

# LEVEL INSTRUMENTATION PRODUCT APPLICATIONS



# **SLOP OIL TANKS**



#### Vessels used for waste recovery of hydrocarbon fluids

- Contains a mixture of hydrocarbons & water
- May contain sticky materials
- Sludge level application
- Digester level application

### **SLOP OIL TANKS**





# **CHEMICAL INDUSTRIES**



#### Chemical storage tanks, process vessels

- High pressure applications
- Cryogenic applications
- Overfill protection to increase plant safety
- Corrosive applications.

#### **CHEMICAL INDUSTRIES**





# **FOOD INDUSTRIES**





- Liquid storage tanks for water, syrup, milk, citric acid
- Hygienic environment
- SS316 / SS316L construction
- May contain suspended materials
- Solid silos-Powder, granules etc

## **FOOD INDUSTRIES**





# **CONDUCTIVE LIQUIDS**



Processes which involves Liquids which are conductive in nature

- Multi Point level measurement
- Constant level monitoring
- Flexible instrumentation

# **CONDUCTIVE LIQUIDS**





# **PETROLEUM & HYDROCARBON INDUSTRY**



# Processes which involves Liquids which are conductive in nature

- To detect the interface between two liquids
- Continuous / Point level measurement
- High pressure
- High temperature applications

## **PETROLEUM & HYDROCARBON INDUSTRY**











- Slurry contains liquid with suspended particles
- Liquid with higher density
- Demands rugged product for level measurement
- Ammonia storage

#### **SLURRY**





# **OIL & GAS INDUSTRY**





- On shore & offshore applications
- High pressure applications
- Critical applications
- Demands highly reliable products for liquid level measurement

## **OIL & GAS INDUSTRY**





# **BOILER APPLICATIONS / STEAM GENERATION**





# **BOILER APPLICATIONS / STEAM GENERATION**





# **LUBRICATION & FILTRATION SYSTEMS**





- Thick and viscous liquids in the process
- Contains mixture of liquids
- Suspended particles may present in the process liquid
- Viscosity variations due to change in temperature

# **LUBRICATION & FILTRATION SYSTEMS**





## **PETROCHEMICAL INDUSTRIES**





#### **PETROCHEMICAL INDUSTRIES**





# **VENDING MACHINES**





- High temperature liquids, Boiling water
- Space constraint-requires design of smaller switches
- Uncontaminated and efficient operations
- Requires continuous /reliable/repeatable Level Measurement

# **VENDING MACHINES**





# **MARINE /SHIP BUILDING APPLICATIONS**



- Typical applications are ship-wide and include high, low and/or intermediate level alarms
- automatic pump-up and pump-down control
- Single-point, multi-point and continuous level monitoring
- Harsh conditions like turbulent liquid, High temperature & Pressure fluids, liquid interfaces
- Used in Bilges of Ships (Space between the engine room floor & bottom of the ship)
- Mixture of oil & water usually settles in bilge of a ship
- Oil Storage tanks in the ships

## **MARINE /SHIP BUILDING APPLICATIONS**





# WATER & WASTEWATER TREATMENT



- Pumping stations, level monitoring in different stages of water treatment plant
- Variety of products available catering to requirements such as mounting constraint, visual indication etc



# WATER & WASTEWATER TREATMENT





### PROCESSES



- - Measuring & monitoring liquids in process tanks, process vessels, Drain pits for wastewater, water, condensate
  - High pressure & high temperature applications
  - Level/Liquid interface
  - Overspill protection & tank dry up prevention in various utilities

#### PROCESSES





# **CHEMICALLY AGGRESSIVE MEDIA**



- - Metal processing industries use strong sulphuric acid/ hydrochloric acid to remove impurities from molten ore
  - Manufacturing of specialty chemicals
  - Toxic and strong acidic environment
  - Volatile media



#### **CHEMICALLY AGGRESSIVE MEDIA**





## **PHARMACEUTICAL APPLICATIONS**



- Liquid Level Measurement in Bio reactors, Filter systems, mixing vessels
  - Hygienic environment

#### **PHARMACEUTICAL APPLICATIONS**





# **PRODUCT LINE**



## **Level Instrumentation for Point Level Measurement & Control**





#### Level instrumentation for Continuous measurement, Visual indication & Control





#### **Level Instrumentation for Visual Indication**





#### **Instrumentation Accessories**





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# THANK YOU