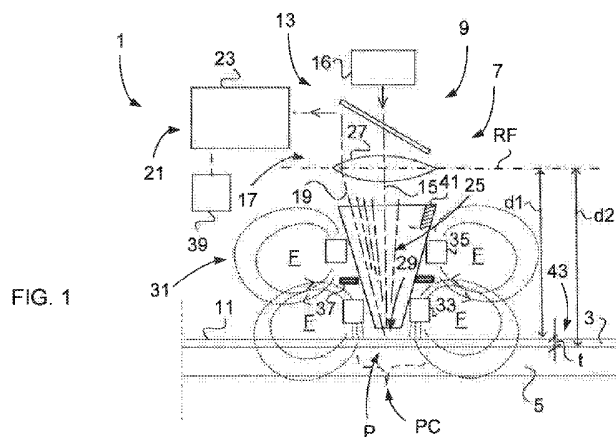




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(54) Title: MATERIAL THICKNESS MEASURING DEVICE



(57) **Abstract:** The present invention regards a material thickness measuring device(1)for measuring the thickness (t) of non-magnetic web (3) applied to a magnetic material (5). The device (1) comprises an optical sensor device (7, 9, 45) for a first interaction with an upper side (11) of the web (3) as an optical reference element (29). It also comprises a reluctance transducer sensor device (31) for a second interaction with the magnetic material (5) as a magnetic reference element on the opposite side of the web (3). A control unit (39) is adapted for each point of measuring (P, PC) to calculate the thickness (t)from said interactions. The reluctance transducer sensor device (31) comprises a hollow conical magnetic core (41) around which circumference at least two coils (33, 35) of different diameter are mounted. The coil (33) having the smallest diameter is situated nearest the web (3) to be measured. The optical sensor device (7,9, 45) is adapted for sensing light beams (19) transferred through the hollow conical core (41) in directions which are oblique relative the plane (29) of said upper side (11).