TUWAY MESSAGE

TO Aziad Levi
Alemeda County Health Dept.

FROM GARY Mitchell
UPS

SUBJECT: Fuel ISLANDS - UPS Facility

DATE 10-6-89

MESSAGE

THE intent of this letter is to inform the alameda County Health Dept. that in the event that the existing fiberglass tanks are to be removes, that U.P.S. will comply with all federal, STATE, and local laws and regulations. Once that the modifications are completed U.P.S. will perform the precision tank testing on both the Tanks and piping. U.P.S. has not performed a test recently because of the ongoing construction and modifications. If I can be of further assistence of this manner do not hesitate to call me.

Sincerly yours,

SIGNED Gary Mitchell

REPLY

DATE:

SIGNED

ASSOCIATED L1-A2375

PRINTED IN U.S.A.

October 5, 1989

Alameda County Health Dept
Hazardous Waste Division
80 Swan Way
Oakland, Ca.

Attention: Aurie Levy

Reference: UPS Tank Petrofit in Oakland
LSI Ref: 3223-89

Dear Sir:

This letter is to state that the existing gas tanks are the only thing to be left in the ground. All other ACC, including pipe, dispensers, vents, etc. are to be completely retro fitted.

If I can be of any further assistance please do not hesitate to call at the jobsite 638-0660 or pager 957-3932.

Very truly yours.

LA SHA INC

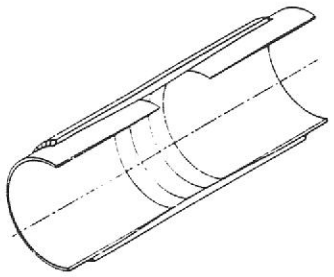
Juan Bernal

Juan Bernal Field Superintendent

LA SHA INC
General Contractor No. 330276 15 Brush Place San Francisco, CA 94103 (415) 553-4129

AMERON

Dualoy® Product Data



Dualoy 3000/L Fiberglass Pipe and Fittings

underground piping for flammable liquids

Uses and applications	Service station product, vent and vapor recovery piping Bulk plant terminals Airports, marinas and marine terminals Central fuel oil systems
Performance	Operating pressures to 300 psig. Continuous temperatures to 150°F (66°C) maximum.
Listing	Dualoy 3000/L pipe system is listed with Underwriters' Laboratories, Inc., File MH 9162, and Underwriters' Laboratories of Canada, File CMH715, for underground piping for flammable liquids.
Composition	**Pipe** Filament-wound fiberglass reinforced epoxy pipe with integral epoxy liner and exterior coating. When classified in accordance with ASTM D2310 and ASTM D2996, the pipe meets the following cell limits: RTRP-11CZ-5430. **Fittings** Compression-molded and filament-wound fiberglass reinforced epoxy. **Adhesive** C20HT two-part epoxy.
Joining system	Bell and spigot tapered adhesive bonded joint.
Pipe lengths	Standard 20 ft random lengths (17 to 21 ft). Longer lengths available on request.
Fittings	Elbows 90° 45° Tees Threaded adapters End caps Reducer bushings Sleeve couplings Nipples Other fittings available without UL listing.

UL LISTED RED THREAD II PIPE
Typical Physical Properties[7]

Property	Value	Value	Test Method
Tensile Strength — Axial at 75° F at 150° F	11,900 psi 9,300 psi	82.05 MPa 64.12 MPa	ASTM D-2105
Compressive Strength — Axial at 75° F	22,700 psi	156.51 MPa	ASTM D-695
Modulus of Elasticity in Tension at 75° F at 150° F	1.72 x 10^6 psi 1.48 x 10^6 psi	11.9 x 10^3 MPa 10.2 x 10^3 MPa	ASTM D-2105
Ultimate Hoop Tensile Strength at Burst Average at 75° F	44,000 psi	303.37 MPa	ASTM D-1599
Long Term Hoop Strength Cyclic Pressure (150x10^6 cycles) at 75° F at 150° F	8,670 psi 8,020 psi	59.78 MPa 55.30 MPa	ASTM D-2992 Procedure A
Thermal Expansion Axial 2" 3" 4" pipe	1.09 x 10^{-5} In./In./°F	1.96 x 10^{-2} mm/mm/°C	AOSI-TM16-3
Thermal Conductivity 2" 3" 4" pipe	2.9 BTU/(Ft.^{2})(Hr.)(°F/In.)	0.42 W/(m)(K)	AOSI-TM16-15
Specific Gravity	1.85	1.85	ASTM D-792
Flow Factor Hazen-Williams Coefficient	150	150	AOSI

(7) Tests run on pipe samples.

(8) Sharper bends should be eliminated to avoid stress concentration which would result in premature pipe failure under pressure conditions.

bending properties of Red Thread II pipe

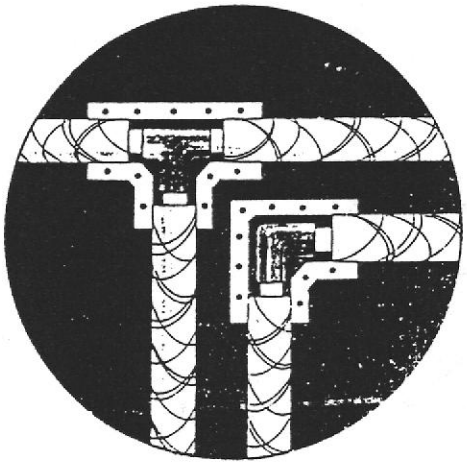
Nominal Pipe Size	Minimum Bending Radius[8]
	75° F
2"	50 ft.
3"	80 ft.
4"	100 ft.

Nominal Pipe Size	Minimum Bending Radius[8]
	24° C
2"	15.2 m
3"	24.4 m
4"	30.5 m

RED THREAD II DOUBLE-WALL SECONDARY CONTAINMENT PIPING

The newest and best Secondary Containment system is now available from Smith Fiberglass Products Inc., the primary supplier of fiberglass reinforced epoxy Service Station piping. This field-proven system is available with all of the fittings necessary to provide a contamination-free system.

The new Smith Fiberglass Products Secondary Containment system uses RED THREAD II pipe, and special



two-piece fittings* as the outer protection shell for UL Listed RED THREAD II product pipe lines.

Secondary Containment lines are one size larger than product lines and are available in 3", 4" and 6" sizes for the 2", 3" and 4" UL Listed product piping system.

