

Title (en)

ARRANGEMENT FOR THE OPTICAL DISTANCE DETERMINATION OF A REFLECTING SURFACE

Title (de)

ANORDNUNG ZUR OPTISCHEN ABSTANDSBESTIMMUNG EINER REFLEKTIERENDEN OBERFLÄCHE

Title (fr)

DISPOSITIF POUR DETERMINER PAR VOIE OPTIQUE LA DISTANCE A LAQUELLE SE TROUVE UNE SURFACE REFLECHISSANTE

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Application

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Abstract (en)

[origin: WO2004092692A1] The invention relates to an arrangement for the optical distance determination of a reflecting surface, which can especially be used to determine small distance modifications, such as those that frequently occur in oscillating systems. One such arrangement can also be used as an optical microphone or hydrophone. The inventive arrangement is designed in such a way that light from a light source is directed towards a reflecting surface (4) by means of a first optical wave guide, and light reflected from the reflecting surface is directed towards at least one statically arranged optical detector by means of the first optical wave guide or at least one other optical wave guide. An optical element (2) collimating in the direction of the reflecting surface is arranged between the reflecting surface and the at least one optical wave guide. Furthermore, at least two optical elements (3) focussing in the direction of the reflecting surface are arranged above the reflecting surface, the optical axes of said optical elements being parallel to the optical axis of the collimating optical element and arranged at constant distances from each other.

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