UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Borealis AG
Petitioner

v.

Berry Plastics Corporation Patent Owner

Case IPR2016-00564 Patent 8,883,280

DECLARATION OF KRISHNAMURTHY JAYARAMAN, PH.D.



TABLE OF CONTENTS

		1	Page	
I.	INTRODUCTION			
II.	QUALIFICATIONS			
III.	INFORMATION CONSIDERED			
IV.	LEGAL STANDARD19			
V.	PERS	SON OF ORDINARY SKILL IN THE ART	21	
VI.	PRIORITY DATES21			
VII.	OVE	RVIEW OF THE '280 PATENT	24	
	A.	The HMS-PP Formulations	24	
	B.	Structures Made From HMS-PP Formulations and Their Properties	27	
VIII.	CLAIM CONSTRUCTION			
	A.	Preamble (claim 1)	29	
	B.	"cell aspect ratio in at least one direction" (claims 16 and 17)	30	
	C.	"recyclable" (claim 34)	31	
	D.	"strip" (claims 32, 33, 61 and 63)	32	
IX.	CLA	PRIOR ART DISCLOSES AND RENDERS OBVIOUS IMS 1, 15-36, 40, 42, 43, 54-61, 63, AND 64 OF THE '280 ENT	33	
	A.	The Prior Art Discloses or Renders Obvious Parent Formulation Claims 1, 36, 40, 42, and 54	33	
		1. Anticipation of Claim 1: Formulation claim	33	
		2. Obviousness of Claims 1 and 54: Formulation Claims	37	
		a. Preamble	37	



		b.	HMS-PP	37
		c.	Slip agent	42
		d.	Other formulation elements	45
	3.		ns 36, 40, and 42: Chemical Blowing Agent and lyst	48
B.	Dens	sity Cla	aim 20 is Disclosed by EP '716	51
C.			laims 15-19, 21-35, 43, and 56-60 Would Have Been	52
	1.	aspe	structure having average cell size and average cell ct ratio of claims 15-17 and 43 would have been ous over EP '716 in view of Park and Barger	52
		a.	Recited cell aspect ratios would have been obvious	55
		b.	Recited cell sizes would have been obvious	58
	2.	temp 19 w Taba	structure having melting temperature, crystallization berature, and degree of crystallinity of claims 18 and rould have been obvious over EP '716 in view of stabaei and the general knowledge in the art as enced by Naguib and PP Handbook	61
		a.	There was motivation to control the claimed properties	63
		b.	The claimed numerical ranges and values would have been obvious by routine optimization of prior art ranges	65
	3.		structure having density of claims 21 and 22 would been obvious over EP '716 in view of Park	73
	4.		structure having microwavability of claim 23 would been obvious over EP '716	77
		a.	Routine optimization of the HMS-PP formulation	70



	b.	Detailed account of estimation of maximum tolerable microwave energy	83	
5.	temp	structure having the maximum exterior surface erature of claim 31 would have been obvious over 716	86	
	a.	Motivation and routine methods to form a foam structure with the claimed thermal insulation	90	
	b.	Detailed account of estimation of maximum exterior surface temperature	95	
6.	and 3 Antu	structure having thermal conductivity of claims 32 83 would have been obvious over EP '716 in view of nes and the general knowledge in the art as enced by Martínez-Díez	100	
	a.	Routine optimization of thermal conductivity would have been obvious	102	
	b.	Detailed account of estimation of thermal conductivity at 21 °C and 93 °C	107	
7.		The structure being recyclable according to claim 34 would have been obvious over EP '71611		
8.	The structure having printable surface of claim 35 would have been obvious over EP '716 in view of US '296			
9.		nanical properties of foam structure in claims 24-30 55-60 would have been obvious		
	a.	The structure having puncture resistance of claim 25 would have been obvious over EP '716	123	
	b.	The structure having tear resistance of claims 26-30 would have been obvious over EP '716 in view of Eichbauer	131	
	c.	The structure having rigidity of claims 24 and 54-		



		of Borealis 2010 Webpage or 2010 Brochure, and further in view of Sheppard and PP Handbook	141
	D.	Claims 61, 63 and 64 Would Have Been Obvious over EP '716 in View of Borealis 2010 Webpage or 2010 Brochure, and Further in View of US '107	168
X.	Decl	aration	175



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.

