HALLIKAINEN *Instruments*
INDUSTRIAL and SCIENTIFIC
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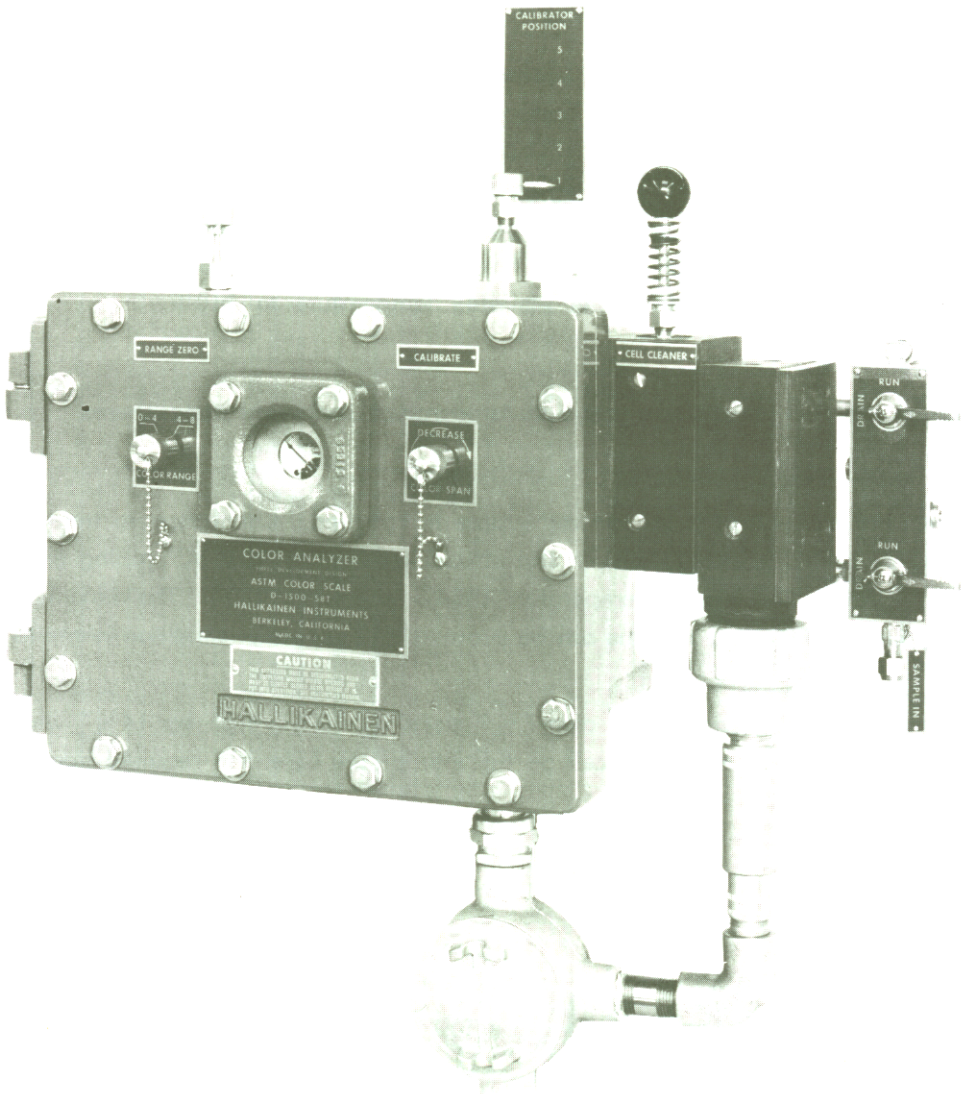
COLOR ANALYZER

Shell Development Co. design

Model 1274



The COLOR ANALYZER is a differential photoelectric colorimeter providing an output signal for recording color determination of petroleum products or other liquids within the limits of measurement of the instrument. A unique feature includes the use of ASTM glass color standards for calibration purposes. These glasses are the same as those used in the petroleum industry for visual comparison tests described in the ASTM-D-1500T method.

The ASTM scale covers a range from pale yellow to deep red in 16 discrete steps, but detection to water white is possible.

CALIBRATION

Calibration is achieved with the aid of four glass color standards selected from the set of 16 in the ASTM test. These four, which are supplied with the instrument, are set in a holder having an additional blank position.

INSTRUMENT OUTPUT

The basic instrument output is 100 millivolts full scale. This output may be tapped down to 50 mv. if desired so that it can be used with a potentiometer transmitter, but normally because of low impedance output (less than 1000 ohms) will permit the use of any of the standard makes of potentiometer recorders direct.

SAMPLE CELL

The sample cell is essentially a three-piece sandwich with the detector phototube mounted external, but integral, to the cell. Particular attention has been given to the construction of the cell windows. They actually protrude into the cell cavity so that a squeegee-like plunger (standard equipment) can be operated from above to clean off smears or stains adhering to the inside surface of the windows. When not in use, the cleaning plunger, which is spring loaded, returns to a position out of the light path. This principle allows the cell to be cleaned without interrupting the sample flow. The sample cell is provided with a thermostatted heater for those applications that require a maintained elevated temperature to 210°F.

PHOTOTUBES

Both the reference and sample phototubes are in temperature controlled atmospheres.

INSTALLATION

A well-regulated 115 volt 60 cycle AC power supply is required. Connection to the instrument is made at a terminal strip inside a ½" condulet. Sample slip stream connections are ⅜" tubing or ¼" pipe. Sample consumption is about 100 ml/min. Sample temperature should not exceed 210°F. The maximum sample pressure should be under 50 pounds. Sampling systems can be provided to properly condition samples for use in this analyzer.

The unit is supplied in an explosion proof case 7¾" deep by 10½" high by 14½" wide, but because of projections above, and below and the sample cell on the side of the case, the required space will be 9" deep by 23" high by 19½" wide.