

Instruction Manual for Steam Traps

GENERAL INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR STEAM TRAPS.

- 1. Before Installation:**
 - A] Clean the pipeline by blowing steam / compressed air.
 - B] Use the right trap for the right job.
- 2. Trap Location:**
 - A] Install the trap below the drain point.
 - B] Install the trap as close to the drain point as possible.
 - C] Trap should be accessible for periodic inspection.
 - D] Installation should be Horizontal preferably, vertical axis of the trap should be Perpendicular to the ground.
- 3. Trap Connection:**
 - A] Outlet connection from the vertical trap, to the return line should be made with union.
 - B] Hand valves / Manual valves are recommended at inlet and outlet lines of traps.
- 4. Dirt Pockets:**
 - A] To extend a vertical pipe below the trap to form a pocket to arrest scale and pipe cuttings / weld slag's etc.
 - B] Clean such devices periodically.
- 5. Strainers:**
 - A] Install strainers wherever conditions are dirty, dusty etc and clean the strainers Periodically.
- 6. By Pass:**
 - A] Wherever used by pass valves should be above the level of trap to avoid loss of prime.
 - B] All the valves associated with the trap should be located close together to facilitate valve manipulation.
- 7. Elevated Trap:**
 - A] Trap should not be elevated more than necessary.
 - B] If elevated the trap should have a water seal or use of an internal check valve.
- 8. Test Valve:**
 - A] Use shut off valve at trap discharge to isolate trap discharge line while testing of trap.



Ball Float Traps



Thermodynamic Steam Trap



Thermostatic Steam Traps



Inverted Bucket Steam Trap



9. Check valve:

- A] Use check valve on discharge line to prevent back flow from return line.
- B] Use check valve when the discharge line is elevated.
- C] Use check valve in the inlet line to prevent loss of prime in case of a sudden pressure drop.
- D] Though it is preferred good engg Practice, it is not Mandatory with UKL Ball Float Trap because of its unique design.

10. Protection against Freezing:

- A] Discharge line should be as short as possible.
- B] Provide drain valve at the bottom of the trap.

11. Starting Steam Trap:

- A] Turn the steam supply on, slowly, to make sure that the trap catches the prime.

12. Testing schedule of Trap:

- A] High-pressure traps [250psig and above] operation to be checked daily / weekly.
- B] Medium pressure traps performance to be checked weekly / monthly.
- C] Low-pressure traps may be tested on a monthly / annual basis.
Periodic maintenance during regular shut downs is always preferred rather than breakdown repairs.

13. Test Methods:

Following are the commonly used methods to ascertain the functioning of the traps.

- A] Test valve method.
- B] Listening device using a Probe, Signal annunciater and Headphones.
- C] Sight Glass.



WHILE INSTALLING TRAPS CAREFUL CONSIDERATION HAS TO BE GIVEN TO:

1] The Drain point.

The drain point should be so arranged that the condensate flows easily into the trap. This point needs to be properly appreciated.

Merely providing a drain hole, at the bottom of the pipeline, will not serve the purpose, as most of the condensate will be swept away by the velocity of steam. On the contrary a pocket needs to be created at the bottom of the pipeline into which the condensate collects and which is subsequently drained away.

2] Pipe sizing.

The Pipes leading to and from the traps should be of adequate and proper size. This is especially true in case of Thermodynamic traps.

Valves, bends, tees close to the traps tend to create unnecessary and in some cases excessive back pressure, which affects the performance of the traps.

3] Air Binding.

When air gets pumped / locked into the trap, in the space meant for steam, the trap function ceases.

Unless the air thus trapped, is released, by making proper provision for venting it, the trap and by extension the plant may take a long time warming up and may never work at its full potential.

4] Steam Lock.

A condition similar to Air lock, except that the cause of non-functioning traps here, is steam instead of air, for e.g. Drying Cylinders. A Steam lock release [SLR] device helps in restoring the function of the trap. SLR is a Std Feature of UKL Ball Float Trap

5] Group Trapping / Individual Trapping.

Many times it is observed that one trap is used for trapping steam / removing condensate from multiple units, for reasons of economy, which is wrong.

Each individual unit may have different consumption levels of steam, and consequently may generate different volumes of condensate at different pressures, which may tend to obstruct / prevent the proper draining of condensate of other units, leading to water logging and other performance related complications.

Therefore it is always highly recommended to use individual traps for individual units, and the outlets of all these individual units are connected to a common condensate collection, return main / drain point.



UNI KLINGER LTD PRODUCT MANAGER - FCD

Also available :



Products- Piston Valves Strainers - ' T ' Type, ' Y ' Type



Products- Steam Traps - Thermodynamic, Thermostatic, Ball Float Traps, IBT, / , Forged Steel Piston Valves , Manual & Actuated Ball & Butterfly Valves , Bellow Sealed Valve / Level Gauges - Reflex, Transparent, Bicolor.

In view of technical progress designs and dimensions are subject to change without notice.

UKL UNI KLINGER LIMITED

FLUID CONTROL DIVISION



- AN ISO 9001 : 2008
COMPANY.

Central Sales Office : SC1, 5th Fl., Kohinoor Estate. Mumbai-Pune Highway, Khadki, Pune-411003.

& Pune Branch Tel.: 91-20-41023000 Fax: 91-20-41023001

e-mail: salescso@uniklinger.com / salespune@uniklinger.com

Website: www.uniklinger.com

Factory : C - 37, M.I.D.C., Ahmednagar - 414111. Maharashtra. Tel.: 0241 - 2779044 / 2777223 / 2777512

Fax: 0241 - 2777294 E-mail: fcdworks@uniklinger.com

Branch Offices :

Baroda :

102, Offtel Towers II,
1st Floor,
R.C. Dutt Road,
Baroda- 390 005.
Tel.: 91-265-2312343/2340660
Fax : 91-265-2341419
e-mail :
salesbar@uniklinger.com

Chennai :

East Coast Centre,
5th Floor, 553, Mount Rd.,
Teyanampet,
Chennai- 600 018.
Tel.: 91-44-24345707
Fax :91-44-24343960.
e-mail :
saleschen@uniklinger.com

Kolkata :

9, 'CHITRAKOOT',
8th Floor, 230 A,
AJC Bose Road,
Kolkata- 700 020.
Tel.: 91-33-22872510
Fax: 91-33-22876494
e-mail :
salescal@uniklinger.com

Mumbai:

A-204, Nagesh Co-op. Hsg. Soc.,
LBS Marg, Navapada,
Thane -400 602.
Tel. :91-22-25421140
91-22-25440461
Fax :91-22-25440463
e-mail :
salesmum@uniklinger.com

New Delhi:

321, Ansal Chamber-II,
6, Bhikaji Cama Place,
New Delhi-110 066.
Tel.: 91-11-41658767
91-11-26193847
Fax: 91-11-41658768
e-mail :
salesdel@uniklinger.com