

ing operation is selectively operable only upon the lamination material which is sensitive to the applicable etching environment, so that an excess timing of either etch is not harmful to the lamination which is not then intended to be etched.

For purposes of simplified presentation, the foregoing description has dealt with the laminations 12-13 of the composite starting sheet as if each lamination were a homogeneous solid, but it will be appreciated that, particularly in extra-ocular applications, a degree of gas and fluid permeability is desired, for enhanced compatibility with the human eye. Some of the above-indicated plastic materials exhibit a degree of such permeability, but I prefer to employ exposure to ion, neutron or other particle or X-ray bombardment, as a means of creating a desired mix of holes and hole sizes to thereby enhance permeability, the bombardment being preferably a controlled step applied to the composite sheet, prior to the erosion processes described above; alternatively, the bombardment to enhance permeability may be performed after masking and just before etching, or after the lens-finishing step. To provide a degree of gas and fluid permeability for applications in which glass is used rather than plastic, it can be noted that glasses with such permeability now exist and are available from Corning Glass Works, Corning, N.Y.

Also, for simplified presentation, the description of the invention has been concerned primarily with the lens element and its formation, so that it will be understood that conventional optical coating and other finishing steps desired for other lens configurations are equally applicable for the present case. Another such finishing step may be a third etch (without mask) to improve edge geometry and avoid sharp edges in the final product.

What is claimed is:

1. The method of making a unitary lens and haptic construction integrally formed from the same single composite laminated sheet of two different materials at least one of which materials is transparent and of optical quality and constitutes a relatively thick rigid first ply of said single sheet, the other ply material of said single sheet being relatively thin compared to the thickness of said first ply, said construction comprising a relatively thick rigid central lens component formed exclusively of said first ply material and having a generally circular periphery, and a relatively thin pliant generally annular and radially outwardly extending haptic component formed exclusively of said other ply material in peripherally continuous retained laminated overlap with at least the rim region of said lens component; which method comprises selecting the composite laminated sheet for thickness in said first ply at least sufficient to accommodate ultimate thickness of the lens component and for thickness in said other ply at least sufficient to accommodate ultimate thickness of the haptic component, masking the outer surface of said first ply with a first pattern to determine selective removal of first ply material in the generally annular included area of the haptic component to exclusion of a central circular area sized for area accommodation of the lens component, masking the outer surface of said other ply with a second pattern that is in concentrically aligned register

with the center of the first pattern, the second pattern being configured to mask a narrow annulus of rim overlap with said central circular area and to mask haptic outward leg-defining formations contiguous to said narrow annulus and within the generally annular included area of the haptic component, subjecting each of the masked sides of the composite sheet to an eroding environment which is specific to the applicable masked ply, the erosion exposure of the masked first ply being sufficient to erode through first-ply thickness, the erosion exposure of the masked other ply being sufficient to erode through other-ply thickness, removing the masks, and thereafter forming a lens curvature in at least one of the surfaces of the lens component.

2. The method of claim 1, in which one of said pattern-masking steps and the erosion step associated therewith are undertaken before performing the other pattern-masking step and its associated erosion step.

3. The method of claim 1, in which the erosion environment specific to the material of said first ply is selected for other-ply insensitivity thereto.

4. The method of claim 1, in which the erosion environment specific to the material of said other ply is selected for first-ply insensitivity thereto.

5. The method of claim 3, in which said first ply is of glass and said other ply is of plastic, the first-ply erosion exposure containing hydrogen fluoride as an essential component.

6. The method of claim 4, in which said first ply is of glass and said other ply is of plastic, the other-ply erosion exposure containing sodium hydroxide as an essential component.

7. The method of claim 1, in which the material of at least one of said laminations is a plastic and the erosion exposure thereof is to chemical etching.

8. The method of claim 1, in which the material of at least one of said laminations is a plastic and the erosion exposure thereof is to a plasma-ion discharge.

9. The method of claim 1, in which the material of at least one of said laminations is a glass and the erosion exposure thereof is to hydrofluoric-acid etching.

10. The method of claim 1, in which the material of at least one of said laminations is a glass and the erosion exposure thereof is to hydrofluoric gaseous etching.

11. The method of claim 1, in which the first-ply material is a plastic and the lens-curvature forming step is performed by die compression.

12. The method of claim 1, in which the first-ply material is a glass and the lens-curvature forming step is performed by conventional lens-grinding techniques while retaining adjacent haptic formations in a deformed position out of the locus of ultimate grinding curvature of the involved surface.

13. The method of claim 1, in which the first-ply erosion step occurs in the circumstance of full masking of other-ply side, and in which the other-ply erosion step occurs in the circumstance of full masking of the first-ply side.

14. The method of claim 1, in which the material of at least one of said laminations is a plastic and the erosion exposure thereof is to X-ray radiation.

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