



Gala's Intellectual Property Assets (Patents)

<u>Title/ Patent Family</u>	<u>Country</u>	<u>Patent Number</u>	<u>Issue Date</u>
METHOD AND APPARATUS FOR ENHANCED MINIMAL SHEAR MOLDING UTILIZING EXTRUSIONAL, PELLETIZATION, AND MELT RHEOLOGICAL CONTROL OF PELLETS AND MICROPELLETS AND MOLDED OBJECTS MADE THEREFROM	CA	2,696,614	10/28/2014
	CN	101,842,419	9/2/2015
	JP	5692637	2/13/2015
	KR	10-1479003	12/29/2014
	MX	305052	11/7/2012
	TW	I429690	3/11/2014
	US	8,969,435	3/3/2015
	ZA	2010/01149	4/28/2011
	AR	AR068198B1	10/19/2016
	METHOD AND APPARATUS TO ACHIEVE CRYSTALLIZATION OF POLYMERS UTILIZING MULTIPLE PROCESSING SYSTEMS	CN	101998897
JP		5503555	3/20/2014
TW		I523745	3/1/2016
US		8,080,196	12/20/2011
US		9,259,857	2/16/2016
METHOD AND DEVICE FOR EXTRUSION OF HOLLOW PELLETS		CN	ZL2009801163944
	EP	2291276	8/24/2016
	AT (valid EP)	2291276	8/24/2016
	BE (valid EP)	2291276	8/24/2016
	DE (valid EP)	2291276	8/24/2016
	IT (valid EP)	2291276	8/24/2016
	NL (valid EP)	2291276	8/24/2016
	TR (valid EP)	2291276	8/24/2016
	JP	5636361	10/24/2014
	KR	101591121	1/27/2016
	TW	I471211	2/1/2015
	US	8,834,760	9/16/2014



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METHOD AND APPARATUS TO ACHIEVE FORMULATION AND REACTIVE POLYMERIZATION UTILIZING A THERMALLY AND ATMOSPHERICALLY CONTROLLED FEEDING SYSTEM FOR THERMOPLASTIC MATERIALS	CN	ZL2009801350118	10/5/2016
	EP	2,349,665	8/19/2015
	BE (valid. EP)	2,349,665	8/19/2015
	FR (valid. EP)	2,349,665	8/19/2015
	IT (valid. EP)	2,349,665	8/19/2015
	DE (valid. EP)	2,349,665	8/19/2015
	JP	5537547	5/9/2014
	KR	10-1343201	12/12/2013
	TW	I432306	4/1/2014
	US	8,444,923	5/21/2013
DRYER SYSTEM WITH IMPROVED THROUGHPUT	AR	075265B1	7/25/2016
	CN	102149525	8/26/2015
	AU	2009288073	8/27/2015
	JP	5697597	2/20/2015
	MX	318922	4/1/2014
	TW	I481490	4/21/2015
	US	8,205,350	6/26/2012
	KR	10-1703939	2/1/2017
CONTINUOUS BAGGING PROCESSES AND SYSTEMS	AU	2010218029	5/7/2015
	CA	2,752,085	8/18/2015
	CN	102333701	1/15/2014
	ID	IDP000037627	1/9/2015
	KR	10-1517455	4/28/2015
	MX	330078	5/14/2015
	RU	22568	1/29/2016
	SG	173604	1/30/2014
	TW	TBD	TBD
	US	8,955,294	2/17/2015
	ZA	2011/05876	10/31/2012
	JP	6063125	12/22/2016
MY	MY-159174-A	12/30/2016	
CONTINUOUS PELLETIZING, DRYING AND BAGGING SYSTEMS WITH IMPROVED THROUGHPUT	CN	102802896	6/24/2015
	JP	5680635	1/16/2015
	MX	317772	2/5/2014
	EP	2445691	8/24/2016
	AT (valid. EP)	2445691	8/24/2016
	DE (valid EP)	2445691	8/24/2016
	IT (valid. EP)	2445691	8/24/2016
	US	8,671,647	3/18/2014



