CONSTRUCTION SKILLS TRAINING INSTITUTE

BASIC COURSE SYLLABUS

PLUMBING & SANITARY

CONSTRUCTION GROUP
LARSEN & TOUBRO LIMITED
SYLLABUS FOR PLUMBING & SANITARY TRADE

CONTENTS

1. Introduction to L&T ECCG
2. Introduction to the Trade
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10. Introduction to Trade on Job Site
11. Overall Revision
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SYLLABUS FOR PLUMBING & SANITARY TRADE

Duration at Skills Training Institute (Spread in three months) : 600 Hrs

1. Introduction to L&T / ECCG : 3 Hrs
2. Introduction to the Trade : 3 Hrs
3. Introduction to Trade Glossary : 6 Hrs
4. Introduction to Tools & Equipment : 12 Hrs
   - Hand tools of the trade
   - Stock and dies
   - Pipe vice
   - Bench vice
   - Blow lamp stove
   - Ferrule m/c
   - Bending m/c

5. Documentation : 24 Hrs
   - Glossary of terms
   - Basic engineering drawings / sketches
   - Info sheets / job cards
   - Time sheets
   - Record book / log book
   - Store requisition

6. Basic Materials : 16 Hrs
   - Galvanized pipes
   - Cast iron pipes
   - PVC pipe
   - SW pipes
   - Fittings
   - Fixtures
   - Solder/Lead
7. Testing
   - Water test
   - Pressure test
   - Smoke test
   - Ball test

8. Safety
   - Health & Safety
   - Eye protection
   - Hand & Foot protection
   - Overall personal safety
   - Moving
   - Lifting
   - Carrying
   - Stacking
   - Working at heights (Ladders / scaffold)
   - Electricity

9. Practice Modules
   - Fl. Taps & Valves
     - Understanding working principles
     - Understanding methods of testing
     - Use of basic tools and bench vice
     - Selection of taps and valves
     - Dismantling taps & valves
     - Inspecting glands, washer
     - Assembling taps and valves in position
     - Ensuring no leaks when tested
     - Safety
     - Site tidiness

16 Hrs

24 Hrs

348 Hrs

24 Hrs
• **F2. Cutting / Threading / Bending**
  GI Pipes : 48 Hrs
  - Use of hand tools
  - Use of cutting tools
  - Use of bending machine
  - Use of pipe Dies & Vice
  - Lubrication
  - Understanding basic sketches & drawing
  - Mark out and cut to size
  - Threading and bending
  - Awareness of tolerance
  - Safety
  - Site tidiness

• **F3. Jointing / Assembling GI Pipes** : 48 Hrs
  - Understanding types of pipes & fittings
  - Understanding methods of joining
  - Use of chain wrench
  - Interpretation of sketches & drawings
  - Joining and assembling GI pipes with supplied fittings
  - Importance of line & level
  - Awareness of tolerance
  - Safety
  - Site tidiness

• **F4. PVC Pipe Bending** : 24 Hrs
  - Understanding types of PVC pipes & fittings
  - Understanding methods of bending
  - Use blow lamp & flame control
  - Interpretation of sketches & drawings
  - Mark out and cut to size
  - Bend PVC pipes
  - Importance of line & level
  - Awareness of tolerance
  - Safety
  - Site Tidiness
• **F5. PVC Jointing**
  - Understanding types of PVC pipe joints
  - Understanding methods of jointing
  - Use of hand tools
  - Use of beveling reamer
  - Use of blow lamp & flame control
  - Application of solvents
  - Assembly methods
  - Interpretation of sketches & drawings
  - Join PVC pipe
  - Importance of line & level
  - Awareness of tolerance
  - Safety
  - Site Tidiness

• **F6. SW Pipe laying / jointing**
  - Understanding types of SW pipe
  - Understanding methods of laying / jointing
  - Use of hand tools
  - Use of sight rails
  - Assembly methods
  - Interpretation of sketches & drawings
  - Importance of gradient / alignment
  - Understanding self cleansing gradients
  - Join SW pipe
  - Testing methods
  - Awareness of tolerance
  - Safety
  - Site Tidiness

24 Hrs

18 Hrs
- **F7. Cast Iron Cutting / Jointing**: 18 Hrs
  - Understanding methods of cutting
  - Use of hand tools
  - Interpretation of sketches & drawings
  - Importance of alignment
  - Understanding methods of jointing
  - Use of chain wheel
  - Introduction to gasket
  - Handling lead
  - Testing methods
  - Awareness of tolerance
  - Safety
  - Site Tidiness

- **F8. Alkathene flanging / Jointing**: 18 Hrs
  - Understanding Alkathene Flange forming tools
  - Assembly methods
  - Types of fittings
  - Connecting Alkathene to G.I. pipe
  - Interpretation of sketches & drawings
  - Importance of alignment
  - Understanding methods of jointing
  - Testing methods
  - Awareness of tolerance
  - Safety
  - Site Tidiness

- **F9. Making service connections**: 24 Hrs
  - Understanding service connections
  - Understanding ferrules, water meter
  - Introduction local authority by-laws
  - Connect cast iron main with domestic service
  - Using ferrule, valve and water meter
• Testing methods
• Safety
• Site Tidiness

• F10. Connecting house sewer to main
  • Understanding sewer connection to main
  • Understanding interceptor traps
  • Introduction local authority by-laws
  • Connect interceptor manhole with main sewer using SW pipes
  • Testing methods
  • Safety
  • Site Tidiness

• F11. Fixing Sanitary Fixtures
  • Understanding, handling, lifting sanitary fixtures
  • Care in fitting and leveling
  • Introduction local authority by-laws
  • Fix low level water closet
  • Connect to soil stack, seal connections
  • Testing methods
  • Safety
  • Site Tidiness

• F12. Installing Water Pump, connecting supply pipe
  • Understanding handling water pump
  • Understanding working principle of Water pump and foot valve
  • Methods of connections
  • Connect pump to pump base
  • Connect supply pipes, foot valves etc.
  • Care in fitting and leveling
  • Introduction local authority by-laws
  • Testing methods
- Safety
- Site Tidiness

**F13 Skill Consolidation Installation**

**Work Project**

- Interpretation of working drawings
- Types of sanitary fixtures and appliances
- Storage cistern, tanks
- Understanding local authority by-laws
- Distribution water supply pipe connections
- Position install sanitary fixtures and appliances
- Testing methods
- Safety
- Site Tidiness

**10. Introduction to Trade on Job Site**

: 64 Hrs

**11. Revision**

: 60 Hrs

**12. Final Testing & Evaluation**

: 24 Hrs