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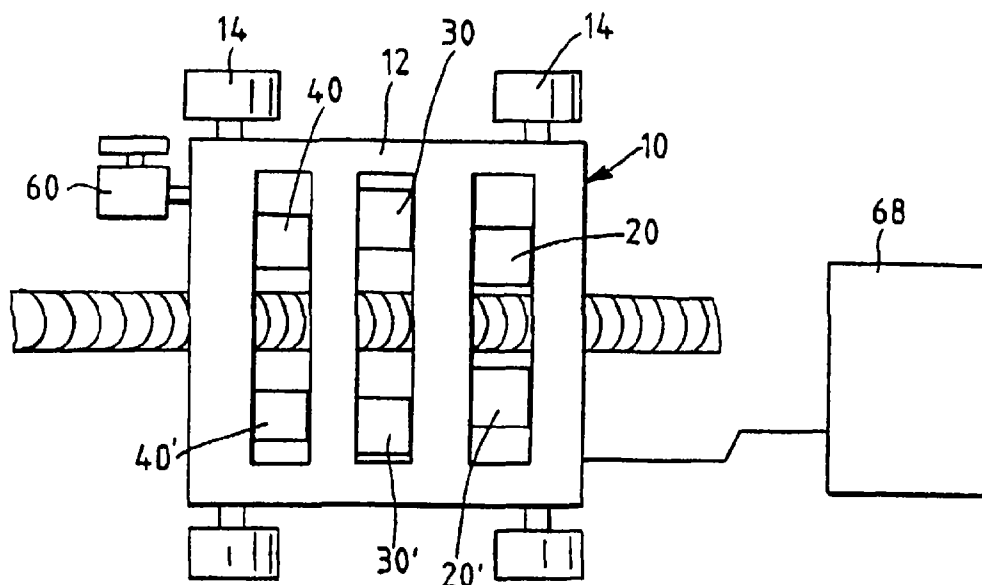
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(54) Title: ULTRASONIC AUSTENITIC WELD SEAM INSPECTION METHOD AND APPARATUS



(57) Abstract: An array of dual-element transducers for automated, ultrasonic inspection of a weld seam in austenitic material is configured through the use of a schematic representation of the weld seam. The weld is divided into zones, and separate transducers are selected to inspect each zone. A creep-wave transducer is used to inspect the uppermost zone, and an L-wave transducer is used to inspect a lower zone. The L-wave transducer is connect to a computer processor to serve "double-duty" it is used with one set of gate and gain settings to process direct reflections of the emitted sound, and with another set of gate and gain settings to process indirect, mode-converted reflections of the sound. Gate settings are determined by measuring sound path distances from the schematic. Test plates are used to determine sensitivity settings, and to confirm adequate width of field for each transducer

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