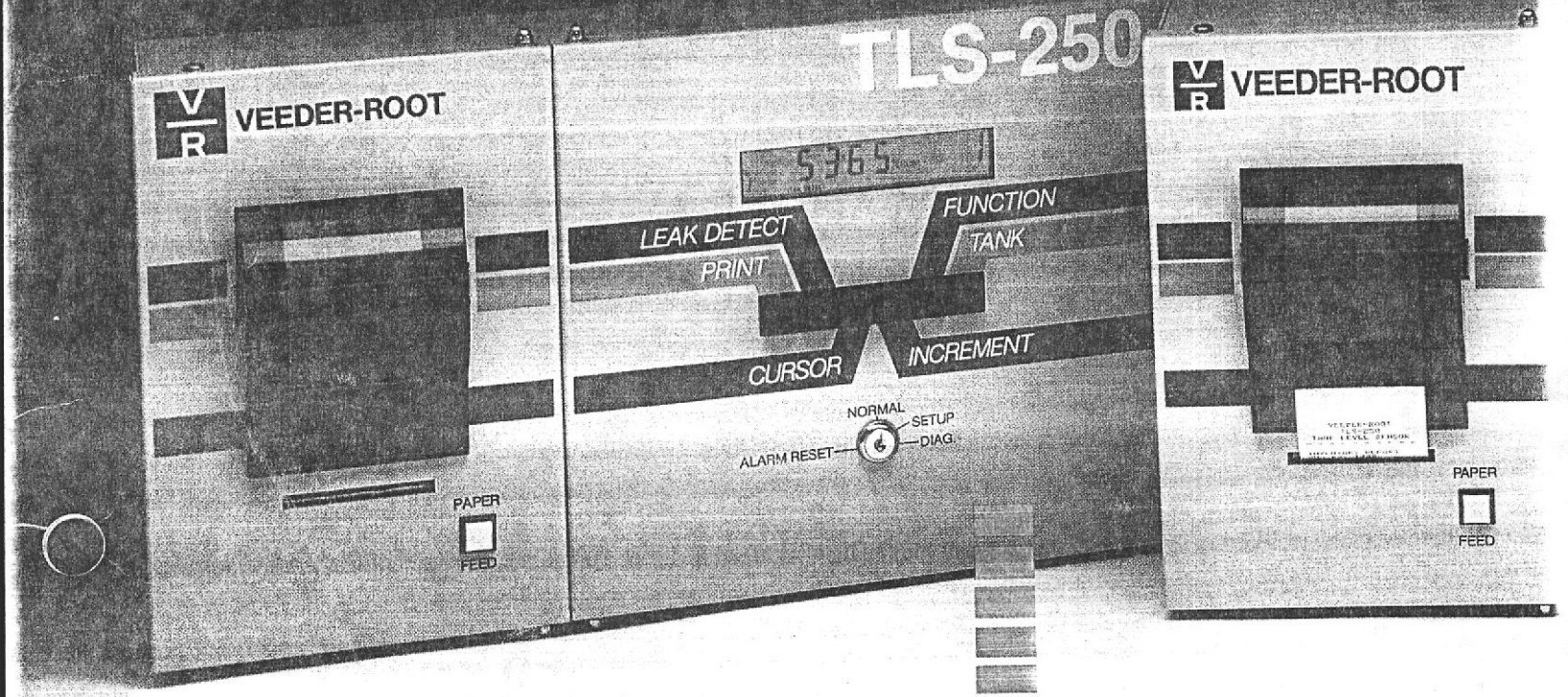
*Patent Pending

PRINTED IN U.S.A. 10M4R8

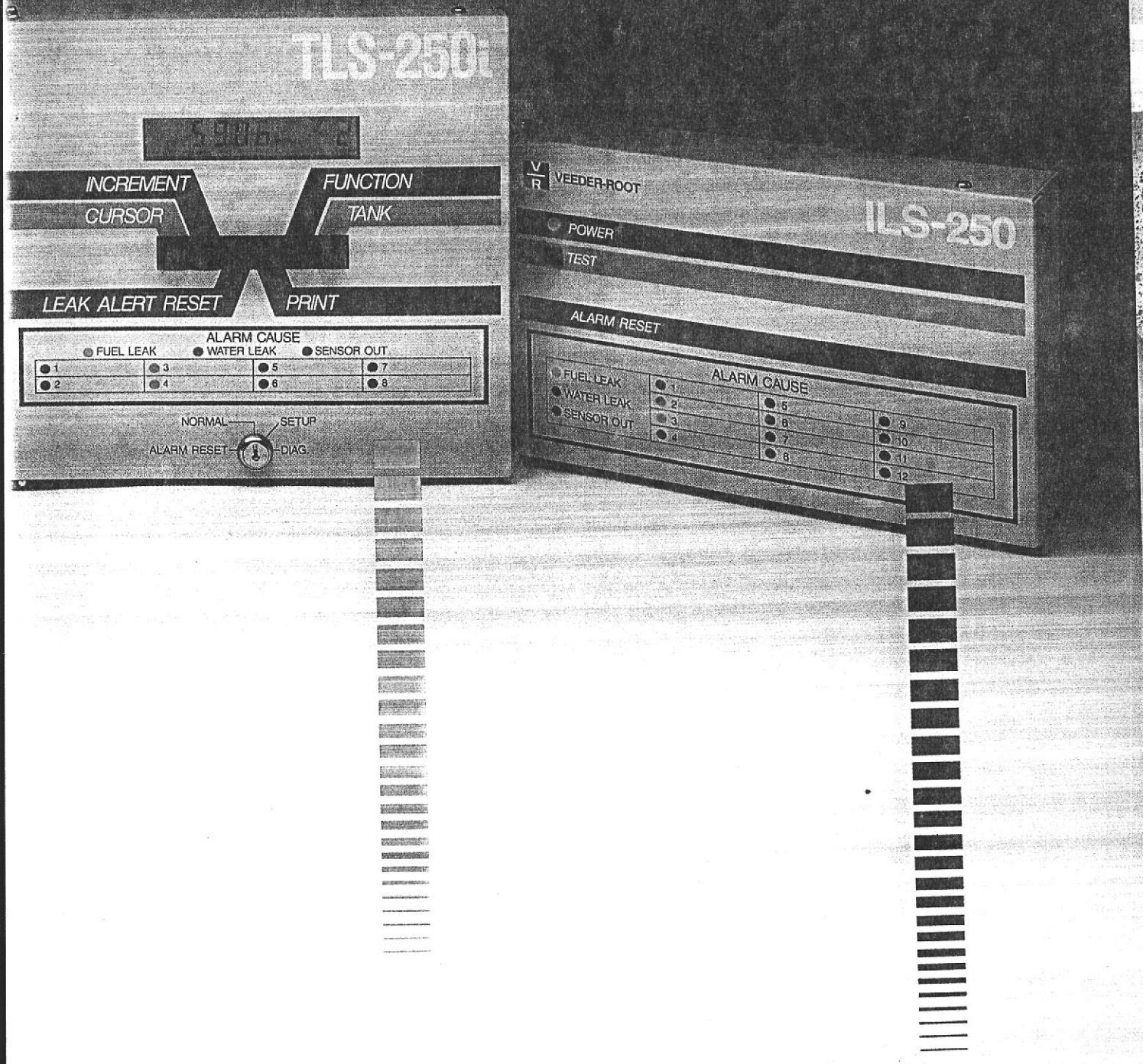
SECONDARY CONTAINMENT (PRODUCT)

