

Productivity and Quality Enhancement- Steel Grinding

Leading Strut Rod Manufacturer from Pune.

Material: Alloy Steel

Coolant: r.rhenus TS 30 PT Emulsion

Pure Synergy

At Sovereign –Tech we look into each and every aspect of Coolant management right from the selection of high performance coolant that suits your application, to its filtration, efficient delivery and maintenance program.

Our prime objective is to bring modern yet proven technology, concepts, products & services to Indian Metal Working Industry at large.

Our in-house core team comprising of experienced and qualified process engineers, Machine Tool engineers, Tool Engineers, Shop-floor & Maintenance Engineers & Chemical Engineers gives us excellent leverage in recognizing and responding to customer needs.

We have collaborated with the best in the industry to bring you the ‘World-Class’ solutions that was never accessible before.

The Products & Services, we offer in collaboration with:



OUR GLOBAL PARTNERS	
High Performance Coolants	
Chip Conveyors	
Coolant Filters	
Coolant Filter Media	
Coolant Pumps	
High Pressure Coolant Delivery	
Needle Nozzles for Grinding	
Automated Coolant Nozzle System for CNC Machining	



Our Concept





THE ULTIMATE
METAL-CUTTING-EDGE
SOLUTIONS



Sovereign Tech
▲ PURE EXCELLENCE ▲



Sovereign Tech
▲ PURE EXCELLENCE ▲

FLUID ADVANTECH
Pure Machining Experience

Cost Analysis of Coolant Management

Customer: Strut Rod Manufacturer, Chakan
Machine :Cincinnati Centerless Grinder
Operation : Rough and Semi Finish Grinding

Average Production : 6000 /Day
Average Production : 230000 /month
Component : Strut Rods
Date of commencement of Fluid Advantech :19/04/07

Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Initial Charge				
a) ITW Coolant ltr	32	100	3200	
b) Rhenus R-UNI ltrs	26	330		8580
Cleaning and rinsing ltr	20	330		6600
Biocides ltr	2	1562		3124
Conditioner Kg	1	500		500
System Cleaner ltr	2	655		1310
Labour	4hrs	200	800	800
Machine down time	4hrs	500	2000	2000
Sub total			6000	22914
Sump life	15 days		15days	2 year
Initial charge cost per month			12000	955
Cost per piece			0.052	0.0042
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Top-up per month ITW	132	100	13200	
Rhenus R_Uni	70.5	330		23265
Cost per piece			0.057	0.101
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Additives				
Biocides ltr	1	1562		1562
Conditioner Kg	0.5	500		250
Defoamer ltr	0.2	2000		400
Cost per piece				0.01
Total Cost on account of coolant and additives			0.109	0.1152

Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Wheel life	1	184000	150000	300000
Cost per piece				1.227
Dressing frequency			1500	5000
Dressing Cycle time			10 min	10 min
Dressing cost per piece				0.055
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Filter media cost				
OL 50/100	2	6136		12272
cost per piece				0.053
Total cost per piece				1.391
Savings per piece				0.5928
Savings Per month in Rs				136344
Savings Per Year in Rs				1636128

Additional Benefits:

- a) Improvement in production
- Due to dressing frequency
- b) Due to wheelchange frequency
- Additional Prod.
- c) Surface finish
- d) Pump maintenance
- e) Cleaniness
- f) Smell
- g) Operative reaction

2300 long rods pm
900 long rods pm
3200 long rods pm
Less than 2.0 Rz
No problem since TCM
Good
No smell
User friendly

Cost Analysis of Coolant Management

Customer :Strut Rod Manufacturer,Pune.			Average Production : 6000 /Day	
Machine :Cincinnati Centerless Grinder			Average Production : 230000 /month	
Operation :Finish Grinding			Component : Strur Rods	
			Date of commencement of TCM : 23/4/07	
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Initial Charge				
a) ITW Coolant ltr	32	100	3200	
b) Rhenus R-UNI ltrs	23	330		7590
Cleaning and rinsing ltr	2	330		660
Biocides ltr		1562		
Conditioner Kg		500		
System Cleaner ltr		655		
Labour	4hrs	200	800	800
Machine down time	4hrs	500	2000	2000
Sub total			6000	11050
Sump life	20 days		20days	2 year
Initial charge cost per month			4200	460
Cost per piece			0.0182	0.002
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Top-up per month ITW	70	100	7000	
Rhenus R_Uni	35.5	330		11715
Cost per piece			0.0304	0.0509
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Additives				
Biocides ltr	1	1562		1562
Conditioner Kg	0.5	500		250
Defoamer ltr	0.1	2000		200

Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Wheel life	1	184000	180000	720000
Cost per piece			1.0222	0.2555
Dressing frequency			2500	10000
Dressing Cycle time			10 min	10 min
Dressing cost per piece			0.0333	0.0083
Particulars	Qty	Rate	Before Fluid Advantech	After Fluid Advantech
Filter media cost				
Paramol N 260/100-25Mtrs	0.6	4160		2496
cost per piece				0.0108
Total cost per piece			1.1041	0.33624
Savings per piece				0.76786
Savings Per month				176607.8
Savings Per Year				2119293.6

Additional Benefits:

a) Improvement in production

Due to dressing frequency

b) Due to wheelchange frequency

Additional Prod.

c) Surface finish

d) Pump maintenance

e) Cleaniness

f) Smell

g) Operative reaction

4140 long rods pm

1380 long rods pm

5520 long rods pm

Less than 0.3 Rz

No problem since TCM

Good

No smell

User friendly

Thank You!

