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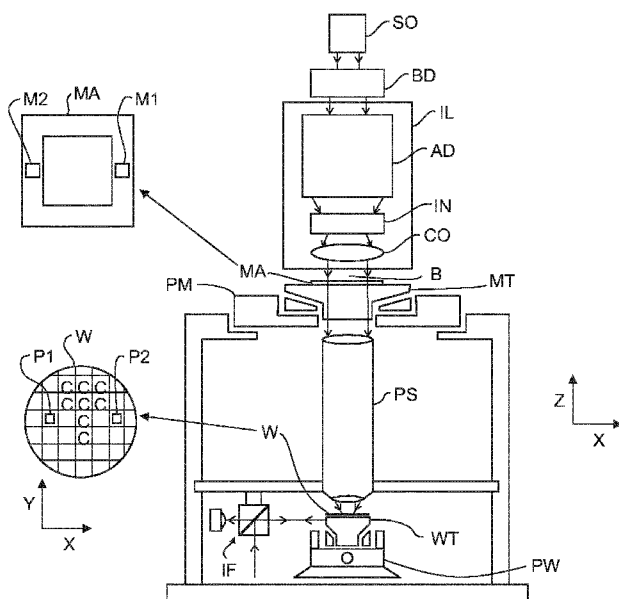
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## (54) Title: POSITION MEASUREMENT SYSTEM, GRATING FOR A POSITION MEASUREMENT SYSTEM AND METHOD

Figure 1



(57) Abstract: A grating for a position measurement system, the grating including a first array of grating lines in a first direction and a second array of grating lines in a second direction. The first and second arrays diffract a measurement beam incident on the first and second arrays in at least one first diffracted beam in the first direction and in at least one second diffracted beam in the second direction. The at least one first diffracted beam is used for position measurement in the first direction and the at least one second diffracted beam is used for position measurement in the second direction. The measurement beam has a power quantity, and the grating is configured to distribute the power quantity unevenly over the at least one first diffracted beam and the at least one second diffracted beam.