantial deviation from normal rates of discharge including sludge discharge sufficient to cause interference in the operation and performance of the waste water facilities;
 - Contain heat in any amount that will accelerate the biodegradation of waste, causing excessive amounts of hydrogen sulphide to form in the waste water sewer or inhabit biological activity in the waste water treatment facilities;
 - Contain non-biodegradable oils, of mineral or petroleum origin;
 - Contain floatable oils, fat; or grease;
 - Contain noxious malodorous gas or substance in quantities that create a public nuisance or a hazard to life;
 - Contain any gassbage;
 - Contain any odour or color producing substances exceeding concentration limits.
8. Categorical pretreatment standards
 1. No person shall discharge or cause to discharge into any waste water facilities waste water containing substances in excess of the quantity prescribed by the IS 2490 Part I for disposal into public sewers. Except as other wise provided herein, compliance with such applicable pretreatment standards for the existing system shall be made within 30days. However the compliance with the categorical pretreatment standard for new sources shall be required before connection to Board sewers.
 2. The Chief General Manager (Engineering) shall notify any industrial or trade user affected by the provisions of these Rules/Regulations and establish an enforceable compliance

schedule for each user.

9. Special Agreements

1. Nothing in these regulations shall be construed as preventing any special agreement or arrangement between the Hyderabad Metropolitan Water Supply and Sewerage Board and any user of the Waste Water facilities, whereby waste water of strength or character more than those specified in IS 2490 Part I for disposal into Public Sewers, is accepted into the system and specially treated, subject to any applicable payments for user charges.
2. Notwithstanding any thing contained in these regulations, the Board may prescribe or impose special conditions for granting a new sewer connection or for material any existing sewer connection, in accordance with local conditions or requirements of any such premises.

10. Class-III – Industrial/Trade effluent discharges :

1. A person who owns, operates or occupies properties need sewerage connection for discharge at more than one location shall submit separate information for each location as may be required by the Board.
2. Provision for Monitoring: (a) When required by the Board, the owner of any premises served by a building sewer carrying industrial/trade waste water discharge, shall provide, suitable access and necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurements of the waste water. Such access shall be in a readily and safely accessible location and shall be provided in accordance with plans approved by the Board. These access shall be provided and maintained at the owner's expense to be safe and accessible at reasonable times.
 - The Board shall consider such factors as the volume and strength of discharge, rate of discharge, quantities of toxic materials in the discharge, waste water treatment facilities, removable capabilities in determining whether access and equipment for monitoring class-III waste water discharges shall be required.
 - When the Board determines access and equipment for monitoring or measuring Class-III waste water discharges are not practicable and reliable the Engineer may specify alternative methods of determining the characteristics of the waste water discharge that will, in the judgement Chief General Manager (Engg)'s provide an equitable measurement.
3. Determination of Waste Water Characteristics
 - Measurements, tests, and analysis of the characteristics of waste water to which reference is made in these Rules/Regulations shall be determined in accordance with method of tests referred in IS 2490 Part-I by the Chief General Manager (Engg) and shall comply with state Law. Sampling locations, times, durations and frequencies shall be determined on an individual basis subject to approval by the Engineer. The discharge shall have the option to use, at this own expense, more complete approved sampling methods, locations, times durations and frequencies than specified by the Chief General Manager (Engg).
 - Measurements, tests, and analysis of the characteristics of waste water required by these Regulations shall be performed by a qualified laboratory to be approved by Hyderabad Metropolitan Water Supply and Sewerage Board when such an analysis are required of a discharged discharger may in lieu of using the Hyderabad Metropolitan Water Supply & Sewerage Board laboratory, make arrangement with any qualified laboratory including that of the discharger to perform such analysis.
 - Unless more frequent monitoring is required by any other Authority of unless if in the option of the Board that the Characteristic of the specific discharge warrant more frequent monitoring in such specific cases monitoring of waste water characteristics necessary for determining compliance with applicable pre-treatment standards shall be conducted on the basis of not later than in time schedule below:

Average Actual Discharge	Monitoring Frequency
Less than 0.5 MLD	Half yearly
0.5 to 5 MLD	Quarterly
More than 5 MLD	Monthly

- Monitoring of Waste Water characteristics for any purpose other than

determining compliance with pretreatment standards, shall be conducted on a frequency as deemed necessary by the Board.

- In determining the discharge characteristics, factors such as continuous,

batch, or seasonal operation, as well as the information requirements of other provisions in these regulations shall be considered by the Board. The Board may obtain waste water samples from time to time as required to verify the consistency of discharge characteristics.

- Fees for any given measurement, test, or analysis of waste water required by these Regulations and performed by Board shall be the same for all Classes of discharges, regardless of the quantity or quality of the discharge, and shall relate only direct cost. The charges will be notified by the Board from time to time. The cost of analysis performed by an independent laboratory at the option of the discharger if such an option is granted by the Board shall be borne by the discharger.

11. Cost of Damages :

If the drainage or discharge causes a deposit, obstruction or damage to any of the Board waste water facilities, the Board shall cause the deposit or obstruction to be promptly removed or cause damage to be promptly repaired. The cost for such work, including materials labor and supervision shall be borne by the person causing such deposit obstruction, or damage.

