

CALCULATE MILL THROUGHPUT

Moly-Cop Tools™ (Version 2.0)



BOND'S LAW APPLICATION

Estimation of a Conventional Ball Mill Grinding Capacity

Remarks

Base Case Example

GRINDING TASK :

Ore Work Index, kWh (net)/metric ton	13.00	Specific Energy, kWh/ton	9.30
Feed Size, F80, microns	9795	Net Power Available, kW	7769
Product Size, P80, microns	150.0	Number of Mills for the Task	2
Total Plant Throughput, ton/hr	835.30	Net kW / Mill	3885

MILL DIMENSIONS AND OPERATING CONDITIONS :

Eff. Diameter ft	Eff. Length ft	Mill Speed % Critical	Charge Filling, %	Balls Filling, %	Interstitial Slurry Filling, %	Lift Angle, (°)	Mill Power, kW	
18.50	22.00	72.00	38.00	38.00	100.00	35.00	3348	Balls
							0	Overfilling
							536	Slurry
							3885	Net Total
							10.0	% Losses
							4316	Gross Total

% Solids in the Mill	72.00	Charge Volume, m3	63.76	Mill Charge Weight, tons	296.48	Apparent Density, ton/m3	5.395
Ore Density, ton/m3	2.80			Ball Charge	296.48		
Slurry Density, ton/m3	1.86			Interstitial	47.48		
Balls Density, ton/m3	7.75			Slurry above Balls	0.00		