

Title (en)
METHOD OF DETECTING THE POSITION OF A DEFECT IN A BODY

Title (de)
VERFAHREN ZUR POSITIONSERFASSUNG EINES DEFEKTS IN EINEM KÖRPER

Title (fr)
PROCÉDÉ DE DÉTECTION DE LA POSITION D'UN DÉFAUT DANS UN CORPS

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Abstract (en)
[origin: WO2012107218A1] The invention relates to a method for the absolute lateral position capturing of a defect in a body with a known propagation speed for acoustic waves, or sound, comprising the following method steps: a) generating a sound pulse (S1) at a first defined position (P1) on the body; b) capturing a sound signal (S2) at a second defined position (P2) on the body; c) capturing a sound signal (S3) at a third defined position (P3) on the body; d) capturing a sound signal (S4) at a fourth defined position (P4) on the body, wherein the positions (P1 to P4) are spaced apart from one another; e) analysing the sound signals (S2) and (S3) and (S4) with respect to whether they originate from the defect in the form of a reflection or transmission; f) ascertaining the propagation times (T2) and (T3) and (T4) of the sound signals (S2 to S4) starting at the defect to the respective position (P2 to P4); g) calculating a first hyperbola (H1) as a set of all points, the propagation time difference of which is (T2) to (T3), with the focal points (P2) and (P3) and a first real semi-axis (2a1) along the connecting straight line (P2-P3); h) calculating a second hyperbola (H2) as a set of all points, the propagation time difference of which is (T3) to (T4), with the focal points (P3) and (P4) and a second real semi-axis (2a2) along the connecting straight line (P3-P4); i) ascertaining a point of intersection of the first hyperbola (H1) and the second hyperbola (H2) in the inside of the body as a position coordinate of the defect.

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