



Application Tech Sheet

Sump Pits

Industry: All Industries

Application: Drainage / Run Off

Sump pits where the liquid waste, rain water and spills from processes are all collected.

Critical Factors: Cost / Reliability

Sump pit monitoring is a sunk cost; it does not improve the process. Reliability is critical because of environmental issues such as spills. Environmental spills can result in unnecessary fines and cleanup costs. Heavy foam, fog, condensate, and turbulence do not interfere with echOsonix transmitters.

What to watch for: Heavy foam, Fog, Condensate, Turbulence

Installation: Ease of installation – no special adaptors or mounts are needed to install an echOsonix unit for sump pit monitoring. The mounting can be directly over safety grating or open top mounting.

Use SOR®:

Advantages

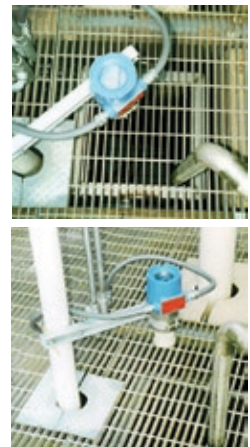
- High power and low frequency penetrates foam and condensate
- Adaptive gain accounts for changing foam thickness during filling and settling
- Field adjustable set points for alarms and pump control
- Loop or line powered units are available

Benefits

- High reliability in changing conditions
- Forgiving installation
- Works well in standpipes and stilling wells

Key Questions:

1. Where is the mounting location?
2. What type of foam is there on the liquid / slurry surface?
3. What is the density of the foam?
4. Does the sump pit get ledges of build up on the vessel walls?
5. What are the failure rates on current instruments?



Ultrasonic Paradigms:

Condensation on sensor face blocks signal. Ultrasonics cannot penetrate foam and only read the foam level. *echOsonix disproves this through use of high power and low frequency.*

Other Technology Options:

- Mechanical Float, Capacitance/RF, TDR Radar – solids and foam collect on floats and sensors causing residue build up and ultimately failure of the instrument.

Similar Applications:

- Liquid level applications (i.e. storage tanks, ponds)
- Anywhere a process overflows into a sump; also consider where the sump feeds into for additional opportunities such as collection ponds or tanks