

Title (en)
PROGRESSIVE SPECTACLE LENS HAVING A VARIABLE REFRACTIVE INDEX AND METHOD FOR THE DESIGN AND PRODUCTION THEREOF

Title (de)
GLEITSICHT-BRILLENGLAS MIT VARIABLEM BRECHUNGSINDEX UND VERFAHREN ZU DESSEN ENTWURF UND HERSTELLUNG

Title (fr)
VERRE DE LUNETTES PROGRESSIF À INDICE DE RÉFRACTION VARIABLE ET SON PROCÉDÉ DE CONCEPTION ET DE FABRICATION

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Abstract (en)
[origin: CA3054482A1] The invention relates to a product comprising a progressive spectacle lens or a representation of a progressive spectacle lens, which is located on a data carrier, wherein the progressive spectacle lens has a front face and a rear face as well as a spatially varying refractive index, the front face being formed as a progressive surface and/or the rear face being formed as a progressive surface. The product is characterized in that the front face, which is designed as a free-form surface, is formed such that the maximum of the magnitude of the mean curvature of the front face is in the progression channel and/or that the rear face, which is designed as a free-form surface, is formed such that the minimum of the magnitude of the mean curvature of the rear face is in the progression channel. The invention further relates to a computer-implemented method for designing a progressive spectacle lens having a spatially varying refractive index and a progressive surface. The method is characterized in that optical properties of the progressive spectacle lens are calculated by means of a ray calculation method at a plurality of assessment points, where visual rays pass through the progressive spectacle lens, wherein at least the nominal residual astigmatism for the progressive spectacle lens is determined at the respective assessment point. Starting from a first design of the progressive spectacle lens, the local surface geometry of the progressive surface and of the local refractive index of the progressive spectacle lens in the respective visual ray path through the assessment points is modified with respect to an approximation of at least the nominal residual astigmatism of the progressive spectacle lens.

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