



US007310974B2

(12) **United States Patent**
Mohanty et al.

(10) **Patent No.:** **US 7,310,974 B2**
(45) **Date of Patent:** **Dec. 25, 2007**

(54) **METHOD FOR PRODUCING TWISTED OPTICAL FIBER WITH REDUCED POLARIZATION MODE DISPERSION**

(58) **Field of Classification Search** 65/404, 65/438, 430
See application file for complete search history.

(75) Inventors: **Sangeeta Mohanty**, Maharashtra (IN);
Nacham Sridhar, Maharashtra (IN);
Salaj Sinha, Maharashtra (IN); **Nitesh Gulati**, Maharashtra (IN); **Sthitadhi Das**, Maharashtra (IN)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,473,273	A	9/1984	Hodge	
5,897,680	A *	4/1999	Geertman	65/402
2001/0020374	A1 *	9/2001	Roba et al.	65/402
2003/0010066	A1 *	1/2003	Sasaoka et al.	65/402
2004/0107734	A1 *	6/2004	Kenkare et al.	65/378

(73) Assignee: **Sterlite Optical Technologies Limited**, Maharashtra (IN)

* cited by examiner

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 580 days.

Primary Examiner—Steven P. Griffin
Assistant Examiner—Queenie Dehghan
(74) *Attorney, Agent, or Firm*—Ladas & Parry LLP

(21) Appl. No.: **10/754,904**

(57) **ABSTRACT**

(22) Filed: **Jan. 9, 2004**

A method for drawing an optical fiber having reduced polarization mode dispersion (PMD) draws an optical fiber from an optical fiber preform whose core ovality is at max about 3%, coats the optical fiber with acrylic polymer and twists the coated optical fiber with a pair of spinning wheels. The twisting of the fiber is achieved by four discrete spin rates that repeat in a periodic fashion after the drawing of certain lengths of the optical fiber. At least one of the spin rates varies in a trapezoidal manner along the respective one of drawn lengths of the optical fiber.

(65) **Prior Publication Data**
US 2004/0163418 A1 Aug. 26, 2004

(30) **Foreign Application Priority Data**
Jan. 13, 2003 (IN) 38/MUM/2003

(51) **Int. Cl.**
C03B 37/022 (2006.01)

(52) **U.S. Cl.** 65/402; 65/438

11 Claims, 3 Drawing Sheets

