

#	Coolant Recycling Application Question	Answer
1	Company Name	ABC Machine, 2750 Ryan Road, Warren, Michigan 48091
2	Contact / Phone / e-mail	Paul Smith, Maintenance Manager, 586-754-8976 email psmith@abc.com
3	Reasons for recycling? Project goals?	Reduce chemical cost and waste hauling. Improve tool life.
4	Application Description / Equipment Type	Recycle coolant in CNC machining centers
5	Amount of coolant to be processed over time?	(1) machine/week
6	Desired recycling rate? Gal/hr.? tanks/day?	500 gallons/3 days
7	Number & size of tank(s) /reservoir(s) /system(s)?	(6) machines with 500 gallon reservoirs
8	Can coolant be separated from other waste fluids?	Yes
9	Coolant-manufacturer-product-synthetic/semi-synthetic?	Quaker cool 2760, semi-synthetic coolant
10	Coolant concentration? Auto mixing? Manual mixing?	8% concentration, manually mixed by operator
11	Coolant cost/gallon? - cost/month? + freight?	\$23.25/gallon, (2) drums/month \$2,511.00
12	Waste hauling cost/gallon? - cost/month?	\$0.25/gallon, 1000 gallons = \$250.00 + \$75.00 pickup fee = \$325.00/month
13	Maintenance hours/month\$ Estimated \$\$	16hrs/month x \$35.00/hr. = \$560.00
14	Machine downtime for maintenance/month? \$\$	16hrs/month x \$60.00/hr. machine time = \$960.00
15	Current problems?	Coolant cost are going up along with tools. Lost production time.
16	Solid contamination? metal, wear particles, fiberglass ?	Aluminum and steel chips.
17	How are solids removed today?	Drag out conveyor.
18	Tramp oil contamination? Type? Ingression rate?	Hydraulic oil, way lube, oil on parts. Coolant is dumped every 8 weeks.
19	How is tramp oil removed today?	Manually skimmed by operator.
20	Level of cleanliness required? solids%, tramp oil%	Eliminate particles larger than 25 microns, tramp oil at 1/2% max.
21	How often is system/tank/reservoir dumped & cleaned?	Each machine is dumped every 8 weeks. (2) machines/month
22	Who is responsible/maintains coolant quality?	The operator monitors concentration and adds water or chemical as required

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23	Plant Temperature, Normal-Minimum-Maximum	70-80 F
24	Plant power ? 120, 240, 460, 575 VAC? 3Phase?	460/3ph/60 hz
25	Cooling water available? Min/Max/Avg Temp?	no
26	Plant air Available? PSI?	Yes, 80 psi is normal
27	Special conditions?	none
28	Coolant maintenance equipment available?	55 Gallon sump vacuum unit
29	Pricing: Ball park \$\$ - Budgetary \$\$ - Firm \$\$	Investigation stage, need budgetary dollars
30	Time frame for project?	1 ST quarter 2016