

COMMUNITY PLUMBING CHALLENGE INDIA 2015



BRIEF #1 - MAINTENANCE GUIDE

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MAINTENANCE GUIDE

INTRODUCTION

One the advantages of our proposal is the easy and cheap maintenace required in order to keep its good fountionality.

Mainly, a right use and a simple and methodic reviews will give to the new facilities a long using life.

This guide includes the recomended inspections and required operations in case of failure.

MAINTENANCE GUIDE

PREVENTIVE REVIEWS

In order to detect possible failures we propose a biweekly preventive review of the facilities

This one will consist in a visual inspection of the facility elements.

We propose to involve the students in this task with the following objectives:


- Make cheaper the facilities maintenance
- Involve the students in the school life, making them aware about the needs and importance on the good use of the facilities.
- Reaching the students interest for skill learning.


Two students will analyse the points included in the following sheets every 2 weeks.


No tools are required for this task: just a pen and a ladder will be required.

PREVENTIVE REVIEWS

TANKS

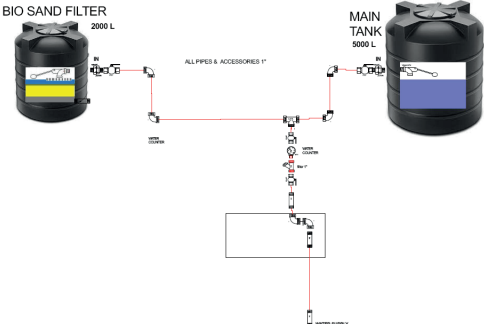
| MAIN TANK (5000L) | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|---------------------------|---|---|---------------------|
|  | Overall Condition? | | | |
| | Leaks in the tank INLET? | | | |
| | Leaks in the tank OUTLET? | | | |

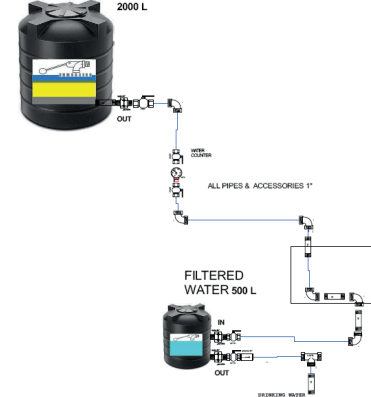
| BIO SAND FILTER TANK (2000L) | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|--|---------------------------|---|---|---------------------|
|  | Overall Condition? | | | |
| | Leaks in the tank INLET? | | | |
| | Leaks in the tank OUTLET? | | | |

| FILTERED WATER TANK (500L) | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|---------------------------|---|---|---------------------|
|  | Overall Condition? | | | |
| | Leaks in the tank INLET? | | | |
| | Leaks in the tank OUTLET? | | | |

PREVENTIVE REVIEWS

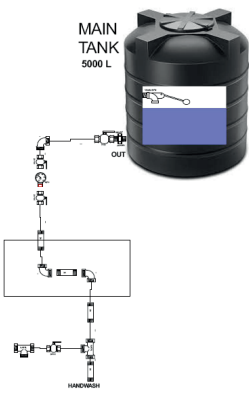
PIPE LINES

| MAIN WATER SUPPLY PIPE LINE | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|---------------------------------------|---|---|---------------------|
|  | Water leaks in valves? | | | |
| | Corrosion or rust in the pipe line? | | | |
| | Water leaks in GI piping accessories? | | | |
| | Wall mount pipe clamps status? | | | |
| | Leaks on water counter? | | | |
| | Measure of water counter | | | |

| FILTERED WATER PIPE LINE | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|---------------------------------------|---|---|---------------------|
|  | Water leaks in valves? | | | |
| | Corrosion or rust in the pipe line? | | | |
| | Water leaks in GI piping accessories? | | | |
| | Wall mount pipe clamps status? | | | |
| | Leaks on water counter? | | | |
| | Measure of water counter | | | |