PIPING: SMITH FIBERGLASS REDTHREAD (3" DIA)
FITTINGS: SMITH FIBERLASS, TWO-PIECE, FLANGED, WITH STANDARD BOLTS, NUTS AND FLATWASHERS.

VEEDER-ROOT 250 SERIES UNDERGROUND STORAGE TANK MONITORING SYSTEMS

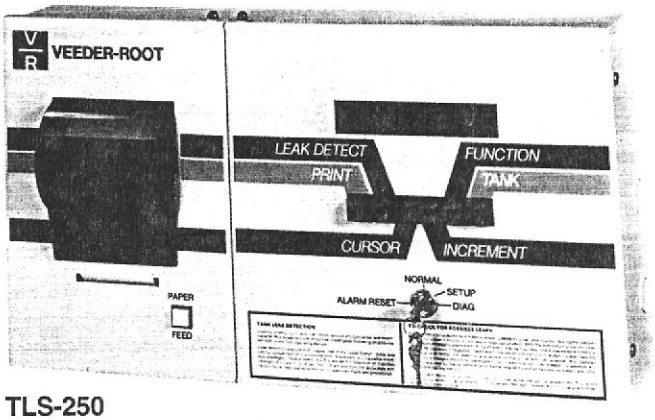


Whether you own single- or double-wall, fiberglass or steel, new or existing tanks—there's a Veeder-Root 250 System with the right combination of inventory management and leak sensing capabilities to meet your monitoring needs.

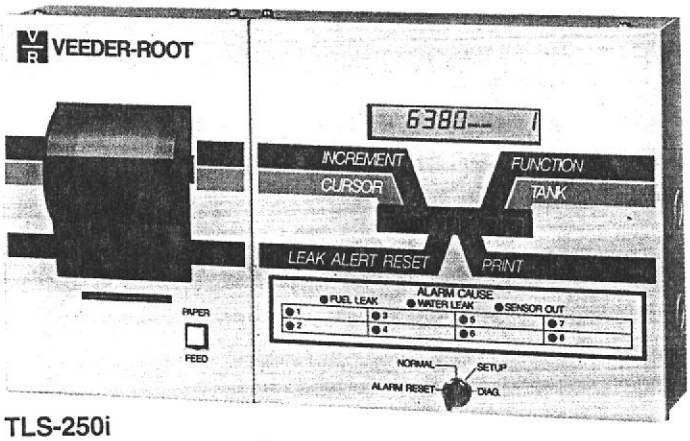


-250
ping sump
ter

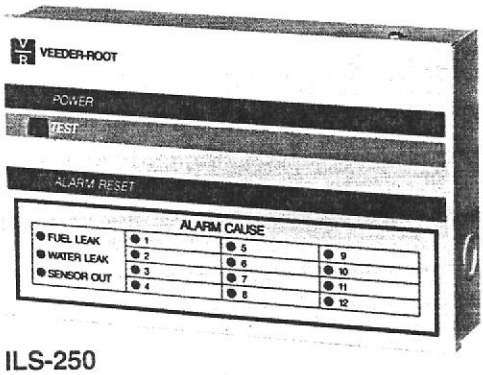
Inventory Control and Leak Detection



TLS-250
Inventory control and in-tank leak detection for single-wall tanks

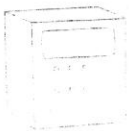


TLS-250i
Inventory control and interstitial leak sensing for double-wall tanks



ILS-250
Low-cost, stand-alone interstitial leak sensing for double-wall tanks

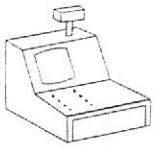
Enhanced, Integrated Management Capabilities



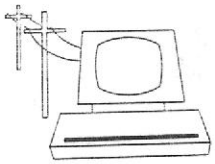
EXTERNAL INPUTS
From line leak detectors, monitoring wells

INVENTORY REPORTS
Detailed information on volume, ullage, bulk deliveries and more

