Sustainable Optimization Cleaning Report

RETURN ON INVESTMENT	CLEANING MEDIA REDUCED	PAYBACK TIME
94 °/o	961 m3	1,1 yr

FoodGeneral Project report,
generated by SKS

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SUMMARY

The purpose of the Alfa Laval Optimization report is to present Optimization possibilities on audited production plant. This report will give estimations on economie or quality improvements based on investment and cost operation numbers.

All agreed audited equipment/processes are analysed in consultations with the local personal. Based on this are the most obvious Optimizations pointed out here. The focus is energy savings, reduction of water and chemicals and also time if uptime can be justified.

Examples of optimizations can be:

- Energy consumption and gentle product treatment on agitation
- Water and chemica! consumption and also time within cleaning
- Energy Consumption and time savings on Hybrid Powder Mixing
- Hygienic mixing and reduced product loss on levitated magnetic mixer
- Energy consumption on big pumps
- Water and chemica! consumption on valves

OPERATION PARAMETERS

The calculations are based on these settings

PROJECT NAME	FoodGeneral
TANK NAME	20m3 mixing tank (batch process)
TAG REFERENCE	MT1
CIP APPLICATION	Food
CLEANING COMPLEXLITY	Difficult removable residuals
CIP PER WEEK	7
WEEKS PER YEAR	52
CIP PER YEAR	364

EQUIPMENT PROFILE$

The calculations are based on these settings

	TCM1	TCM2
MODEL NAME	ExistingSprayHead	RotaryJetHead
EQUIPMENT TECHNOLOGY	Rotary Spray Head	Rotary Jet Head
UNIT MODEL	SaniMidget 360 clip-on	TJ20G 4x3.9
PRESSURE [BAR]	2.00	5.00
FLOW RATE [M3/HR]	6.0000	6.5000
QTY	2	1
TOTAL LIFETIME [YRS]	5	5
LIST PRICE PER UNIT	€725,00	€5.869,00
DISCOUNT	0 %	0 %
NET PRICE PER UNIT	€725,00	€5.869,00
ADDITIONAL INVESTMENT COSTS	€0,00	€0,00
ADDITIONAL RUNNING COSTS	€0,00 /hr	€0,00 /hr
ADDITIONAL INVESTMENT COSTS NOTES		

ANALYSIS OUTPUT

Below you see the annual cip comparison between the equipment profiles

	SANIMIDGET 360 CLIP-ON		TJ20G 4X3.9	
	VOL. [M3/YR]	COST [€/YR]	VOL. [M3/YR]	COST [€/YR]
Water Usage	1019.20	€4.076,80	334.88	€1.339,52
Caustic Usage	218.40	€1.092,00	80.08	€393, 12
Acid Usage	218.40	€1.092,00	80.08	€393,12
ANNUAL TOTALS	1456.00	€6.260,80	495.04	€2.125,76

CLEANING CIP ANALYSIS

Below you see the comparison between the equipment profiles

	SANIMIDGET 360 CLIP-ON		TJ20G 4X3.9	
	STEP VOLUME	STEP COST	STEP VOLUME	STEP COST
1 Pre-rinse Water	2.00 m3	€8,00	0.65 m3	€2,60
2 Caustic	0.60 m3	**€3,00**	0.22 m3	**€1,08**
3 Intermediate rinse Water	0.80 m3	**€3,20**	0.27 m3	€1,08
4 Acid	0.60 m3	**€3,00**	0.22 m3	**€1,08**
5 Final rinse Water	0.00 m3	**€0,00**	0.00 m3	€0,00
Total per CIP	4.00 m3	**€17,20**	1.36 m3	**€5,84**

RETURN ON INVESTMENT