12. Pretreatment L

1. Waste Water with special characteristics :

- If any waste Water that contains substances or characteristics shown to have deleterious effect on the waste water facilities, processes, equipment, or receiving waters, or that constitutes a public nuisance or health hazard, is discharged or proposed for discharge to the waste water sewers, the Board May :
 - require pretreatment to a condition acceptable for discharge to the waste water sewer ;
 - require control over the quantities and retest of discharges;
 - require payment to cover extra cost of handling and treatment of the waste water not covered by existing fees and charges, such extra cost shall being determined by the Board in each case.
 - Require the specification of compliance schedules to meet any applicable treatment requirements;
 - Require the submission of reports necessary to ensure compliance with applicable pretreatment requirement;
 - Carryout all inspection, surveillance and monitoring necessary to determine compliance with applicable pretreatment requirement; and
 - Reject the waste water if scientific evidence indicates the discharge will create unreasonable hazards or have unreasonable deleterious effects on the waste water facilities
 - when considering the above alternatives, the Engineer shall ensure the condition of the Board permit are met. The installation of necessary facilities shall be subject to Residential review if the Engineer allows the pretreatment or equalization of waste water flows.

- Where pretreatment or flow equalizing facilities are provided or require for any waste water, they shall be maintained continuously in satisfactory and effective operation at the owner's expense.
2. Compliance with pretreatment requirements :A person required to pretreatment waste water in accordance with these Regulations, shall provide a statement to be reviewed by an authorized representative of the user. Such statement shall indicate whether applicable pretreatment requirements are being met on a constant basis and, if not describe the additional operation and maintenance or additional pretreatment or operation and maintenance needed to meet the pretreatment requirements, the user shall submit a plan (including schedules) to the Board. The plan (including schedules) shall be consistent with applicable conditions of the Board.
 3. Monitoring Requirements : Discharge of waste water to the Board waste water facilities from the facilities of any use shall be monitored in accordance with the provisions of the these regulations.
13. Waste Water Service Charges
1. Charges & Fees: All charges fees and penal charges payable to the Board for the use of the Board's waste water facilities under industrial and commercial purposes shall be as per rates, charges, deposits and tariff as prescribed by the Board from time to time or in accordance with specific conditions agreed upon in any contract/agreement deed between the Board and the consumer or a person utilizing the facility.
 2. Determination of System Use:
 - The use of the Board waste water facilities shall be based on actual measurement and analysis of each user's 'waste water discharge in accordance with provisions of these regulations to the extended such measurement and analysis are considered by the Board to be feasible and cost effective.
 - Where measurement and analysis are not considered feasible, in quantum and extend of each user's use of the facilities shall be determined by the quantity of water user, on supply of such water either by the Board or by any other measures or source.
 - The Board, when determining actual use of the Board waste water facilities based on water use that result in a significant difference between a discharger water use and waste water discharge, when appropriate, such consumptive water waste water facility. The type of meters used to measure such water uses and the installation shall be as approved by the Board.

PART – VI MISCELLANEOUS

1. Single Application Form :
subject to provisions in Part-III, Part IV and Part-V of these Regulations, there shall be a single application form both for "Water Supply Service Connection and Sewerage Service Connection". However sewer service connection of a premises shall be connected to the sewerage main of the Board and after the Water Supply Service Connection is made.
2. Bye – Laws:
While every applicant seeking water supply or sewerage connection (or both) is expected to know the provisions of the Act and the Rules and Regulations made there-under, the Board may take bye-laws prescribed under section 51 and 76 of the Act for information, adherence and compliance by a consumer.
3. Power of Managing Director to make certain supplementary Regulations :

1. Notwithstanding anything contained in these regulations, the Managing Director may be an order, make such provisions as appears to him to be necessary or expedient :
 - for bringing the provisions of these regulations in to effective operation;
 - for making omissions from, addition to and adaptations and modifications of these regulations for purposes of giving effect to the provisions of these regulations;
 - for removing difficulties arising in connection with the transition to the provisions of these regulations;
 - for authorizing the continued carrying on, for the time being, of services and activities under Part-III, Part-IV and V of these Regulations.
2. The Managing Director may, by an order prescribe form or forms for various purposes under various Regulations of as specified in Statement appended to these Regulations.
3. The provisions made by any order of the Managing Director under these regulations, shall have effect as if made under these regulations, shall have effect as if made unde4 these regulations and any such order may be made so as to be retrospective to any date not earlier than the date of commencement of these regulations. Provided that no person shall be deemed to be guilty of an offence by reason of so much of any such order as makes any provisions thereof retrospective to any date before the making thereof.
4. Repeal :

All regulations in so far as they are related to "WATER SUPPLY" & SEWERAGE" service that were inforce prior to the commencement of these Regulations shall be deemed to have been and or hereby repealed on and from the date of effect of these Regulations.

T.R.PRASAD

STATEMENTS

Regulation No.3 : Form of application for water supply/ sewerage connection

Regulation No.4. : Form of Completion Certificate

Regulation No.5. : Application form and forms of

Regulation No.6 : Agreement for grant of License to an Engineer or Plumber.

Regulation No.23. : Form of Inspection and testing.

Regulation No. 30. : Form of detailed description of work and specifications of materials.

Regulation No.40(2) : Form of Construction permit for waste water disposal system.

T.R.PRASAD
PR.SECRETARY TO GOVT.,
M.A.&U.D.DEPARTMENT.