

Title (en)

METHOD AND DEVICE FOR MEASURING THE LEVEL OF SECONDARY RADIATION PRODUCED BY PRIMARY RADIATION INCIDENT ON A ZONE OF AN OBJECT

Title (de)

VERFAHREN UND VORRICHTUNG ZUR MESSUNG EINER ZWEITEN, VON EINER ERSTEN IN EINEM RAUMBEREICH EINES GEGENSTANDS ERZEUGTEN STRAHLUNG

Title (fr)

PROCEDE ET DISPOSITIF POUR LA MESURE D'UN DEUXIEME RAYONNEMENT PRODUIT PAR UN PREMIER RAYONNEMENT DANS UNE ZONE D'UN OBJET

Publication

**EP 0820251 A1 19980128 (DE)**

Application

**EP 96907985 A 19960415**

Priority

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- CH 109195 A 19950413

Abstract (en)

[origin: WO9632053A1] In order to measure the level of secondary radiation (4, 25) produced by primary radiation focussed on a zone (5) within an object (3), the invention calls for the primary and secondary radiation coming from or going to the zone (5) to be directed, in a common beam (17, 25), towards the same optical element (21) which focusses the primary radiation and collimates the secondary radiation into an optical fibre (30) leading to a measuring unit (29). In this beam, the primary and secondary radiation (i.e. the radiation transmitted into and retransmitted by the zone (5)) are conveyed parallel and cylindrically coaxial, but spatially separated from each other. Scattering and luminescence of light which can come only from the zone (5) within the object can be measured or otherwise determined. In addition, a relatively high light intensity can be produced at certain points within the object (3) being examined, the light intensity rapidly decreasing outside the object so that there is no danger of damage to the surrounding areas or the walls of the object (3). It is also possible to determine scatter and luminescence in the interior (1) of an object (3) which is only accessible to rays via an aperture (32), the position of the scatter and luminescence zone (5) being definable to such a degree of certainty that it can be kept away from radiation-sensitive zones.

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