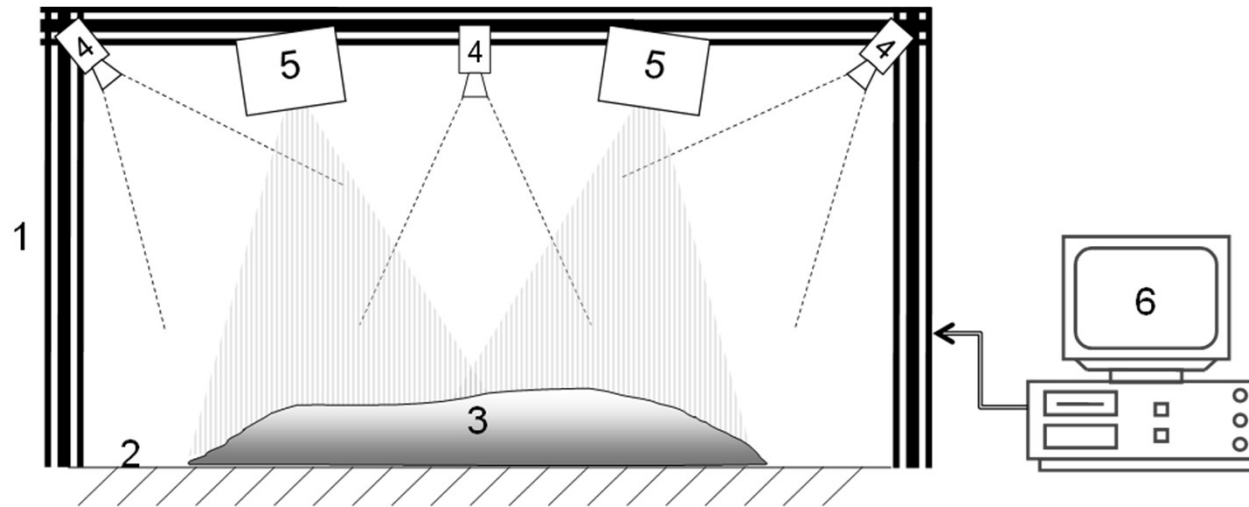


# 3D SHAPE DEVIATIONS CHECK ALONG PRODUCTION LINE



**PRIORITY NUMBER:**

102017000149389

**KEYWORDS:**

Line quality check

Fringe projection

Temporal phase shift

Phase unwrap

3D reconstruction



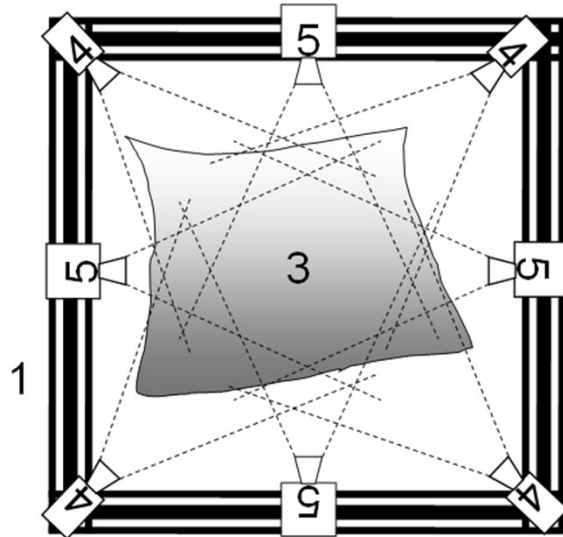
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The system is able to find three-dimensional shape deviations, with respect to project specifications, using both Fringe Projection and Temporal Phase Shift techniques. The system can work along mass production line for real time shape quality check. It also can be suited to work with objects of every measures.



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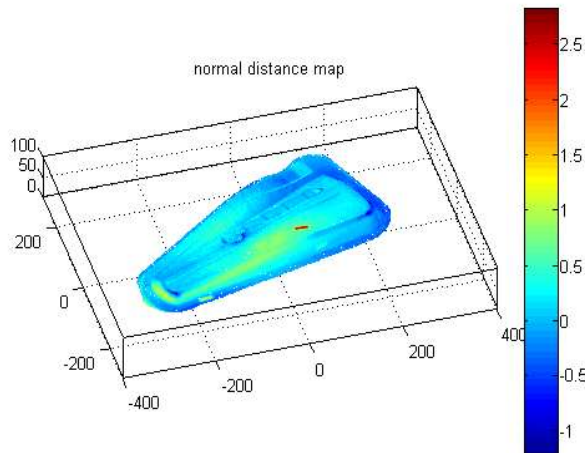
# 3D SHAPE DEVIATIONS CHECK ALONG PRODUCTION LINE



## DESCRIPTION:

The system uses both Fringe Projection and Temporal Phase Shift techniques to find full field shape deviations on 3D objects as, for example, moulded parts. The system can work with objects of every measures, but it better fits with object measures from 0.5m x 0.5m to 2m x 2m, or even bigger.

The system is made of a frame or a cell (1), where the object (3) is laid down over a platform (2). Object is shot by a certain number of cameras (4) and lighted by 4 spotlights (5). The fixed cameras shoot the entire object, minimizing or cancelling dark zones and undercuts, if present. Image acquisition, as well as spotlight pattern generation and data processing is performed by computer (6).



## ADVANTAGES:

- Real time 3D shape recognition on a mass production line (up to 10 pcs / min).
- Real time self positioning error correction along production line
- Adjustable calibration range

## APPLICATIONS:

- Optical Measurements
- Industrial:
  - Automotive
  - Small electrical appliances
  - White Goods
  - Aerospace
- Production line quality check