ON-SITE ALARMS
Warn of theft, overfills, other alarm conditions

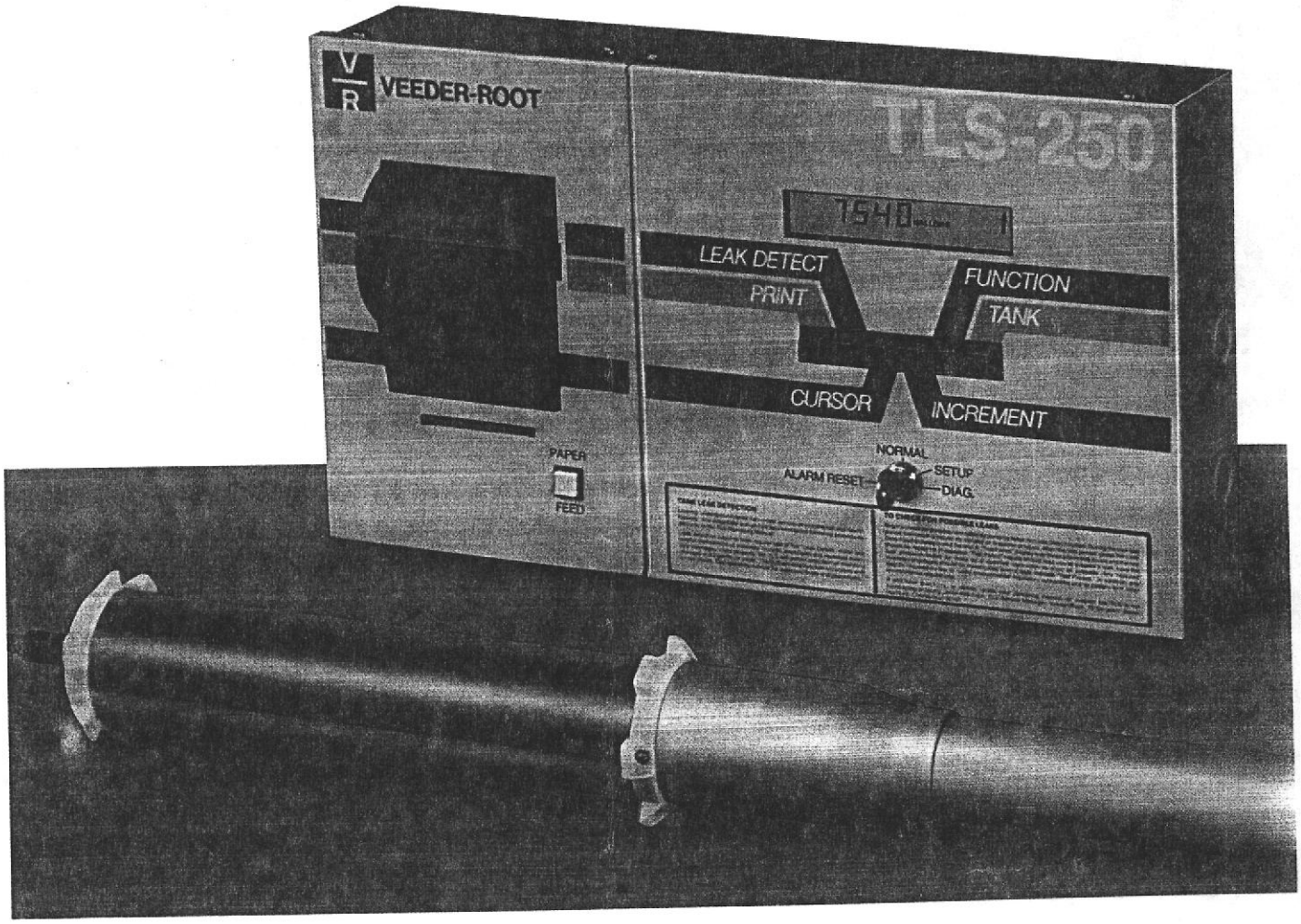


POS TERMINALS
Tie in with POS terminals for centralized inventory management



DATA COMMUNICATIONS
Transmit all inventory, alarm and leak sensing information to central computer via the RS-232 data communications interface

TLS-250 *Inventory Control with In-Tank Leak Detection for Single-Wall Tanks*



The proven leader in automated inventory control and in-tank leak detection!

The TLS-250 lets you take greater control of your fueling operation. It provides enhanced inventory management and reporting capabilities, improves fuel security, and helps you comply with UST regulations.

Take a look at just some of the advantages you get with a TLS-250 System.

- Faster, more accurate inventory reports for quicker shift changes, better inventory control
- Improved control and security with programmable alarm limits and alarm output relays
- Increased environmental protection with leak detection and overfill alarm capabilities
- Integrated UST management with the ability to accept inputs from other monitoring devices
- Enhanced operational management with RS-232 communications interface

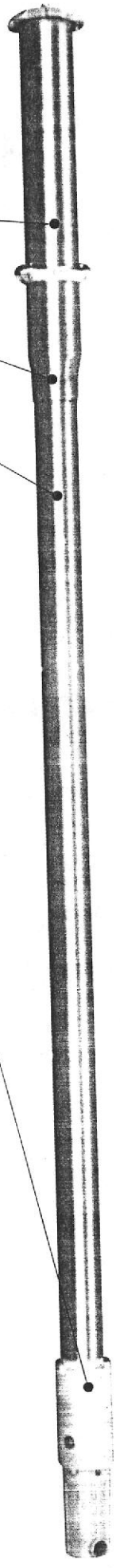
TLS-250. More than inventory reports and leak detection. Total UST management!

TLS-250 Features Add Management Control to Underground Fuel Storage

The TLS-250 includes features that improve your ability to control inventories, reconcile accurately shift and daily totals, spot losses from theft, and identify leaks and overfills which could cause severe environmental damage.

Many of these features, reports and alarm limits are programmable and can be set to match the operating requirements of your installation. In addition, two internal alarm relays can be connected to external alarm devices or security systems and programmed to trigger when any alarm limit has been reached.

- **On-Demand Inventory Report**
  - Gallons of Fuel
  - Inches of Fuel
  - Ullage
  - Inches of Water
  - Temperature of Fuel
- **Automatic Inventory Increase Report**
- **Automatic and On-Demand Leak Tests**
  - Single or all tanks
- **Automatic Leak Test Validity Checks**
- **Final Leak Rates with PASS, FAIL and INVALID Leak Test Result Indicators**
- **Overfill Alarm Feature**
- **Programmable Alarm Limits and Indicators Identify**
  - Theft
  - Leak Losses
  - Low Inventory
  - High Water
  - Overfills
  - External Inputs
- **Two Alarm Relays Can Trigger Alarm/Security Devices**
- **Simple to Order—Just Specify Tank Diameters**
- **Programmable Alarm Configuration Ties Any/All Alarm Indicators to Output Relays**
- **External Input Interface Integrates Signals from Other Monitoring Devices**
- **Programmable Times for Automatic Reporting**
- **One System Monitors Up To Eight Tanks**
- **Handles Manifolded Tanks**
- **Two-Wire, Factory-Calibrated "Smart" Probes**
- **RS-232 Communications Interface**
- **On-Site and Remote Self-Diagnostics**
- **Available With or Without Integral Printer**
- **Emergency Generator Version**
  - Continuous leak tests
  - Inventory reports available
  - RS-232 communications interface



