ABSTRACT

A device and method for online detection of the blending effect of an eccentric rotor extruder. The device includes a computer, an ultrasonic detector (11), an air-coupled ultrasonic transmitting device (I) and an air-coupled ultrasonic receiving device (II). The computer is connected with the ultrasonic detector (11). The ultrasonic detector (11) is connected with the air-coupled ultrasonic transmitting device (I) and the air-coupled ultrasonic receiving device (II) respectively. The air-coupled ultrasonic transmitting device (I) and the air-coupled ultrasonic receiving device (II) are arranged on a stator (10) of the eccentric rotor extruder. The air-coupled ultrasonic transmitting and receiving devices are suitable for the unique structure of the eccentric rotor extruder, and a cooling water channel is included to ensure that the ultrasonic transducer operates at a proper temperature. The magnetic structure and the air-coupled ultrasonic can detect the blending state of the eccentric rotor extruder in any section without damaging the stator (10) of the eccentric rotor extruder.

Figure to be published with Abstract: **Fig. 1**