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(54) **FLUORESCENT OPTICAL LIQUID LEVEL SENSOR**

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(57) **ABSTRACT**

A liquid level sensor comprising a transparent waveguide containing fluorescent material that is excited by light of a first wavelength and emits at a second, longer wavelength. The upper end of the waveguide is connected to a light source at the first wavelength through a beveled portion of the waveguide such that the input light is totally internally reflected within the waveguide above an air/liquid interface in a tank but is transmitted into the liquid below this interface. Light is emitted from the fluorescent material only in those portions of the waveguide that are above the air/liquid interface, to be collected at the upper end of the waveguide by a detector that is sensitive only to the second wavelength. As the interface moves down in the tank, the signal strength from the detector will increase.

12 Claims, 2 Drawing Sheets