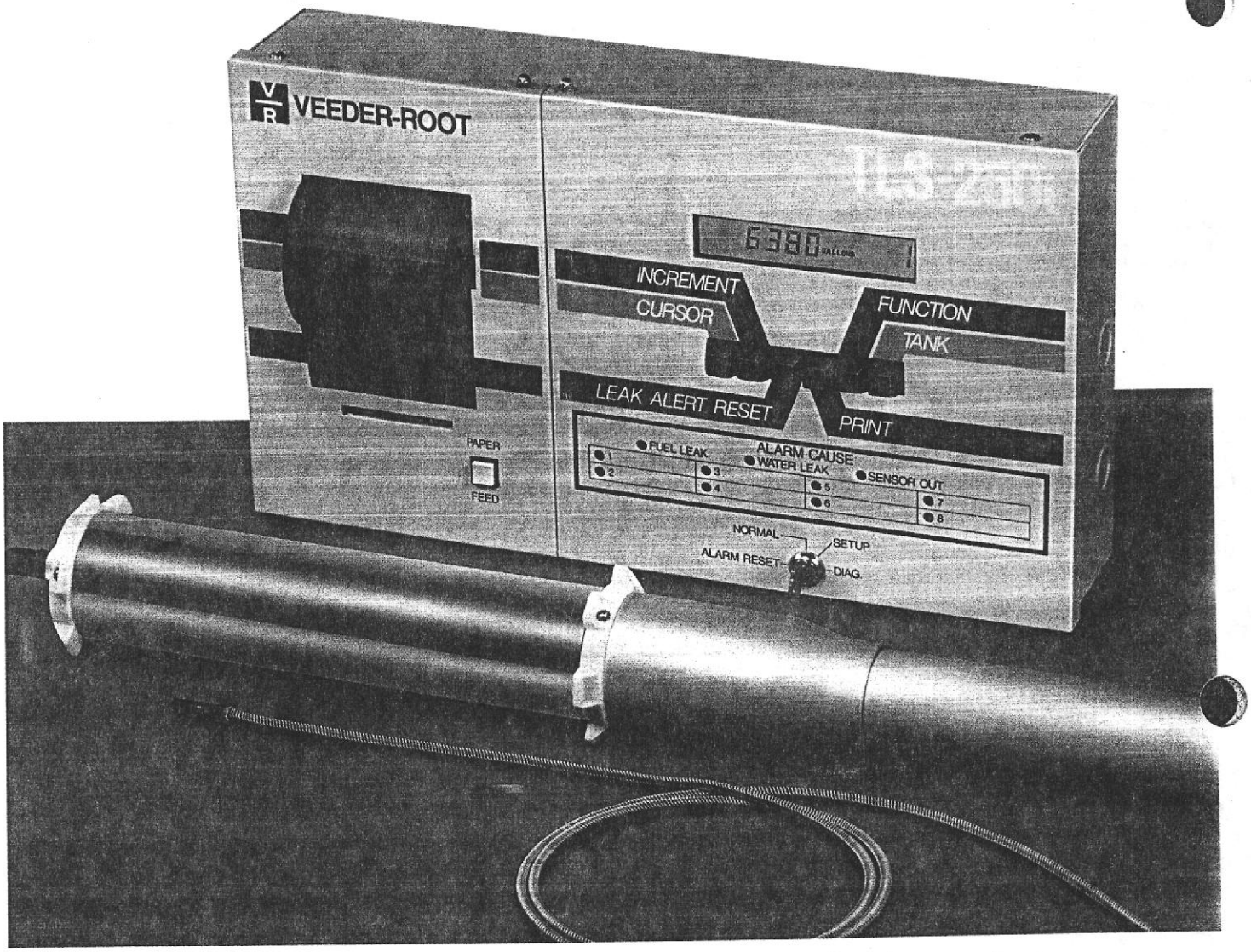
A TLS-250 PROBE is mounted permanently in each tank through either a 3" or 4" riser pipe. It operates on a capacitance principle to sense fuel height, and requires only a simple two-wire connection to the console. Probes provide inventory measuring and in-tank leak detection.

LEAK DETECT MODE senses losses as small as 0.2 gallons per hour.

A THERMISTOR SENSOR measures fuel temperature.

A THREE-STAGE FILTER helps to ensure measurement accuracy in all fuel tanks by separating water from the product.

TLS-250i Inventory Control and Interstitial Leak Sensing Systems for Double-Wall Tanks



TLS-250i – the same inventory control, programming, alarm and communications capabilities of the TLS-250 with interstitial and piping sump leak sensing for double-wall tanks.

TLS-250i advanced-technology sensors monitor the tank annulus and piping sump for leaking fuel or water. When either is detected, an audible alarm and front-panel LEDs indicate alarm cause and location.

And, like the TLS-250, the TLS-250i provides enhanced inventory management and reporting capabilities, improves fuel security, and helps you comply with UST regulations. The control you need for your fueling operation.

Take a look at some of the ways the TLS-250i System can improve your UST management.

- Faster, more accurate inventory reports for quicker shift changes, better inventory control
- Improved control and security with programmable alarm limits, alarm output relays
- Increased environmental protection with leak detection, overfill alarm capabilities
- Integrated UST management with the ability to accept inputs from other monitoring devices
- Enhanced operational management with RS-232 communications interface

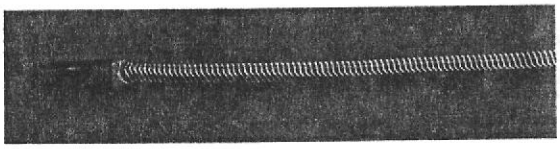
TLS-250i. Complete UST management for double-wall tanks!

Loaded with Features to Improve UST Management

The TLS-250i offers features that improve your ability to control inventories, reconcile accurately shift and daily totals, spot losses from theft, and identify leaks and overfills which could cause severe environmental damage.

Many of these features, reports and alarm limits are programmable and can be set to match the operating requirements of your installation. In addition, two internal alarm relays can be connected to external alarm devices or security systems and programmed to trigger when any alarm limit has been reached.

- **On-Demand Inventory Report**
  - Gallons of Fuel
  - Inches of Fuel
  - Ullage
  - Inches of Water
  - Temperature of Fuel
- **Automatic Inventory Increase Report**
- **Automatic, Continuous Leak Sensing**
  - Tank Annulus
  - Piping Sump
- **Sensors Detect as Little as 1/16" of Fuel–Even Fuel Floating on Water!**
- **Audible and Visual Leak Detect Indicators**
  - Leak Type
  - Leak Location
- **"Sensor Out" Indicators Identify Failed or Disconnected Sensor**
- **Overfill Alarm Feature**
- **Programmable Alarm Limits and Indicators Identify**
  - Theft
  - Overfills
  - Low Inventory
  - External Inputs
  - High Water
- **Two Alarm Relays Can Trigger Alarm/Security Devices**
- **Simple to Order–Just Specify Tank Diameters**



Advanced, two-in-one sensor detects fuel or water.

A TLS-250i INVENTORY PROBE is mounted permanently in each tank through either a 3" or 4" riser pipe. It operates on a capacitance principle to sense fuel height, and requires only a simple two-wire connection to the console. Probes provide inventory measurement and "shutdown mode" theft detection.

A THERMISTOR SENSOR measures fuel temperature.

A THREE-STAGE FILTER helps to ensure measurement accuracy in all fuel tanks by separating water from the product.

