Armstrong®

Intelligent System Solutions®

STEAM • AIR • HOT WATER

White Paper

How Your Steam Trap Selection Affects Your Bottom Line Profits

Inverted Bucket Trap
vs.
Thermodynamic Trap

An Armstrong Report

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Example 1:

Trap Costs Over a 5 Year Period.

Disc Traps changed every 12 months.
No change of Inverted Bucket Traps.

Cost		Inverted Bucket Type	Thermodynamic Type
Steam Loss[1] (IB = .97 lbs/hr) (TD = 2.4 lbs/hr)	Monthly	$6.98	$17.28
	Yearly	$84.97	$210.24
	5 Years	$424.86	$1,051.20
Trap Costs	Each Trap	$162.00	$194.00
	Traps Over 5 Yrs (1)	$162.00	$970.00
Labor Costs[2] ($25.50 / Hr)	Installations	1	5
	5 Year Cost	$12.75	$63.75
Total Trap Cost		**$599.61**	**$2,084.95**

Total Cost Difference	**$1,485.34**
Cost Difference Per Year	**$297.07**
Cost Difference Per Month	**$24.76**

In this example, the maintenance department changes the disc traps every twelve months to ensure proper trap operation. In this scenario the Inverted Bucket Trap will save an estimated **$24.76** per month for each trap.

1 - Average steam loss due to normal trap operation

2 - Assuming 1/2 hour per trap change. Labor Costs from Bureau of Labor and Statistics

Example 2:

Trap Costs Over a 5 Year Period.

Disc Traps changed every 2 years.
No change of Inverted Bucket Traps.

Cost		Inverted Bucket Type	Thermodynamic Type
Steam Loss[1] (IB = .97 lbs/hr) (TD = 2.4 lbs/hr)	Monthly	$6.98	$17.28
	Yearly	$84.97	$210.24
	5 Years	$424.86	$1,051.20
Steam Blow-Through[2] (TD = 20 lbs/hr)	Monthly	-	$144.00
	Yearly	-	$12,614.40
	5 Years	-	$25,228.80

Note: Trap Blow-Through in years two and four.

Trap Costs	Each Trap	$162.00	$194.00
	Traps Over 5 Yrs (1)	$162.00	$582.00
Labor Costs[3] ($25.50 / Hr)	Installations	1	3
	5 Year Cost	$12.75	$38.25
Total Trap Cost		**$599.61**	**$26,900.25**

Total Cost Difference	**$26,300.64**
Cost Difference Per Year	**$5,260.13**
Cost Difference Per Month	**$438.34**

In this example, the maintenance department changes the disc traps every two years. The average measured operational life of a disc trap is one year, so it is assumed that in years two and four the trap will blow through steam. In this scenario the Inverted Bucket Trap will save an estimated **$438.34** per month for each trap.

1 - Average steam loss due to normal trap operation

2 - Steam loss due to trap failure based on SteamStar® analysis at 60 psi

3 - Assuming 1/2 hour per trap change. Labor Costs from Bureau of Labor and Statistics

Armstrong International offers intelligent system solutions to give you the ability to better collect intelligence and manage performance across your entire steam system to maximize energy efficiency and minimize disruption.

The ability to monitor and maintain your facility's steam trap populated directly affects your bottom line. Armstrong's Steam Testing and Monitoring Systems give you the means to achieve best practice steam system management by proactively monitoring your steam trap inventory.

SteamStar®

SteamStar® Features:

- Accurately shows losses in steam, fuel, money and CO_2 emissions, based on formulas approved by the United Nations Technical Committee.
- Calculate real steam losses for any trap model from any manufacturer.
- Benchmarking and Trending Analysis: Easily compare and view data from local, regional or global locations.
- Provides ROI prioritization based on dollar losses of failed steam traps.
- Survey data from Microsoft Excel, third-party software, handheld testing devices or wireless monitoring can be uploaded.
- Eliminates the need for expensive software maintenance, training, upgrades and licensing fees.

Armstrong®

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