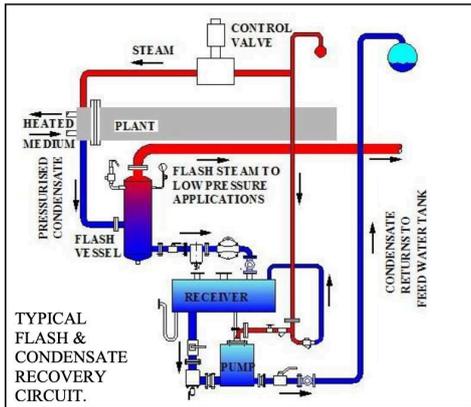


# *Flash & Condensate Recovery Systems*

Mutiny & MTRPS



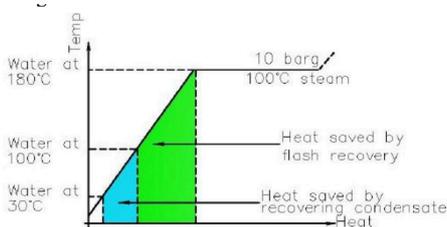


## Maximum Heat Recovery from Available Condensate

### WHY HEAT RECOVERY FROM CONDENSATE ?

Condensate is the steam that has condensed to water after giving away its latent heat in the heating process. Being condensed from steam it is pure water and the best possible source of feed water for the boiler. This quality feed water directly results into reduction of blow downs, the resultant heat losses through blowdowns and reduces other scale related challenges in the boiler. In addition to this the most important feature of Medium or high pressure condensate is that it carries with it a significant amount amount of sensible heat which gets wasted the moment we drain the condensate.

This heat, as shown in the demonstrative graph alongside, is nearly about 20% of the total heat of the steam and can be recovered by controlled flashing and return of the condensate to the boiler feed water tank at 100 deg.C.



### Create substantial savings by recovering heat from condensate.... Consider

- Cost of steam at just Rs. 2 per kg,
- Condensate pressure 3.5 kg/cm<sup>2</sup> ...p1
- Flash recovery at 0.5kg/cm<sup>2</sup> pressure ...p2
- Condensate to be recovered. only 1000 kg/hr

$$\text{recoverable flash} = \left( \frac{\text{sensible ht at } p_1 - \text{sensible ht at } p_2}{\text{latent ht at } p_2} \right) \times 100$$

$$= \left( \frac{148 - 109.5}{533} \right) \times 100 = 7.2\% = 72 \text{ kg/hr of steam recovery}$$

$$\text{Money saved} = 72 \times 2 = \text{Rs. 144 per hr.}$$

By returning balance condensate to boiler feed water tank at 100 deg. C

$$\text{equivalent steam saved} = \left( \frac{(100 - 35) \times 1000}{540} \right) = 120 \text{ kg/hr}$$

$$\text{Money saved} = 120 \times 2 = \text{Rs. 240 per hr.}$$

$$\text{Therefore total money saved} = 240 + 144 = \text{Rs 388 per hr.}$$



✓✓ *Strainers can be cleaned Online*

✓✓ *Without any Shutdown*

✓✓ *Without opening Strainer*

✓✓ *In Compliance with TPM*

# Mutiny – Steam Operated Condensate Return Pump

Experience of nearly two decades and a vision to develop customer friendly solutions has helped us “Indo Anushka Steam Technologies” to succeed in creating products and provide a range of value added but economical solutions in this field of heat recovery from condensate.

## STEAM OPERATED CONDENSATE RETURN PUMPS

| SR No. | Item   | Material | Class                |
|--------|--|----------|----------------------|
| 1      | Pump body, frame assly, receiver body                                  | M.S.     | IS 2062              |
| 2      | Ainteno Online Cleaning Strainer                                       | M.S.     | With SS304 internals |
| 3      | Disc check valve   | S.S.     |                      |
| 4      | Ball Valve   | C.I.     | SS 304 internals     |
| 5      | All pipng - condensate inlet & return, exhaust, overflow, steam inlet. | M.S.     | IS 1239 CLASS C      |
| 6      | Steam trap   | SS 420   |                      |
| 7      | Pump internals   | SS 304   |                      |

|                        |  |
|------------------------|--|
| <b>Size</b>            | 25NB, 40NB, 50NB, 80 X 50NB  |
| <b>MOC</b>             | Float based, spring loaded snapshut mechanism, fully mechanical and automatic. |
| <b>End Connection:</b> | 1500# Flanged  |
| <b>Max. All. Pr.</b>   | 7 bar  |
| <b>Max. All. Temp</b>  | 180 °C   |



## CAPACITY TABLE :

### Condensate Handling Capacity, kg/hr.

| SR No. | OP. INLET PR. Bar. | Back PR. Bar. | Pump Size |      |      |           |               |
|--------|--------------------|---------------|-----------|------|------|-----------|---------------|
|        |                    |               | 25NB      | 40NB | 50NB | 80 X 50NB | Mutiny - MINI |
| 1      | 7.0                | 1             | 1065      | 1875 | 2700 | 4570      | 650           |
| 2      | 7.0                | 2.8           | 980       | 1715 | 2490 | 4250      | 500           |
| 3      | 7.0                | 4.2           | 900       | 1475 | 2370 | 4040      | 450           |
| 4      | 3.5                | 0.7           | 980       | 1635 | 2615 | 4500      | 600           |
| 5      | 3.5                | 1.75          | 940       | 1510 | 2370 | 4000      | 500           |
| 6      | 3.5                | 2.8           | 815       | 1305 | 1960 | 3350      | 400           |

# MTRPS – Combination of Flashing and Pumping Condensate.

## MTRPS – Description

The IndoAnushka make MTRPS is designed as a complete solution for flashing and pumping condensate. This is an ideal equipment to recover flash from condensate of small quantities at lower pressures.

The MTRPS's main feature is the compact design and it occupies very less space hence can be installed locally near the equipment without disturbing the existing plant layout.

## Operation

The condensate flows into the specially designed flashing chamber. Here the flash is separated from the condensate and the remaining hot condensate is discharged from the bottom of the flashing chamber.

This hot condensate then flows in to the pumping chamber from where it can be pumped to the application destination. The system consists of a balancing system to keep the pressure uniform in the entire equipment

MOC : BODY – M.S. INTERNALS - S.S.304. PIPING – M.S.  
END CONNECTIONS: #150 RATING.  
MAX. OP. PR.: 14 KG/CM2                      MAX. OP. TEMP.: 220 °C

## Specifications:

| MODEL - SIZE     | CAPACITY<br>KG/HR |
|------------------|-------------------|
| MTRPS22-25M      | 600               |
| MTRPS22-25       | 1000              |
| MTRPS40-25       | 1200              |
| MTRPS40-40       | 1400              |
| MTRPS40-50       | 2000              |
| MTRPS70-50       | 2400              |
| MTRPS70-8050     | 4000              |
| MTRPS130-50x2    | 4800              |
| MTRPS130-8050+50 | 6000              |
| MTRPS130-8050x2  | 8000              |



## Get In Touch

Plot No.693, GIDC, MAKARPURA, VADODARA – 10.

+91 99250 08817 / +91 84017 28133

[www.indoanushka.co.in](http://www.indoanushka.co.in)

[info@indoanushka.co.in](mailto:info@indoanushka.co.in), [engg@indoanushka.co.in](mailto:engg@indoanushka.co.in)