- **Programmable Alarm Configuration Ties Any/All Alarm Indicators to Output Relays**
- **External Input Interface Integrates Signals from Other Monitoring Devices**
- **Programmable Times for Automatic Reporting**
- **Four-Tank System Monitors**
  - Inventory In Four Tanks
  - Eight Sensors
- **Eight-Tank System Monitors**
  - Inventory in Eight Tanks
  - Sixteen Sensors
- **Handles Manifolded Tanks**
- **Two Wire, Factory-Calibrated "Smart" Probes**
- **RS-232 Communications Interface**
- **On-Site and Remote Self-Diagnostics**
- **Optional Integral Printer**

TLS-250 & TLS-250i *Inventory, Leak Sensing and Alarm Reports*

The TLS-250 and TLS-250i provide detailed inventory, leak sensing and alarm information to enhance and improve UST management and to help meet regulations requiring environmental safety and protection.

This information can be printed as shown below by TLS-250 and TLS-250i models equipped with optional printers, or transmitted via the RS-232 interface to a POS terminal or computer.

In addition, an alarm history report showing the dates and times of the last three occurrences of each alarm type, a system setup parameters report and a diagnostic information report can be printed or transmitted via the RS-232 interface.

The Leak Monitor and Leak Alarm reports are available only from the TLS-250. The Sensor Alarm report is available only from the TLS-250i. All other reports are common to both systems.

LEAK DETECT: Beginning and ending inventory and cumulative loss by tank, 0.2 GPH test pass or fail indicator. Programmable start and stop times or on demand. Single or all tanks. (TLS-250 only)

INVENTORY STATUS: Fuel volume and height, temperature, water level, time and date. Programmable times or on demand.

```
Station Name
Street
City, State Zip
Telephone Number

INVENTORY REPORT
NOV 12, 1988
6:30 AM

TANK 1
PREMIUM UNLEADED
  1676 GALLONS FUEL
  8324 GALLONS ULLAGE
 21.75 INCHES FUEL
   0.0 INCHES WATER
  55.3 DEGREES F

TANK 2
REGULAR UNLEADED
  3731 GALLONS FUEL
  6269 GALLONS ULLAGE
 38.37 INCHES FUEL
   1.3 INCHES WATER
  56.7 DEGREES F
```

AUTOMATIC DELIVERY: Beginning and ending volume, temperature, net increase, time and date. Automatic.

```
TANK 1
PREMIUM UNLEADED
INVENTORY INCREASE

NOV 12, 1988
3:38 PM
   709 GALLONS FUEL
  56.7 DEGREES F

NOV 12, 1988
  5685 GALLONS FUEL
  60.4 DEGREES F

  4976 NET INCREASE
```

```
LEAK MONITOR REPORT

TEST START TIME:
NOV 6, 1988
11:00 PM

TEST HOURS 1 - 6
--------------------
 TNK1 TNK2 TNK3 TNK4

      DEGREES F
60.2 56.6 55.9 55.4

      GALLONS

 0.0   0.0 -0.3   0.0
 0.3   0.0 -2.1   0.1
 0.7   0.0 -4.0   0.1
 1.2   0.1 -5.6   0.0
 1.5   0.0 -7.1   0.0
 1.8   0.0 -9.3   0.1

      DEGREES F
55.3 56.4 55.6 55.3

FINAL LEAK RATES:

                0.20
              GAL/HR
TANK  GAL/HR   TEST
  1    0.30  INVALID
  2    0.00  PASSED
  3   -1.55  FAILED
  4    0.01  PASSED

TANK1
PREMIUM UNLEADED

SEG 1  TEST MIX ERR
SEG 2  TEST MIX ERR

SEG 1  DLVY MIX ERR
SEG 2  DLVY MIX ERR

TEMP CHANGE ERROR
RECENT DELIVERY

TEST ENDING TIME:
NOV 7, 1988
6:00 AM
```

NOTE: The TLS-250i is a continuous interstitial and piping sump leak sensor. When fuel or water is detected, an audible alarm and front-panel LEDs indicate the alarm type and location.

```
----THEFT ALARM----
TANK 1
PREMIUM UNLEADED

NOV 16, 1988
12:11 AM
```

THEFT ALARM: Warns of sudden loss of fuel. Programmable. Can activate alarm or security systems.

```
----LEAK ALARM----
TANK 3
DIESEL

NOV 13, 1988
4:00 AM
```

LEAK ALARM: Warns of a major tank leak during off hours. (TLS-250 only)

```
--OVERFILL ALARM--
TANK 2
REGULAR UNLEADED

NOV 21, 1988
2:21 PM
```

OVERFILL ALARM: Warns of potential overfill during bulk deliveries. Programmable. Can activate alarm or security systems.

```
--LOW LIMIT ALARM--
TANK 3
DIESEL

NOV 21, 1988
9:05 AM
```

LOW LIMIT ALARM: Warns of low inventory. Programmable limits.

```
--HIGH WATER ALARM--
TANK 4
REGULAR UNLEADED

NOV 12, 1988
2:29 AM
```

HIGH WATER ALARM: Warns of excessive water in tanks. Programmable limits.

```
-- EXT. INPUT ON ---

NOV 27, 1988
 9:09 PM
-- EXT. INPUT OFF --
NOV 27, 1988
 9:09 PM
```

