## THERMAX ATMOSPHERIC DE-AERATOR with IMMERSION TUBE

- Facilitates mixing of condensate, flash steam and cold make-up water
- Liberates dissolved gases and oxygen
- SS De-aerator head with SS immersion tube

Atmospheric De-aerator Head is designed to remove dissolved gases and oxygen from the feed water by proper mixing of condensate, flash steam and cold make up. Solubility of oxygen and other dissolved gases decreases with rise in temperature and they are released from solution. These gases are then released through the air vent fitted on the de aerator head.

The mixing action takes place by suitably locating the nozzles and providing spray screens and baffles. A Thermax flash condensing de-aerator head consists of three parts

- Atmospheric De-aerator Head, which is bolted to the top of the tank and is supplied with connections for cold make up, condensate return, flash steam and recirculation.
- An immersion tube which distributes the mixed fluids into the tank
- A guide nozzle for mounting the immersion tube.
- Recirculation system (optional)



## MATERIAL OF CONSTRUCTION

Atmospheric De-aerator Head SS 304 Immersion Tube SS 304

## DESIGN SPECIFICATIONS

Design Pressure  $5 \text{ kg/cm}^2 \text{ (g)}$ Design Temperature  $158^{\circ} \text{ C}$ 

### INSTALLATION

The de-aerator head is mounted on the feed water tank on a flanged nozzle. Sealing gaskets are used above and below the immersion tube flange.

Pipe work should be preferably of the same size as that of nozzles.

The flanged nozzle supplied lose to be welded on the top of the FW Tank at a suitable location (reffer GA drawing).

## RECOMMENDATIONS

**Cold makeup line**- Fit a DCV before connecting to TADIT. **Condensate Return line**- Fit a DCV before connecting to TADIT.

Vacuum Breaker - Install in vertical position.

Air Vent - Install in vertical position.

### SELECTION TABLE

| Condensate w/o Flash<br>Steam Kg/hr | Condensate with flash<br>Steam Kg/hr | TADIT<br>Model |
|-------------------------------------|--------------------------------------|----------------|
| 5000                                | Refer Thermax for Details            | 150            |
| 10000                               |                                      | 200            |
| 20000                               |                                      | 250            |
| 30000                               |                                      | 300            |

## END CONNECTIONS

TADIT & nozzles N1, N2, N3 are provided with flanged end connections conforming to ANSI-B16.5 Class # 150, N4, N5 screwed BSP for air vent and recirculation.

# SELECTION

IMMERSION TUBE LENGTH

Immersion tube length is selected based on feed water tank depth. Consideration should be given to the nozzle height on which TADIT is to be fitted.

IMMERSION TUBE

(N4)

Use the following criteria for selecting immersion tube length.

### L = D + H - 300 mm (for tank depth > 1000 mm)

\*Contact HO for tank depths < 1000mm

Where L = Immersion tube length, in mm

D = Tank depth, in mm

H = Nozzle height, in mm (standard available 150 mm)

Immersion Tube Length (L) have been standardized as 900, 1050, 1200, 1350, 1500, 1650, 1800, 1950, 2100, 2250, 2400 mm

## MODELS & DIMENSIONS

|    | TADIT<br>150 | TADIT<br>200 | TADIT<br>250 | TADIT<br>300 |
|----|--------------|--------------|--------------|--------------|
| Α  | 440          | 490          | 500          | 500          |
| В  | 370          | 420          | 475          | 525          |
| С  | 185          | 210          | 235          | 265          |
| D  | 175          | 200          | 210          | 225          |
| N1 | 65           | 100          | 150          | 150          |
| N2 | 50           | 80           | 80           | 100          |
| N3 | 25           | 40           | 50           | 65           |
| N4 | 15           | 15           | 15           | 15           |
| N5 | 15           | 25           | 25           | 25           |
| N6 | 150          | 200          | 250          | 300          |



### **THERMAX**

Sustainable Solutions in Energy & Environment

#### **COOLING & HEATING DIVISION**

#### Services SBU - FEMS

D - 13, MIDC Industrial Area, R. D. Aga Road, Chinchwad, Pune 411 019. INDIA Tel.: +91-20-2747 5941

Fax: +91-20-2747 7080

E-mail: info.c&hservices@thermaxindia.com

#### AHMEDABAD 380 006

Tel.: (079) 2657 5408 / 5341 / 7073

Fax: (079) 2657 7270

DEAERATOR HEAD

E-mail: mambiar@thermaxindia.com

### **BANGALORE 560 020**

Tel.: (080) 2346 7761 - 64 Fax: (080) 2346 7760

E-mail: adminblr@thermaxindia.com

### **CHENNAI 600 018**

Tel.: (044) 2435 3831 - 34 Fax: (044) 2435 3841

E-mail: chennaidivsupp@thermaxindia.com

#### **HYDERABAD 500 482**

Tel.: (040) 2339 6820, 2331 0254

Fax: (040) 2331 2335

E-mail: hyd\_sec@thermaxindia.com

#### **MUMBAI 400 016**

Tel.: (022) 2204 5391, 2204 5324

Fax: (022) 2204 0859

E-mail: psecreta@thermaxindia.com

#### **NEW DELHI 110 057**

Tel.: (011) 2614 5319, 2614 5701 Fax: (011) 2614 5311, 2614 8679 E-mail: psupport@thermaxindia.com

#### **KOLKATA 700 016**

Tel.: (033) 2282 6711 - 13 Fax: (033) 2282 6769

E-mail: mbiswas@thermaxindia.com

### **VADODRA 390 005**

Tel.: (0265) 231 4802, 234 5442

Fax: (0265) 231 0051

E-mail: pbaroda@thermaxindia.com

#### www.thermaxindia.com

International offices at Indonesia, Russia, Kazaksta

Indonesia, Russia, Kazakstan, Saudi Arabia, Malaysia, Bangladesh, Sri Lanka, Hong Kong, China Thailand, UAE, Kenya, Nigeria, Brazil, UK, USA

#### **Thermax Business Portfolio**

**Boilers & Heaters** 

**Absorption Cooling** 

**Air Pollution Control** 

**Captive Power** 

Chemicals

2007

Мау

Water & Waste Solutions