

APPLICATION NOTE

AGAR ID-200 WASTE HYDROCARBON AND SLOP OIL TANK SYSTEMS

INTRODUCTION

Many manufacturing processes produce hydrocarbon wastes that contain highly variable amounts of water. Some of these industries are:

- ◆ Refining
- ◆ Chemical Manufacturing
- ◆ Steel
- ◆ Metal Finishing
- ◆ Pharmaceutical

This waste material is usually collected in waste tanks (or slop tanks) and treated on a batch basis. The goal of the treatment is to break hydrocarbon and water emulsion to the free phase hydrocarbon and water, then remove all the water possible from the hydrocarbon. The recovered water is usually sent to wastewater treatment or other internal recycling facilities. In most cases, the recovered hydrocarbon is a waste product with little or no value. However, refineries are able to recycle recovered slop oil into crude plant feed or coker plant feed.

In the treatment of waste oil, the adjustable sensitivity of the *AGAR ID-201 Interface Detector* is used to perform three functions in a waste or slop tank:

1. Automatic Dewatering Control
2. Emulsion Build-Up Monitoring
3. Automatic Outlet Oil Quality Control

1. **Automatic Dewatering Control**
Probe #1 is inserted approximately 1-3 feet from the bottom of the tank to control the water dump valve. It should be inserted horizontally for ON-OFF control, or at a 45° angle for modulating control. The set point should be set at approximately 80% water. This will force the emulsion to build above the probe and will virtually eliminate the dumping of free phase hydrocarbons with the effluent water.
2. **Emulsion Build-Up Monitoring**
Probes #2, #3, and #4 monitor the water content in the hydrocarbon at various levels in the tank. This information is used to determine chemical injection or heat treatment requirements.
3. **Automatic Outlet Oil Quality Control**
Probe #5 is inserted about 3 feet below the dry oil outlet to monitor the quality of the oil leaving the tank. The probe has a 4-20 mA output corresponding to water content of the oil before discharge and an alarm relay that can be used as an override to handle the build-up of untreatable emulsion.

Wash/Slop Tank Application Drawing

