Beverage Fermentation Class Case Study Workshop ESG Processes at Anheuser Busch, Inc. Brewery Fermentation Transfer of Beer

Energy Calculations with Fluid Hydraulic Pump Head







Determination of Optimum Economic Pipe Diameter for Constant Mass-Throughput Rate



 \$ Pins
 Comment: Based on the Optimum Economic Pipe Diameter Graph the economic choice would be a 1.5" pipe

 \$POpCs
 Comment: 1.5" pipe cost is low, but with a future motor replacement cost is the same as a 2" pipe

 \$SC
 Comment: 2" pipe has the lowest Carbon Footprint compared to the 1" and the 1.5" Pipes

 CFP
 Comment: Select the 2" pipe with the lowest Carbon Footprint and the lowest maintenance costs

 Comment:
 For CIP of the 2" pipe selection a VFD CIP pump will be used to get velocities between 5-8 Ft/Sec

1								
	0.25 Hp	\$100	3 Hp	\$1,200	25 Hp	\$10,000	100 Hp	\$40,000
	0.5 Hp	\$200	5 Hp	\$2,000	30 Hp	\$12,000	125 Hp	\$50,000
	0.75 Hp	\$300	7.5 Hp	\$3,000	40 Hp	\$16,000	150 Hp	\$60,000
	1 Hp	\$400	10 Hp	\$4,000	50 Hp	\$20,000	200 Hp	\$80,000
	1.5 Hp	\$600	15 Hp	\$6,000	60 Hp	\$24,000	250 Hp	\$100,000
	2 Hn	\$800	20 Hn	\$8,000	75 Hp	\$30,000	300 Hn	\$120,000