



WASH TANK SKETCH

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**ANNEXURE – F**  
**(Technical Data regarding selection of Agitator)**  
**(for Wash Tanks)**

**General :**

1. Purpose of agitation : To keep the solids under suspension
2. Degree of agitation : Medium  
 Too much agitation will cause : Generation of more fines (Speed of Propeller Shaft should not be more than 70 rpm)  
 Too little agitation will cause : Settling of solids  
 Preferred degree of agitation : Medium  
 Foaming tendency : No

**Operating Conditions :**

1. Location : Indoor
2. Operation schedule : Continuous
3. Process feed components : 20-25% w/w silicious uranium slurry
4. Type of solids : silicious ground uranium ore
5. % Solids (w/w) : 20-25%
6. Solid Density ( $T/m^3$ ) : 2.8 (Sp. Gr)
7. Particle size ( $\mu/mm$ ) : 90% passing through (-) 325 mesh
8. Solution density : 1.05 gram/cc
9. Working Temp. ( $^{\circ}C$ ) : 45  $^{\circ}C$
10. Working Pressure (bar/Kg per  $cm^2$ ) : Atmospheric
11. pH : 1.5 – 2.0

**Vessel Details :**

9. Tank Diameter x height (mm x mm) : 2600  $\varnothing$  x 3000 mm
10. Tank Top : Closed
11. Tank Bottom : Flat
12. Liquid level (mm) : 2620
13. Free board (mm) : 380
14. Baffle details : 200 mm x 2400 mm, 3 Nos.
15. Agitator mounting : Channel
16. MOC of tank : MSRL

**Agitator Type Preferred :**

3. Portable : Gear driven
4. Top entry : Gear driven
5. Side Entry : Belt driven
6. MOC of wetted parts : Soft lined and spark tested
7. Shaft sealing : Stuffing Box

**Motor :** 3 Phase, 440 volt, 1440 rpm only Crompton Greaves/ABB/Kirloskar/Simens make preferred

**Gear Box :** Only Premium Energy Transmission Ltd./Radicon make preferred (Worm & Worm wheel type Heavy Duty Gear Box)

**Coupling :** Only Fenner /SKF/ Utkarsh make preferred

**Bearings (Gear Box / Pedestal) :** Only SKF/FAG make preferred