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### A SURVEY OF SOIL FOR DETERMINATION OF CORROSION FACTORS ON WATER PIPE WITHIN TEHRAN AREA

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#### Abstract:

Corrosion of water and gas pipes is not desirable from the view point of health, economy and nuisances. There are many factors in soil which attack the metal pipes for corrosion. (Steel, Cast, Iron and Like). That is why the designer of metal pipes for conveyance of metal pipes for conveyance of water and gas should be aware of these factors and pay nutmost care in selection of pipes and protection facilities. The results of research and surveys in different areas of the world indicate that there are certain main soil factors such as resistivity of the soil, PH, Rodex, Podex, Sulfides, Moisture Content, Particle size and uniformity which affect the rate of corrosion. In this research the route of all main pipes within Tehran area is surveyed and mapped and in every 1 to 2 kilometer soil is sampled and analyzed for moisture content, sulfides, TDS, PH, and soil resistivity which are presented in table 1 and 2. Based on results, the soil of south and west side of Tehran is rather very corrosive to metals and the soil of north of Tehran comparatively has less corrosion effects.

#### Keywords:

[Corrosion of water pipes](#) . [Resistivity](#)

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