ACMV ATB

An Energy Saving Product

AUTOMATIC TUBE BRUSHING SYSTEM

For Your Heat Exchangers

Saving In Energy

Heat exchanger tubes begin to foul-up the moment it starts to operate. Fouling in heat exchanger tubes not only reduces cooling capacity, energy usage would be higher than the intended design condition. With the automatic tube brushing system, energy consumption can be reduced by up to 30 percent.

Chillers operating in high ambient temperature particularly face compromise in cooling capacity with increase heat exchanger fouling.

Saving in Maintenance

The automatic tube brushing system brushes the heat exchanger tubes 3 to 4 time daily. Regular manual brushing or high pressure cleaning and chemical cleaning of heat exchanger tubes becomes unnecessary or is eliminated entirely.

Reduction in Chemicals

When heat exchanger tubes are badly fouled, normal chemical water treatment needs more aggressive introduction of chemicals which often leads to greater heat exchanger corrosion. When heat exchanger tubes are kept clean daily by the automatic tube brushing system, expensive chemical cleaning can be avoided and chemicals used in normal program of water treatment reduced

Reduction in Downtime

Downtime due to scheduled or unscheduled cleaning of heat exchanger tubes are often an expensive exercise for the manufacturing plants. Plants forced to carry out maintenance on the heat exchanger tubes need also to shut down the rest of the production processes leading to lost in production time. The automatic tube brushing system maintains the fouling of the heat exchanger at an acceptable level reducing the downtime needed for heat exchanger maintenance.

	Fouling Factor	
Fouling Factor hr sq. ft Deg F/ Btu	Approx. Scale Thickness in Inches	% of Power Increase Required
Clean	0.000	0
0.0001	0.001	1.1
0.00025*	0.003	2.75
0.0005	0.006	5.5
0.001	0.012	11.0
0.002	0.024	22.0
0.003	0.036	33.0
0.004	0.048	44.0

** Chiller Design Condenser Fouling Factor*

Downtime

need not be necessary when there is a simple solution

ATB System comprise:

- Brush and Basket set
- 4 Way Diverter Valve
- Control Panel

Application

- Water Cooled Chillers
- Shell and Tube Heat Exchangers
- Plate Heat Exchangers
- Power Stations

Ask For Our Other Range of Products

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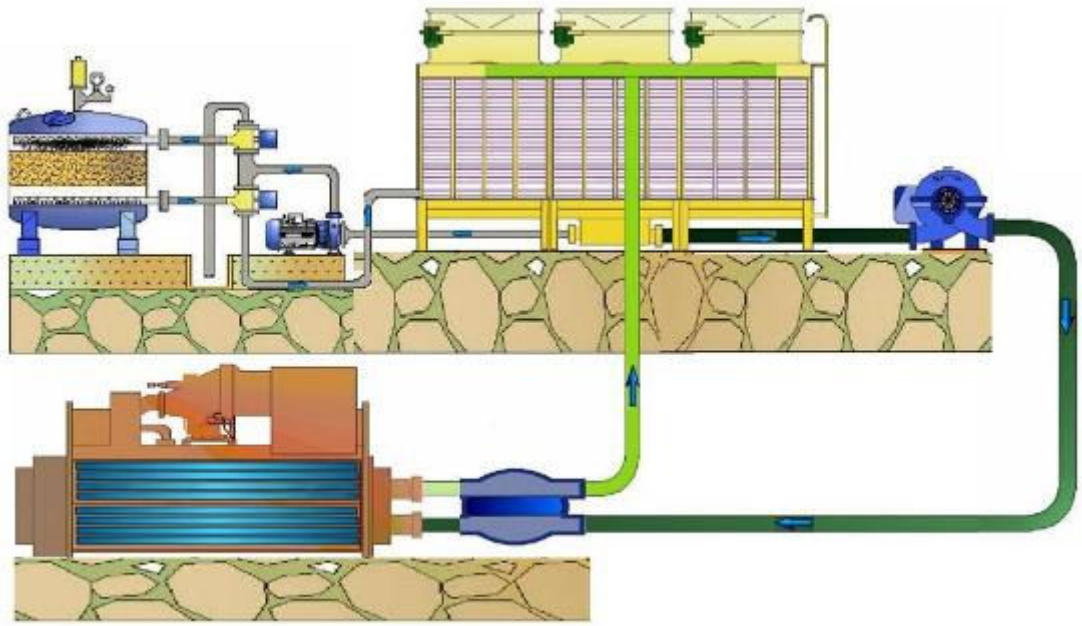

How the Automatic Tube Brushing Systems Works

Baskets are installed at both ends of every available heat exchanger tube. A brush is assigned to each tube and resides in the basket which holds and captures the brush as it moves in a spinning motion from one end of the tube to the other.

By tuning from Normal Position to Reverse Position and back again, the 4 way diverter valves installed in the pipeline changes the water flow in the heat exchanger which causes the brush to move back and forth and clean the tube in the process.

The movement of brush from one end of the tube and back again is a complete brushing cycle. The 4 way diverter valve changes position 3 to 4 times daily in every interval of 6 to 8 hours to activate 3 to 4 brush cycles in a 24 hour day. The 4 way diverter valve is kept in a reverse position only 30 seconds in every brush cycle.

A control panel provided activates the brushing cycles automatically by turning the 4 way diverter valve while the chiller is online - brushing the tube clean without the need to shutdown the chiller.

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