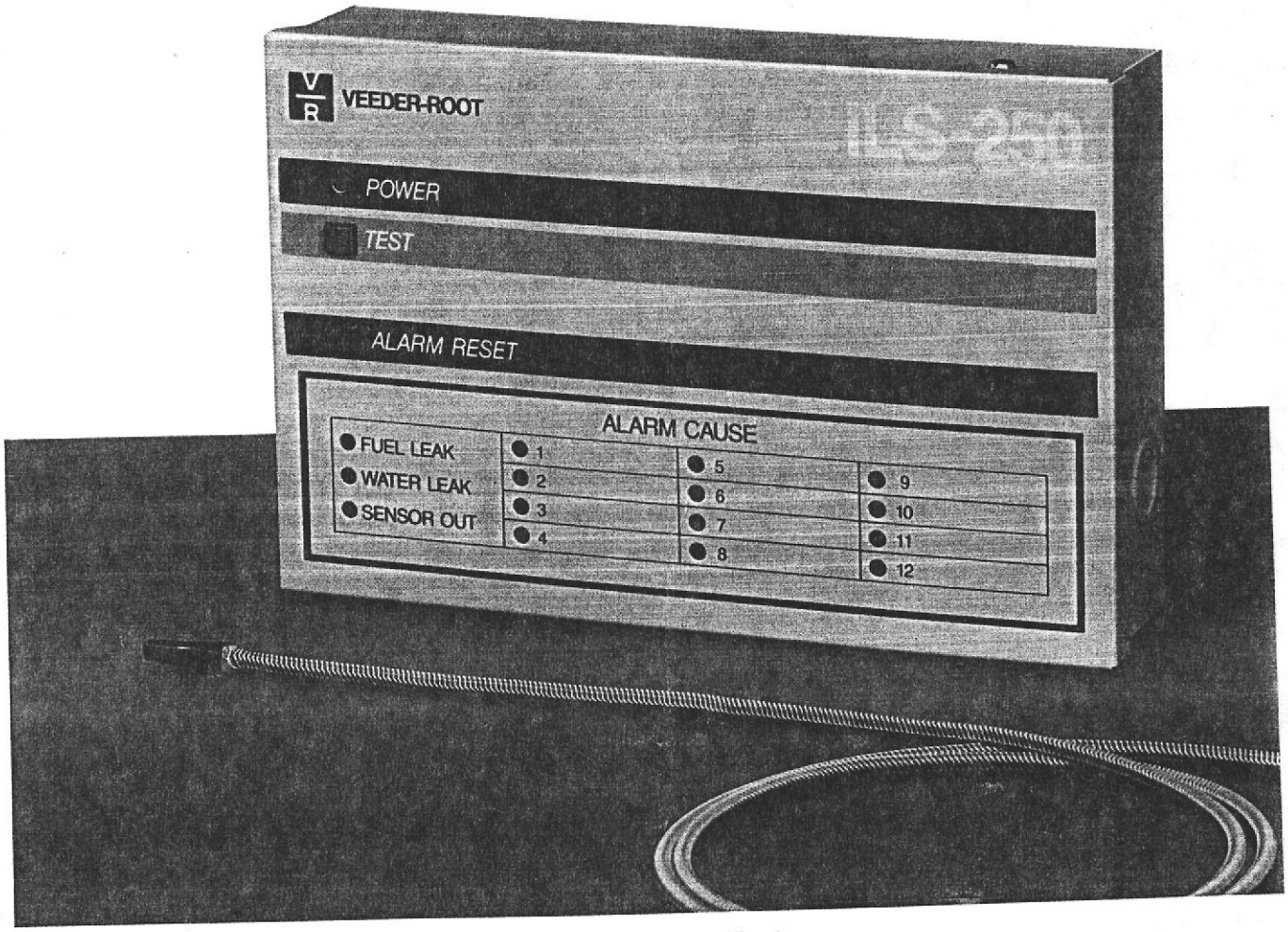
EXTERNAL INPUT: Warns that an external device such as a line leak detector has sent a signal indicating an alarm condition.

```
--- SENSOR ALARM ---
SENSOR 4A
    FUEL DETECT

OCT 23, 1988
 7:18 PM
```

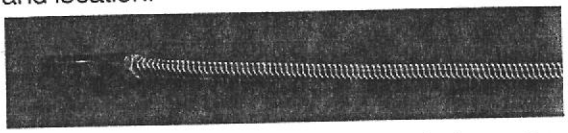
SENSOR ALARM: Warns of a fuel or water leak or sensor out condition detected by the TLS-250i. (TLS-250i only)

ILS-250 *Low-cost, stand-alone interstitial leak sensing for double-wall tanks*



The ILS-250 provides a low-cost solution to leak detection in double-wall tanks at installations where automated inventory control is not required.

The ILS-250 uses the same advanced sensor technology as the TLS-250i to monitor the tank annulus and piping sump for leaking fuel or water. And, like the TLS-250i, the audible alarm and front-panel LEDs indicate alarm cause and location.



Advanced, two-in-one sensor detects fuel or water.

Models are available to handle four, eight and twelve sensors.

The ILS-250 will help owners of double-wall, steel or fiberglass tanks comply with local, state and federal regulations requiring accurate, automatic leak detection in underground tanks.

System Features

The ILS-250 incorporates numerous operating features to provide reliable, automated leak detection. These features can provide an early warning of tank leaks and help prevent severe environmental damage.

- **Automatic, continuous leak sensing**
  - Tank annulus
  - Piping sump
- **Sensors detect as little as 1/16" of fuel – even fuel floating on water!**
- **Audible and visual leak detect indicators**
  - Leak type
  - Leak location
- **Available in 4-, 8-, and 12-sensor models**
- **Alarm output relay can trigger alarm/security devices**
  - 8- and 12-sensor models
- **"Sensor Out" indicators identify failed or disconnected sensor**

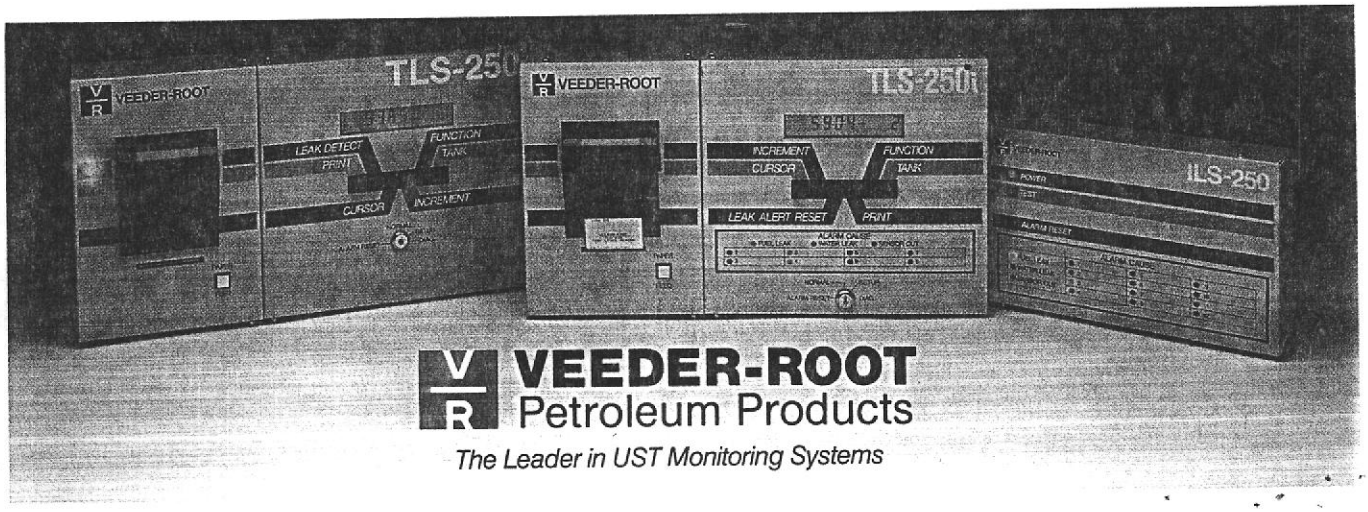
TLS-COMM *UST fuel management software*

TLS-COMM is an easy-to-use, menu-driven communications and database program designed specifically for the TLS-250. It is IBM PC XT/AT-compatible and features remote system profiling, automatic polling, detailed reports, inventory reconciliation, plus advanced techniques to refine inventory accuracy and improve data management.