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PELLETIZING ASPHALT	CN	103038316	2/25/2015
	JP	5872546	1/22/2016
	US	9,382,423	7/5/16
VALVE DEVICES, SYSTEMS, AND METHODS FOR CONTROLLING THE DISTRIBUTION OF MATERIALS	CN	103596860	4/20/2016
	JP	5933699	5/13/2016
	SG	195221	4/8/2015
	TW	I499548	9/11/2015
	US	8,863,931	10/21/2014
	US	9,187,247	11/17/2015
CENTRIFUGAL PELLET DRYER FOR SMALL APPLICATIONS	US	6237244	5/29/2001
	US	6807748	10/26/2004
SUPPORT RING FOR PELLET DRYER SCREEN	JP	4633882	11/26/2010
	US	6138375	10/31/2000
WATER FLOW GUIDE FOR PELLETIZER	CN	1374900	4/25/2007
	DE (valid. EP)	EP1218156	2/14/2007
	EP	EP1218156	2/14/2007
	IT (valid. EP)	EP1218156	2/14/2007
	KR	647253	11/10/2006
	US	6,551,087	4/22/2003
US	7,393,484	7/1/2008	
INSULATION PLUG FOR UNDERWATER PELLETIZER DIE RECESS	CN	1406664	5/17/2006
	KR	10-0746648	7/31/2007
	US	6,824,371	11/30/2004
DEFLECTOR FOR CENTRIFUGAL PELLET DRYER SCREEN	US	6,739,457	5/25/2004



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UNDERWATER PELLETIZER WITH POSITIVELY CONTROLLED CUTTER HUB	US	7,033,152	4/25/2006
SECTIONED ADJUSTABLE WATER FLOW GUIDE FOR UNDERWATER PELLETIZER	AT (valid. EP)	E358007	3/28/2007
	CN	1732071	2/2/2011
	EP	EP1556199	3/28/2007
	DE (valid. EP)	EP1556199	3/28/2007
	IT (valid. EP)	EP1556199	3/28/2007
	TW	I293269	2/11/2008
TWO-PIECE WATER BOX ASSEMBLY FOR PELLETIZER	US	7,172,397	2/6/2007
CENTRIFUGAL PELLET DRYER WITH PLASTIC WALL PANELS	US	7,024,794	4/11/2006
METHOD AND APPARATUS FOR MAKING CRYSTALLINE PET PELLETS	AT (valid. EP)	1684961	10/2/2013
	BE (valid. EP)	1684961	10/2/2013
	BR	PI 0416735-0	6/9/2015
	CH (valid. EP)	1684961	10/2/2013
	CZ (valid. EP)	1684961	10/2/2013
	DE (valid. EP)	1684961	10/2/2013
	EP	1684961	10/2/2013
	ES (valid. EP)	1684961	10/2/2013
	FR (valid. EP)	1684961	10/2/2013
	GB (valid. EP)	1684961	10/2/2013
	IN	251737	3/30/2012
	IT (valid. EP)	1684961	10/2/2013
	JP	4828430	9/22/2011
	NL (valid. EP)	1684961	10/2/2013
	PL (valid. EP)	1684961	10/2/2013
	TR (valid. EP)	1684961	10/2/2013
US	7,157,032	1/2/2007	
US	8,366,428	2/5/2013	
US	9,492,948	11/15/16	



