INTERFACE IN THE FIELD

OPTIMAL BOOT INTERFACE MEASUREMENT

CUSTOMER PROFILE

INDUSTRY: Downstream Oil & Gas
LOCATION: Refinery
APPLICATION: Separator boots

ICEBREAKER

"If Magnetrol can effectively measure the interface in boots, would this mitigate the potential of catastrophic failures in downstream equipment?"

Refinery unit with boot as liquid-liquid separator

CHALLENGES

Ineffective boot interface measurement

- Issues can range from reduced productivity and process efficiency to catastrophic failures in downstream equipment
- There are a variety of vessels that have these separators including alkylation units, hydrotreaters, cokers and amine units

WATER CARRYOVER

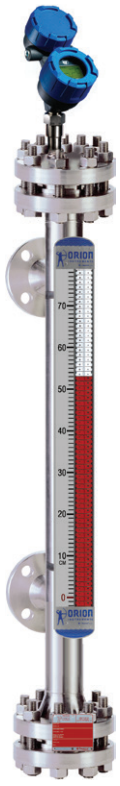
- If water enters distillation columns or other high-temperature units, then it will rapidly flash due to thermal expansion
- May cause excessive vibration and damage to trays or other parts of the distillation column
- Costs can reach $550K USD per hour to have a distillation column down (based on the size of the refinery)
- May require days to bring it back up depending on damage

HF ACID CARRYOVER

- If HF acid proceeds downstream it can corrode stainless steel piping, valves, fittings and instrumentation

HYDROCARBON EXTRACTION

- If hydrocarbon process liquids exit the boot it will diminish efficiency of the water treatment processes
- Hydrocarbons may plug screens or filters downstream



GWR with MLI for redundancy

SOLUTION

Magnetrol® level devices allow for tighter control of the interface to increase productivity and prevent failures of downstream equipment

- Aurora® design is compact; great for limited space and process connections around boots
- Redundant options include MLI with GWR (Aurora®) or external addition of magnetostrictive for thicker emulsions
- MLI provides advantages over sight glasses for manual inspection during walk-through
- No dead zones (or blind spots) for shorter level spans

RESULTS

Better level measurement in boots for more effective separation

- Safeguards against considerable costs due to failures in downstream equipment
- Enhances the safety of the refinery by mitigating potential catastrophic failures
- Reduces maintenance due to reliable signal and enhanced diagnostics

MAGNETROL®
LEVEL MATTERS