PREVENTIVE REVIEWS

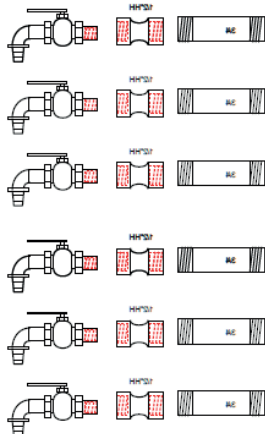
PIPE LINES


| HAND WASHING WATER PIPE LINE | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|---------------------------------------|---|---|---------------------|
|  | Water leaks in valves? | | | |
| | Corrosion or rust in the pipe line? | | | |
| | Water leaks in GI piping accessories? | | | |
| | Wall mount pipe clamps status? | | | |
| | Leaks on water counter? | | | |
| | Measure of water counter | | | |

PREVENTIVE REVIEWS

BIO SAND FILTER, TAPS AND WASTER LINE

| HAND WASHING WATER PIPE LINE | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|------------------|---|---|---------------------|
|  | Good water flow? | | | |
| | Clean sand? | | | |

| TAPS | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|------------------|---|---|---------------------|
|  | Broken? | | | |
| | Good water flow? | | | |
| | Leaks? | | | |

| WASTER LINE | ITEM | ✓ | ✗ | PROBLEM DESCRIPTION |
|---|--------------------------------|---|---|---------------------|
|  | Broken? | | | |
| | Good water flow, obstructions? | | | |
| | Leaks? | | | |

PREVENTIVE REVIEWS

RESULTS

The results of the visual review will be registered in the following sheet:

| WATER COUNTERMEASURES | | | |
|--|--------|---------------------|-----------------|
| Filtered water countermeasure | | | |
| Hand washing water countermeasure | | | |
| Main water supply water countermeasure | | | |
| CORRECTIVE ACTIONS | | | |
| Action nr. | Where? | Problem description | Date reparation |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Reviewed by | | | |
| Date | | | |

CORRECTIVE ACTIONS

COMMON TROUBLES







The most common troubles could be:

- Water leaks in irin accesories
- Water leaks at valves
- Valves and taps inmovilization (or other movile elements)
- Rusty pipe lines / corrosion

The following sheet explains the corrective actions required in case of troubles

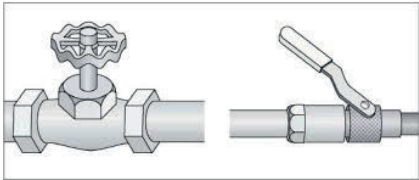





CORRECTIVE ACTIONS

REPAIRING LEAKS

| REPAIRING LEAKS | | |
|-----------------|---|---|
| 1° | Locate the leak |  |
| 2° | Isolate the pipeline section by closing the appropriate shut-off valves |  |
| 3° | Unscrew the pipe from the accessories |  |
| 4° | Apply teflon or hemp on the thread |  |
| 5° | Thread the pipe and accessories |  |
| 6° | Tighten the union | |
| 7° | Open closed shut-off valves |  |

CORRECTIVE ACTIONS

VALVES AND TAPS

| VALVES AND TAPS | | |
|-----------------|---|---|
| 1° | Locate the damaged valve or tap |  |
| 2° | Isolate the pipeline section by closing the appropriate shut-off valves |  |
| 3° | Unscrew the tap or valve from the pipe |  |
| 4° | Apply teflon or hemp on the thread |  |
| 5° | Thread the pipe and tap or valve |  |
| 6° | Tighten the union | |
| 7° | Open closed shut-off valves |  |






CORRECTIVE ACTIONS

REMOVING RUST AND PAINTING PIPES

| REMOVING RUST AND PAINTING PIPES | | |
|----------------------------------|----------------------------|---|
| 1º | Remove the rust from pipes |  |
| 2º | Clean and dry |  |
| 3º | Paint the pipes |  |









CORRECTIVE ACTIONS

PPE REQUIREMENTS

| PPE REQUIREMENTS | | |
|------------------|--|---|
| 1° | Covered safety shoes (steel toe caps) |  |
| 2° | Safety glasses |  |
| 3° | Gloves |  |
| 4° | Trousers (covering knee and lower leg) |  |
| 5° | Work shirt (long or short sleeve) |  |

CORRECTIVE ACTIONS

TOOLS REQUIREMENTS

| TOOLS REQUIREMENTS | |
|--------------------------|---|
| Stilsons (pipe wrench) |  |
| Adjustable wrench |  |
| Key parrot beak |  |
| Step ladder |  |
| Slotted screwdriver set |  |
| Phillips screwdriver set |  |
| Teflon tape |  |
| Hemp for plumbing |  |

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