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Tel: 571-272-7822 Entered: May 9, 2014

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CORNING INCORPORATED
Petitioner

v.

DSM IP ASSETS B.V. Patent Owner

Case IPR2013-00049 Patent 6,298,189 B1

Before FRED E. McKELVEY, GRACE KARAFFA OBERMANN, JENNIFER S. BISK, SCOTT E. KAMHOLZ, and ZHENYU YANG, *Administrative Patent Judges*.

KAMHOLZ, Administrative Patent Judge.

FINAL WRITTEN DECISION 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73(b)



I. INTRODUCTION

A. Background

Petitioner Corning Incorporated ("Corning") filed a petition (Paper 2 ("Pet.")) to institute an *inter partes* review of claims 53-66 ("the challenged claims") of U.S. Patent No. 6,298,189 B1 (Ex. 1001 ("the '189 patent")). The Board instituted trial for the challenged claims on the following grounds of unpatentability asserted by Corning:

Reference(s) ²	Basis	Claims challenged
Shustack	§ 102	53, 54, 56, 57, 59, 60,
		62, 63, 65, and 66
Shustack	§ 103	53, 54, 56, 57, 59, 60,
		62, 63, 65, and 66
Szum '928	§ 102	53-58, 65, and 66
Szum '928	§ 103	53-58, 65, and 66
Szum '928 and Shustack	§ 103	59-64
Szum '928 and Szum '396	§ 103	59-64
Shustack and Jackson	§ 103	55, 58, 61, and 64

Decision to Institute 2-3 (Paper 13 ("Dec.")).

After institution of trial, Patent Owner DSM IP Assets B.V. ("DSM") filed a Patent Owner Response (Paper 40 ("Resp.")), and Corning filed a Reply to the Patent Owner Response (Paper 58 ("Reply")). DSM filed a Supplemental Response (Paper 67, "Suppl. Resp.") with leave of the Board, and Corning filed a Supplemental Reply (Paper 68, "Suppl. Reply"). DSM

² This Petition relies on the following references: U.S. Patent No. 5,352,712 (Ex. 1003 ("Shustack")); WO 95/15928 (Ex. 1005 ("Szum '928")); WO 96/28396 (Ex. 1006 ("Szum '396")); U.S. Patent No. 4,900,126 (Ex. 1007 ("Jackson")).



¹ Case IPR2013-00048 concerns claims 1-52 of the '189 patent.

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filed a Motion for Observations on Cross-Examination of Corning Reply Declarants (Paper 71 ("Obs.")), and Corning filed a Response to the Observations (Paper 78 ("Obs. Resp.")).

DSM also filed a Motion to Amend Claims (Paper 42 ("Motion to Amend")). In it, DSM proposed claims 72, 73, 74, and 75 to substitute for patented claims 59, 60, 62, and 63, respectively. Motion to Amend 1-5. Corning filed an Opposition to the Motion to Amend Claims (Paper 57). DSM filed a Reply to the Opposition (Paper 69).

DSM also filed a Motion to Exclude certain of Corning's evidence (Paper 72 ("PO Motion to Exclude")). Corning filed an Opposition (Paper 79), and DSM filed a Reply (Paper 82). Corning filed a Motion to Exclude certain of DSM's evidence (Paper 75 ("Pet. Motion to Exclude")). DSM filed an Opposition (Paper 77), and Corning filed a Reply (Paper 83).

Corning relies upon declarations of Dr. Michael Winningham (Ex. 1014) and Ms. Inna Kouzmina (Ex. 1015) in support of its Petition. DSM relies upon declarations of Dr. Christopher Bowman (Ex. 2034) and Dr. Carl Taylor (Ex. 2032) in its Response, along with a deposition of Dr. Winningham (Exs. 2027-31) and portions of Ms. Kouzmina's deposition (Exs. 2024-26). Corning relies upon declarations of Dr. Jiann-Wen Woody Ju (Ex. 1035) and Dr. Dotsevi Sogah (Ex. 1068) and a responsive declaration of Dr. Winningham (Ex. 1076), along with depositions of Dr. Bowman (Exs. 1070-75) and Dr. Taylor (Exs. 1045-47) and a portion of Ms. Kouzmina's deposition (Ex. 1044), in its Reply. DSM relies upon a supplemental declaration of Dr. Bowman in its Supplemental Response (Ex.



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2052). Corning relies upon depositions of Dr. Winningham (Ex. 1078³) and Dr. Dotsevi Sogah (Ex. 1077) in its Supplemental Reply. DSM relies upon depositions of Dr. Winningham (Ex. 2085), Dr. Sogah (Exs. 2073-74), and Dr. Ju (Exs. 2087-88) in its Motion for Observations on Cross-Examination of Corning Reply Declarants.

Oral argument was conducted on February 11, 2014. A transcript is entered as Paper 87. Both parties indicated during oral argument that the oral argument in case IPR2013-00048 relates to this proceeding as well. Paper 87, 1-2. The transcript for case IPR2013-00048 is entered as Paper 93 in that proceeding.

The Board has jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

Corning has not proved that claims 53-66 are unpatentable.

DSM's Motion to Amend Claims is denied without prejudice.

Corning's Motion to Exclude Evidence is dismissed.

DSM's Motion to Exclude Evidence is dismissed-in-part and denied-in-part.

B. The Invention

The '189 patent generally relates to radiation-curable coating compositions for optical glass fibers commonly used in data transmission. Ex. 1001, 1:18-19. In particular, the patent describes optical glass fibers coated with two radiation-cured coatings. *Id.* at 1:26-27. An inner primary coating contacts the glass surface of the fiber. *Id.* at 1:28-30. An outer

³ Ex. 1078 is a rough transcript. DSM submitted an official transcript as Ex. 2085.



primary coating overlays the inner coating. *Id.* For identification purposes, the outer primary coating may include colorant or, alternatively, a third colored layer, called an ink coating, which is applied to the outer primary coating. *Id.* at 1:53-58. Figure 1, depicting such an optical glass fiber, is reproduced below.

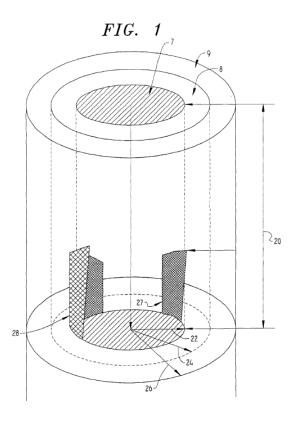


Figure 1, above, illustrates a longitudinal cross-sectional view of a coated optical glass fiber 7 coated with an inner primary coating 8 and a commercially available outer primary coating 9. *Id.* at 8:8-9; 10:7-9.

To create a cable or ribbon assembly, used in the construction of multi-channel transmission cables, a plurality of coated optical fibers are bonded together in a matrix material. *Id.* at 1:39-47. In order to connect the fibers of multiple ribbons, the surface of a glass fiber must be accessible. *Id.* at 1:53-2:6. This is often accomplished by a process known as "ribbon



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