TLS-COMM enhances your ability to manage fueling sites from a centralized location, analyze fuel data for improved inventory control and leak detection, and efficiently plan the bulk delivery of product.

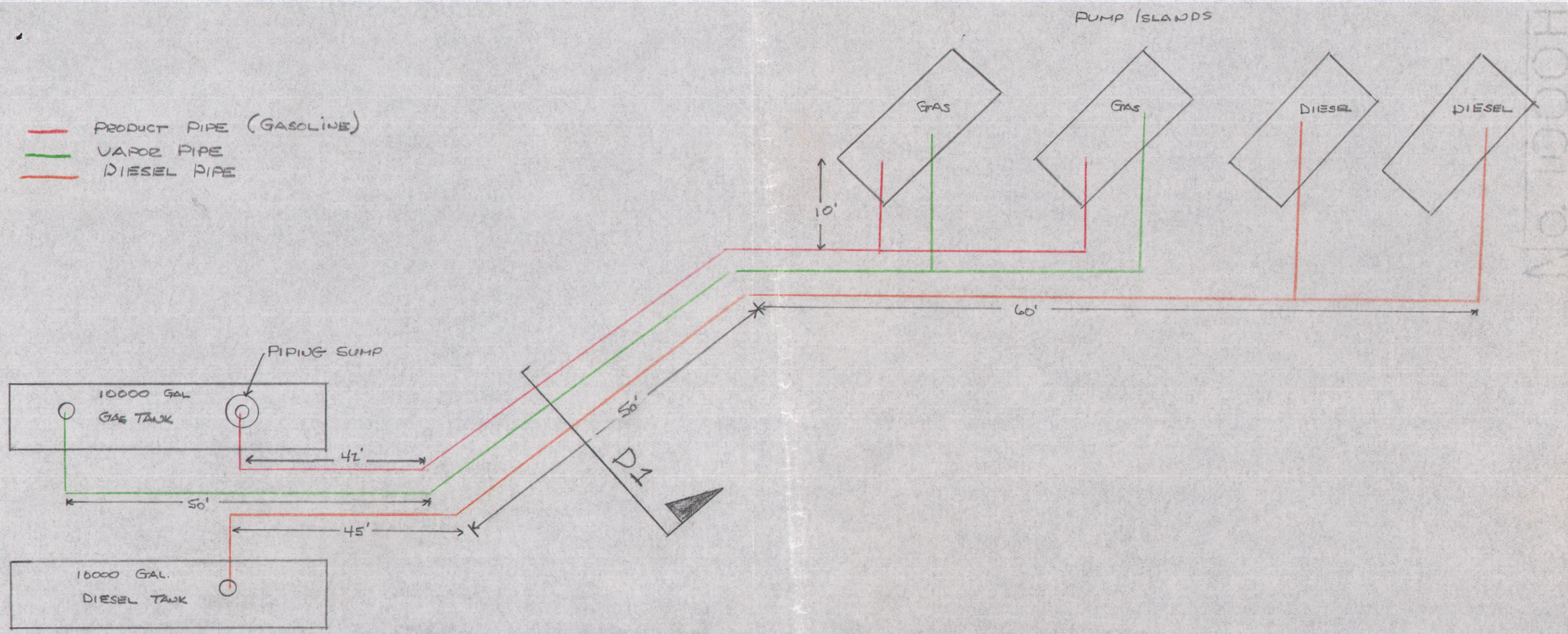
TLS-COMM Features

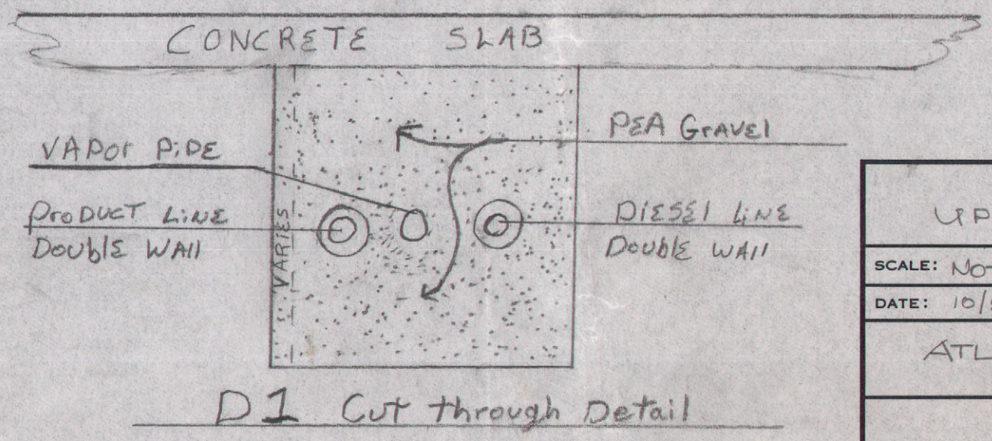
- A complete stand-alone communications and database program for the TLS-250 Tank Level Sensor
- Menu driven, with help screens for easy operation
- Remote automated polling of TLS-250 locations during off hours
- Automated, manual, or terminal mode dialing
- Remote station and tank profiling
- Stores TLS-250 setup parameters in individual files
- On-screen review of latest data in report format
- Prints data in report format to a printer or file
- Stores up to 100 TLS-250 locations, and 99 days worth of data
- Data archive capability stores unlimited TLS-250 reports in packed data format
- Tank chart database with 65 popular fiberglass tanks
- Direct input of 20 height/volume points for fiberglass tanks
- Inventory reconciliation capability
- Tank strapping program included
- Runs on an IBM PC or compatible, color monitor and hard disk recommended



70 SARGEANT STREET, HARTFORD, CT 06102 U.S.A. (203) 527-7201

PRODUCT PIPE (GASOLINE)
VAPOR PIPE
DIESEL PIPE





D1 Cut through Detail

UPS - OAKLAND - 8400 PARDEE DRIVE

SCALE: NOT TO SCALE	APPROVED BY:	DRAWN BY
DATE: 10/5/89		REVISED

ATLAS HYDRAULIC CORP.

DRAWING NUMBER