**Evaluation of Hydrocyclone**

Determine the mass of solids (for an unweighted mud) and the volume of water discarded by one cone of a hydrocyclone (desander or desilter):

Volume fraction of solids (SF):

Mass rate of solids (MS):

Volume rate of water (WR)

Where ;

SF = fraction percentage of solids  
MW = average density of discarded mud (ppg)  
MS = mass rate of solids removed by one cone of a hydrocyclone (lb/hr)  
V = volume of slurry sample collected (quarts)  
T = time to collect slurry sample (seconds)  
WR = volume of water ejected by one cone of a hydrocyclone (gal/hr)

Sample Case : Average weight of slurry sample collected = 16.0 ppg  
 Sample collected in 45 seconds  
 Volume of slurry sample collected = 2 quarts

a. Volume fraction of solids :

b. Mass rate of solids :

c. Volume rate of water :