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CENTER HEATED DIE PLATE FOR UNDERWATER PELLETIZER	BR	PI0607272-0	12/13/16
	CN	101107108	1/26/2011
	IN	272806	4/27/2016
	JP	4789956	7/29/2011
	KR	10-1266840	5/16/2013
	TW	I396616	5/21/2013
	US	7,402,034	7/22/2008
	US	7,524,179	4/28/2009
STEEP ANGLE CUTTER HUB AND BLADE ASSEMBLY	EP	EP1582327	5/13/2015
	BE (valid. EP)	EP1582327	5/13/2015
	AT (valid. EP)	EP1582327	5/13/2015
	DE (valid. EP)	EP1582327	5/13/2015
	IT (valid. EP)	EP1582327	5/13/2015
	US	7,318,719	1/15/2008
MULTI-LAYER CENTRIFUGAL PELLET DRYER SCREEN	CN	101124048	6/29/2011
	IN	276960	11/7/2016
	EP	EP1830963	4/27/2016
	AT	EP1830963	4/27/2016
	DE	EP1830963	4/27/2106
	IT	EP1830963	4/27/2016
	JP	5583326	7/25/2014
	KR	10-1266839	5/16/2013
	MX	291544	11/1/2011
	SELF-CLEANING CENTRIFUGAL PELLET DRYER AND METHOD THEREOF	AT (valid. EP)	EP1650516
AT (valid. EP)		EP2557382	4/30/2014
CN		1782646	3/9/2011
DE (valid. EP)		EP1650516	4/2/2014
DE (valid. EP)		EP2557382	4/30/2014
EP		EP1650516	4/2/2014
EP		EP2557382	4/30/2014
IN		262538	8/27/2014
IT (valid. EP)		EP1650516	4/2/2014
IT (valid. EP)		EP2557382	4/30/2014
JP		5068943	8/24/2012
KR		10-1276553	6/13/2013
TW		I355972	1/11/2012
US	7,171,762	2/6/2007	
US	7,421,802	9/9/2008	



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METHOD AND APPARATUS FOR MAKING CRYSTALLINE POLYMERIC PELLETS AND GRANULES

CN	101184593	2/8/2012
EP	1883517	2/17/2016
AT (valid. EP)	1883517	2/17/2016
DE (valid. EP)	1883517	2/17/2016
IT (valid. EP)	1883517	2/17/2016
RU (valid. EA)	12678	12/30/2009
ID	IDP0025909	6/16/2010
IN	264452	12/30/2014
JP	5265354	5/10/2013
KR	10-1379345	3/24/2014
MX	309693	5/17/2013
TW	I392572	4/11/2013
US	8,361,364	1/29/2013
US	9,032,641	5/19/2015
VN	15965	9/21/2016

METHOD AND APPARATUS FOR PELLETIZING BIOMATERIAL COMPOSITES

CA	2619945	1/19/2016
RU (valid. EA)	12997	2/26/2010
ID	ID P 0028576	6/14/2011
JP	5301274	6/28/2013
KR	101308562	9/13/2013
MX	296356	2/21/2012
SG	140261	10/29/2010
TH	52701	12/2/2016
TW	I440658	6/11/2014
ZA	2008/1845	11/26/2008

STEEP ANGLE CUTTER HUB WITH BLUNT EDGE BLADES

AT (valid. EP)	EP1984157	4/22/2015
CN	101405114	11/7/2012
DE (valid. EP)	EP1984157	4/22/2015
EP	EP1984157	4/22/2015
KR	10-1445060	9/21/2014
US	7,267,540	9/11/2007



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APPARATUS AND METHOD FOR PELLETIZING WAX AND WAX-LIKE MATERIALS

CN	101448614	1/29/2014
JP	5726406	4/10/2015
KR	10-1392713	4/30/2014
MX	313938	10/4/2013
TW	I411671	10/11/2013
US	8562883	10/22/2013
EP	1991402	12/28/2016
AT (valid EP)	1991402	12/28/2016
BE (valid EP)	1991402	12/28/2016
DE (valid EP)	1991402	12/28/2016
IT (valid EP)	1991402	12/28/2016
TR (valid EP)	1991402	12/28/2016
US	9,649,802	5/16/2017

APPARATUS AND METHOD FOR CONTROLLED PELLETIZATION PROCESSING

AT (valid. EP)	EP2700489	5/27/2015
BE (valid. EP)	EP1954470	4/30/2014
BE Valid. (EP)	EP2700489	5/27/2015
CH (valid. EP)	EP2700489	5/27/2015
DE (valid. EP)	EP1954470	4/30/2014
DE (valid. EP)	EP2700489	5/27/2015
FR (valid. EP)	EP2700489	5/27/2015
IT (valid. EP)	EP2700489	5/27/2015
NL (valid. EP)	EP2700489	5/27/2015
TR (valid. EP)	EP2700489	5/27/2015
EP	EP1954470	4/30/2014
EP	EP2700489	5/27/2015
CN	101484304	4/24/2013
IN	266125	4/6/2015
JP	5203213	2/22/2013
KR	10-1357647	1/24/2014
MX	295872	2/9/2012
SG	142890	5/31/2011
TW	I400279	7/1/2013
US	8303871	11/6/2012
VN	14309	7/13/2015



