

[54] **APPARATUS AND METHOD FOR DETECTING INHOMOGENEITIES IN SEMI-PLASTIC SUBSTANCES THROUGH ULTRASOUND**

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[57] **ABSTRACT**

A method and apparatus is reported for detecting inhomogeneities in semi-plastic substances such as toilet bars containing soap. An ultrasound probe is utilized to test the substance at an exit orifice of an extruder. Best results are obtained by utilizing a ceramic ultrasonic probe, rectangular in shape including a transducer having a concave curvature on a lower surface thereof. The probe includes a thermoplastic delay material. Ultrasonic waves directed through the probe preferably have a frequency between 1 and 2.25 MHz. Wedging of the extruded substance is also useful to improve contact with the probe as it passes through the extruder exit orifice.

**32 Claims, 2 Drawing Sheets**

