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(54) Title: PROCESS FOR FORMING A TITANIA-CONTAINING PREFORM SILICA GLASS BLANK

(57) Abstract

The present invention is directed to a process for forming a preform suitable for consolidation to a glass blank for producing an optical waveguide fiber. The preform comprises a core portion and an inner cladding layer surrounding the core portion and contains SiO_2 and TiO_2. A portion of the TiO_2 in the preform is in a crystalline form that is predominantly rutile. In addition to SiO_2 and TiO_2, the preform contains an additive compound that is preferentially sacrificed instead of TiO_2 when the preform is consolidated. The process includes oxidizing Si and Ti containing compounds as well as a precursor of the additive compound to form SiO_2, TiO_2, and the additive compound. The preform containing these materials is then formed. In addition, the preform can be converted to a glass blank by consolidation of the preform.

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

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US CL :Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 65/413, 430, 427

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,154,744 A (BLACKWELL et al) 13 October 1992	
A	US 5,067,975 A (BACKER et al) 26 November 1991	

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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