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MELT COOLER AND VALVING SYSTEM FOR UNDERWATER PELLETIZING PROCESS	EP	EP2007561	1/30/2013
	AT (valid. EP)	EP2007561	1/7/2013
	CH (valid. EP)	EP2007561	1/7/2013
	DE (valid. EP)	EP2007561	1/7/2013
	IT (valid. EP)	EP2007561	1/7/2013
	TR (valid. EP)	EP2007561	1/7/2013
	ID	ID P 0028830	7/25/2011
	CN	101472720	4/3/2013
	JP	4833334	9/30/2011
	KR	10-1408161	6/10/2014
	MX	294381	1/6/2012
	MY	MY-155308-A	9/30/2015
	PH	1-2008-502339	10/3/2013
	TH	45329	7/28/2015
	TW	1412448	10/21/2013
	US	RE45113	8/10/2010
	VN	13203	9/22/2014
IN	277802	11/30/2016	
SOLID FACE DIE PLATE	RU (valid. EA)	14595	12/30/2010
	EP	EP2018257	2/24/2016
	AT (valid. EP)	EP2018257	2/24/2016
	BE (valid. EP)	EP2018257	2/24/2016
	DE (valid. EP)	EP2018257	2/24/2016
	IT (valid. EP)	EP2018257	2/24/2016
	TR (valid. EP)	EP2018257	2/24/2016
	KR	10-1408165	6/10/2014
	MX	316630	12/18/2013
	TH	50394	7/12/16
	US	8,512,021	8/20/2013
	US	9,149,954	10/6/2015
SYSTEM FOR CONTROLLING CUTTER HUB POSITION IN UNDERFLUID PELLETIZER	JP	5785540	9/30/2015
	TW	I549801	9/21/2016
	US	9,481,122	11/1/2016
	CA	2,766,052	TBD
	EP	2442954	5/31/2017
	AT (valid EP)	2442954	5/31/2017
	DE (valid EP)	2442954	5/31/2017
	IT (valid EP)	2442954	5/31/2017



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CENTRIFUGAL PELLET DRYER SCREEN WITH INTEGRAL EMBOSSED DEFLECTOR STRIPS

CA	2.684.414	7/15/2014
EP	2147272	8/17/16
AT (EP valid)	2147272	8/17/16
BE (EP valid)	2147272	8/17/16
CZ (EP valid)	2147272	8/17/16
DE (EP valid)	2147272	8/17/16
IT (EP valid)	2147272	8/17/16
NL (EP valid)	2147272	8/17/16
CN	102016473	5/1/2013
GC	GC00002993	5/24/2008
JP	5795161	10/14/2015
MX	308731	4/15/2013
TH	45862	9/11/2015
TW	I437198	5/11/2014
US	8,220,177	7/17/2012

THERMALLY INSULATED DIE PLATE ASSEMBLY FOR UNDERWATER PELLETIZING AND THE LIKE

CL	51655	1/11/2016
AT (valid. EP)	EP2326474	3/18/2015
AU	2009282038	12/4/2014
CN	102239035	9/2/2015
DE (valid. EP)	EP2326474	3/18/2015
RU (valid. EA)	19076	12/30/2013
EP	EP2326474	3/18/2015
ID	IDP 39555	9/30/15
IL	211179	1/7/2015
IT (valid. EP)	EP2326474	3/18/2015
JP	5571082	7/4/2014
MX	320241	5/16/2014
SG	168911	9/30/2013
TW	I494202	8/1/2015
US	8708688	4/29/2014
ZA	2011/01115	4/25/2012
TH	52702	12/2/2016
DE (Util. Model)	212009000038U1	8/12/2009

