



TI NO. 04/2010

TECHNICAL INSTRUCTIONS



**TRENCHLESS TECHNOLOGY
BY
DTE OF WORKS
ENGINEER-IN-CHIEF'S BRANCH
MILITARY ENGINEER SERVICES
INTEGRATED HQ OF MoD (ARMY)**

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- The contractor shall handle and dispose of all construction waste as per directions of GE and it will be ensured that drilling fluid / excavated solids do not enter roadways, drains and sewer lines. Drilling fluid shall be disposed of in environmentally safe manner as per govt. regulations.
- Back filling operations shall not begin until written unless the entire work has been inspected and passed by GE.
- The contractor shall submit the As-Built drawings supported by tracking data and record drawings in duplicate hard copy as well as soft copy (giving horizontal and vertical alignment and details of existing utility locations) of Trenchless installations within 30 days of completion of Trenchless work.
- The Trenchless contractor shall clean the site on completion of Trenchless work and shall ensure that no heaving or humping of ground has occurred.
- Defect rectification period of Trenchless installation shall be two years from the date of completion issued by GE shall be liable for rectification of all defects notified to him during the intervening period.
- Specification of trenchless techniques shall be as per the Codes of Practice Suiting Indian Conditions published by the Indian Society for Trenchless Technology from time to time.

15. Relevant Codes of Practice

SN	Code	Description
1.	IS 7364-(part 2) 1975	Code of practice for plastic pipes, work for potable water supplies, laying and jointing of polyethylene pipes
2.	IS 7364-(part 2) 2003	Code of practice for plastic pipes, work for potable water supplies, laying and jointing of PVC pipes (first revision)
3.	IS 8008-(Part I to VI) 2003	Specifications for injection moulded high density polyethylene (HDPE) fittings for potable water supplies. Part I General Requirement (First Revision)
4.	IS 8329-2000	Specifications for Centrifugally cast (spun) ductile iron pressure pipes for water gas and sewage
5.	IndSTT: 101-2009	Code of Practice for Horizontal Direction Drilling Technique Suiting Indian Conditions
6.	IndSTT: 102-2009	Code of Practice for Microtunneling & Pipe Jacking Technique Suiting Indian Conditions
7.	IndSTT: 201-2009	Code of Practice for Cured in Place Pipe Technique Suiting Indian Conditions
8.	IndSTT: 202-2009	Code of Practice for Glass Reinforced Pipe (GRP) Technique Suiting Indian Conditions
9.	IndSTT: 301-2009	Code of Practice for Pipe Bursting

16. Further Reading & References

1.	Technical Proceedings of Seminar on Trenchless Technology organized by HQ CE Delhi Zone Delhi Cantt -10 on 22-23 Dec 09
2.	IndSTT Publication - Basics of Trenchless Technology by Prof Niranjan Swarup
3.	IndSTT Publication - HDD Good Practices Guidelines
4.	IndSTT Publication - Microtunneling & Pipe Jacking Good Practices Guidelines
5.	IndSTT Publication - Rehabilitation Methods
6.	IndSTT Publication - Replacement Methods
7.	IndSTT Publication - Trenchless Technology & Subsurface Construction (SSTT)
8.	IndSTT Publication - Subsurface Asset Development Guidelines (SSAD)
9.	IndSTT Publication - Subsurface Asset Administration (SSAA)
10.	IndSTT Publication - Subsurface Asset Termination (SSAT)
11.	IndSTT Publication - Safety Issues in Subsurface Networks Development & Management
12.	IndSTT Publication - Waste Management & Trenchless Technology
13.	IndSTT Publication - Pipeline Condition Assessment
14.	IndSTT Publication - Training Manual for HDD Operation
15.	IndSTT Publication - Training Manual for Microtunneling Operation
16.	IndSTT Publication - Training Manual for Moling Operation
17.	IndSTT Publication - Training Manual for Pipe Bursting Operation
18.	IndSTT Publication - Training Manual for Pipe Ramming Operation
19.	IndSTT Publication - Standard General Conditions for Construction Contracts Employing Trenchless Technology
20.	IndSTT Publication - Guidelines for Application for Conditions in Construction Contracts Employing Trenchless Technology
21.	IndSTT Publication - Schedule of Rates for Construction Contracts Employing Trenchless Technology (Third Edition)
22.	IndSTT Publication - Model Consultancy Contract for HDD Crossing (MCC-HDD)
23.	IndSTT Publication - General Conditions of Contract Document for Horizontal Directional Drilling (GCC-HDD)
24.	IndSTT Publication - Introduction to Pipeline Rehabilitation
25.	Practical Guideline for the Application of Microtunnelling Methods for the ecological, cost-minimised installation of drain and sewers
26.	Trenchless Technology for Installation of Cables and Pipelines
27.	Handbook of Pipe Bursting Practice
28.	www.instt.com
29.	www.nastt.org
30.	www.indstt.org
31.	http://www.tttechnologies.com/