UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GUANGDONG ALISON HI-TECH CO., LTD., Petitioner

v.

ASPEN AEROGELS, INC., Patent Owner

> Case IPR2017-00152 Patent 7,780,890

PATENT OWNER ASPEN AEROGELS, INC.'S PRELIMINARY RESPONSE



TABLE OF CONTENTS

I.	INTRODUCTION1			
II.	THE '890 PATENT			
III.	CLAIM CONSTRUCTION11			
	A.	"Gel	sheet(s)" (claims 11, 13, 18) 12	
	B.	"Cont	tinuous sheet" (claim 11) 14	
	C.	"Sol"	(claims 11, 15, 17, 21) 15	
	D.	"Roll	ing the dispensed sheet into a plurality of layers" (claim 11)	
	E.	"The	layers" (claim 11) 17	
IV.	PETITIONER'S INVALIDITY GROUNDS SHOULD BE REJECTED 17			
	А.	Grounds 1-3: Claims 11-13, 15, 17, and 21 are not rendered obvious by the combination of Nakanishi and any one of Ramamurthi, Roberts, or Andersen 18		
		1.	Nakanishi does not disclose "A method for preparing gel sheets" comprising the step of "dispensing a sol onto a moving element as a continuous sheet," as recited in claim 11	
		2.	The Rolling and Drying Prior Art combined with Nakanishi does not render claim 11 obvious	
		3.	Dependent claims 12, 13, 15, 17, and 21 40	
	В.		nds 4-5: Claims 11-13, 15, 17, and 21 are not obvious over Ramamurthi in of either Nakanishi or Champagne	
		1.	Ground 4: Neither Ramamurthi nor Nakanishi discloses "dispensing a sol onto a moving element as a continuous sheet," "rolling the dispensed sheet into a plurality of layers," or "drying the layers"	
		2.	Ground 5: Ramamurthi and Champagne do not render obvious claims 11- 13, 15, 17, or 21	
	C.		nd 6: Claims 11-13, 15, 17, and 21 are not rendered obvious by the ination of Sonoda and Uchida	
		1.	Neither Sonoda nor Uchida discloses "dispensing a sol onto a moving element as a continuous sheet"	
		2.	Neither Sonoda nor Uchida discloses "rolling the dispensed sheet into a plurality of layers"	
		3.	Sonoda does not disclose "drying the layers"	
		4.	Dependent claims 12, 13, 15, 17, and 21	

Case IPR2017-00152 Attorney Docket No: 41577-0003IP1

	D.	Grounds 7 and 8: Claims 18 and 19 are not rendered obvious over Nakanishi in view of Ramamurthi and either Chew or Leeke	
	E.	Ground 9-12: Claims 18 and 19 are not rendered obvious over Ramamurthi in view of Champagne and either Chew or Leeke, and Sonoda in View of Uchida and either Chew or Leeke	62
V.	PETIT	IONER'S ASSERTED GROUNDS ARE HIGHLY REDUNDANT	63
VI.	CONC	LUSION	65

LIST OF EXHIBITS

Exhibit No.	Description
AA 2001	Aspen's 6th Supplemental Response to Nano 1st Set of Interrogatory No. 43 (Oct. 3, 2016)
AA 2002	Press Release: Aspen Aerogels Receives Title III Funding to Build High Technology Manufacturing Facility in Rhode Island (ASPEN0040124-ASPEN0040126) (Sept. 17, 2004)
AA 2003	Frank '075 – U.S. Pat. No. 5,789,075
AA 2004	Fricke, <i>et al.</i> , Optimization of Monolithic Silica Aerogel Insulants (ASPEN0040127-40131), April 18, 1991
AA 2005	RESERVED
AA 2006	RESERVED
AA 2007	Fidler – U.S. Pat. No. 6,136,216
AA 2008	Brinker & Scherer, Sol-Gel Science: The Physics and Chemistry of Sol-Gel Processing (Academic Press, Inc. 1990)
AA 2009	Encyclopedia Britannica Online re gel electrophoresis
AA 2010	Bouis – U.S. Pat. No. 6,203,679
AA 2011	Declaration by Dr. George L. Gould and Appendices A & B
AA 2012	Wikipedia: "Sol-Gel" https://en.wikipedia.org/wiki/Sol-gel
AA 2013	Order No. 35: Construing Certain Terms of the Asserted Claims of the Patents at Issue (<i>Markman</i> Claim Construction), <i>In the Matter</i> of Certain Composite Aerogel Insulation Materials and Methods

	for Manufacturing the Same, Inv. No. 337-TA-1003, USITC (Jan. 31, 2017)
AA 2014	McGraw-Hill Dictionary of Scientific and Technical Terms, Sixth ed., 2003.

DOCKET A L A R M



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.