

Title (en)

METHODS FOR MAKING ULTRA-LOW EXPANSION SILICA-TITANIA GLASSES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON KIESELSÄURE-TITANDIOXID-GLÄSERN MIT ULTRANIEDRIGER AUSDEHNUNG

Title (fr)

PROCEDES DE FABRICATION DE VERRES EN SILICE-ANHYDRIDE TITANIQUE A EXPANSION ULTRA FAIBLE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9954259A1] Ultra-low expansion silica-titania glasses are produced by flame deposition of a mixture of vaporized octamethylcyclotetrasiloxane (OMCTS) and vaporized titanium isopropoxide (Ti-Ipox). Ti-Ipox is vaporized by nitrogen bubbled from conduit (16) into tank (12) and OMCTS is vaporized by nitrogen bubbled from conduit (14) in tank (10). Before being mixed with the Ti-Ipox, the OMCTS is dried so that its water content is less than 2 ppm and preferably less than 1 ppm. In this way, the formation of a precipitate on the glass making equipment (e.g., burners (28), distribution manifold (26), static mixer (18), joint (13), and conduits (20, 22, 24 and 30)) is avoided. Such a precipitate if allowed to form will result in premature shutdown of the glass making process and can result in undesirable variations in the composition of the silica-titania glass being produced.

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