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(54) **Title:** INTERFEROMETRY FOR LATERAL METROLOGY

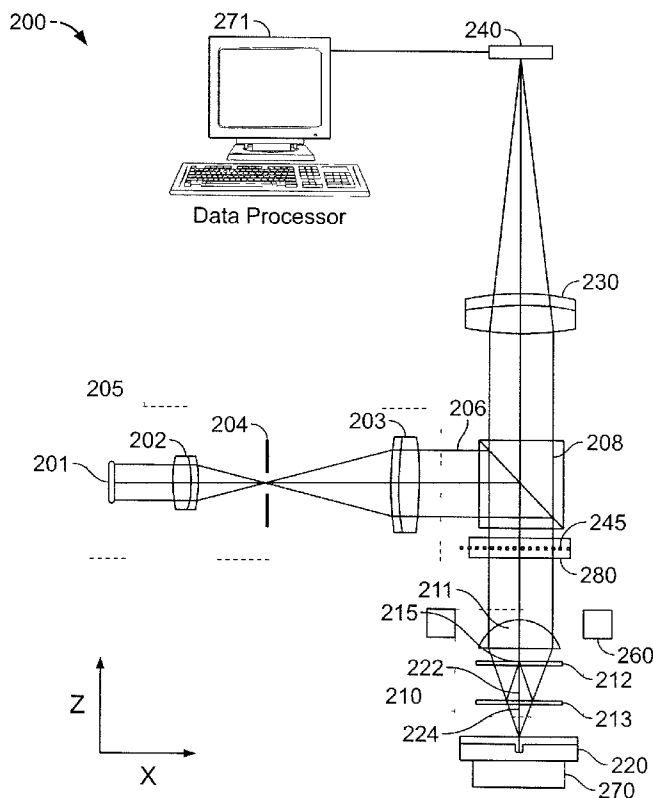


FIG. 1

(57) **Abstract:** A method is disclosed which includes: using a scanning interferometry system, generating a sequence of phase-shifted interferometry images at different scan positions of an object comprising a buried surface, identifying a scan position corresponding to a position of best focus for the buried surface based on the sequence of phase-shifted interferometry images of the object, and generating a final image based on the phase-shifted interferometry images and the scan position, where the interferometric fringes in the final image are reduced relative to the interferometric fringes in the phase-shifted interferometry images.



FR, GB, GR, **HR**, HU, IE, **IS**, **IT**, LT, LU, LV, MC, MT, NL,  
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## B FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 PUBWEST(USPT ,PGPB, EPAB.JPAB), Google Scholar, Google Patents, Search Terms phase shift, image, fringe free, weighted average fringe contrast, localized, best focus, top, bottom, banded, surface, distance, group index, velocity, lateral, metrology, machine vision, storage medium, controller, model, correction, least squares

## C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 2005/0088663 A1 (De Groot et al) 28 April 2005 (28 04 2005), para [0003], [0006], [0012], [0020], [0025], [0030], [0053], [0057], [0063], [0128], [0139], 307	32
Y		1-31, 33-44
Y	US 7,068,376 B2 (De Groot) 27 June 2006 (27 06 2006), col 2, ln 40-59, col 4, ln 41-53, col 5, ln 1-54, col 7, ln 7-34, col 12, ln 17-34, col 13, ln 20-46	1-31, 33-44

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