POSITIONABLE GAS INJECTION NOZZLE FOR AN UNDERWATER PELLETIZING SYSTEM

AT (valid. EP)	EP2296856	11/13/2013
BE (valid. EP)	EP2296856	11/13/2013
CN	102112278	6/26/2013
CZ (valid. EP)	EP2296856	11/13/2013
DE (valid. EP)	EP2296856	11/13/2013
EP	EP2296856	11/13/2013
FR (valid. EP)	EP2296856	11/13/2013



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POSITIONABLE GAS INJECTION NOZZLE FOR AN UNDERWATER PELLETIZING SYSTEM (cont'd)	IT (valid. EP)	EP2296856	11/13/2013
	JP	5364789	9/13/2013
	MX	314322	10/17/2013
	TW	I466768	1/1/2015
	US	8,011,912	9/6/2011
	US	8,007,701	8/30/2011
PIN DRIVE AND QUICK DISCONNECT CUTTERHUB	DE (UM)	202014010742.4	7/1/2016
	EP	2969442	1/2/2017
	AT (valid. EP)	2969442	1/2/2017
	BE (valid. EP)	2969442	1/2/2017
	DE (valid. EP)	2969442	1/2/2017
	IT (valid. EP)	2969442	1/2/2017
	JP	6105149	3/10/2017
	US	9,630,347	4/25/2017
VOLATILE INGREDIENTS	EP	EP2008784	2/27/2013
	AT (valid. EP)	EP2008784	2/27/2013
	DE (valid. EP)	EP2008784	2/27/2013
	IT (valid. EP)	EP2008784	2/27/2013
	TR (valid. EP)	EP2008784	2/27/2013
OUTWARDLY PROJECTING EMBOSSED DEFLECTOR STRIP	JP	6093094	2/17/2017
STARTER VALVE	EP	EP1851023	1/14/2009
	AT (valid. EP)	EP1851023	1/14/2009
	DE (valid. EP)	EP1851023	1/14/2009
	IT (valid. EP)	EP1851023	1/14/2009
	US	8,187,512	5/29/2012
	US	8,414,283	4/9/2013
	KR	1264946	5/9/2013
KR	10-1239497	2/26/2013	
ADJUSTABLE DEWATERING INLET	DE-UM	20-2016-006451	1/23/2017
MELT CUTTER	EP	2747969	12/16/2015
	AT (valid. EP)	2747969	12/16/2015
	DE (valid. EP)	2747969	12/16/2015
	IT (valid. EP)	2747969	12/16/2015
	CN	ZL2012800414398	11/23/2016



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FILTRATION DEVICE	EP	2629871	2/10/2016
	DE (valid. EP)	2629871	2/10/2016
	IT (valid. EP)	2629871	2/10/2016
	AT (valid. EP)	2629871	2/10/2016
	CZ (valid. EP)	2629871	2/10/2016
	TR (valid. EP)	2629871	2/10/2016
	PL (valid. EP)	2629871	2/10/2016
	JP	5714114	3/20/2015
	KR	10-1506555	3/23/2015
	CN	ZL2010800697608	9/30/2015
	TW	I517889	1/21/2016
	EP	2712664	5/31/2017
	AT (valid. EP)		
	BE (valid. EP)		
	CZ (valid. EP)		
	DE (valid. EP)		
	ES (valid. EP)		
FR (valid. EP)			
GB (valid. EP)			
IT (valid. EP)			
NL (valid. EP)			
PL (valid. EP)			
TR (valid. EP)			
POLYIMIDE BEADS AND METHOD FOR PRODUCTION THEREOF (Jointly owned by Gala/Rhodia-Solvay)	AM (valid. EA)	14994	4/29/2011
	AZ (valid. EA)	14994	4/29/2011
	BY (valid. EA)	14994	4/29/2011
	KZ (valid. EA)	14994	4/29/2011
	KG (valid. EA)	14994	4/29/2011
	MD (valid. EA)	14994	4/29/2011
	RU (valid. EA)	14994	4/29/2011
	TJ (valid. EA)	14994	4/29/2011
	TM (valid. EA)	14994	4/29/2011
	FR	06 11260	3/9/2012
	CN	101600549B	11/28/2012
	TW	I428221	3/1/2014