



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
	IN	282430	4/11/2017
	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	12/18/2013
	JP	5503555	3/20/2014
	TH	58302	10/16/2017
	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	9/14/2016
	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
	TH	54929	5/11/2017
	TW	I471211	2/1/2015
	US	8,834,760	9/16/2014
	US	9,815,223	11/14/2017



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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
CA	2,733,167	5/9/2017
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



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CONTINUOUS PELLETIZING, DRYING AND BAGGING SYSTEMS WITH IMPROVED THROUGHPUT

CN	102802896	6/24/2015
CA	2,752,086	5/16/2017
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

PELLETIZING ASPHALT

CN	103038316	2/25/2015
JP	5872546	1/22/2016
US	9,382,423	7/5/2016
CA	2,797,085	7/25/2017

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

TUMBLER SYSTEMS AND METHODS

US	9,782,705	10/10/2017
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CENTRIFUGAL PELLET DRYER FOR SMALL APPLICATIONS

US	6,237,244	5/29/2001
US	6,807,748	10/26/2004

SUPPORT RING FOR PELLET DRYER SCREEN

JP	4633882	11/26/2010
US	6,138,375	10/31/2000

WATER FLOW GUIDE FOR PELLETIZER

KR	647253	11/10/2006
US	6,551,087	4/22/2003
US	7,393,484	7/1/2008



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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
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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
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METHOD AND APPARATUS FOR MAKING CRYSTALLINE PET PELLETS

EP	1684961	10/2/2013
BE (valid. EP)	1684961	10/2/2013
CZ (valid. EP)	1684961	10/2/2013
TR (valid. EP)	1684961	10/2/2013
JP	4828430	9/22/2011
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
	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
	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
	VN	16761	3/27/2017
	VN	16761	3/27/2017
SELF-CLEANING CENTRIFUGAL PELLET DRYER AND METHOD THEREOF	AT (valid. EP)	EP1650516	4/2/2014
	CN	1782646	3/9/2011
	DE (valid. EP)	EP1650516	4/2/2014
	EP	EP1650516	4/2/2014
	IN	262538	8/27/2014
	IT (valid. EP)	EP1650516	4/2/2014
	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	8,562,883	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
IN	283473	5/23/2017

APPARATUS AND METHOD FOR CONTROLLED PELLETIZATION PROCESSING

AT (valid. EP)	EP2700489	5/27/2015
BE (valid. EP)	EP1954470	4/30/2014
CH (valid. EP)	EP2700489	5/27/2015
DE (valid. EP)	EP1954470	4/30/2014
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	9/12/2017
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
KR	10-1762209	7/21/2017
GCC	GC0004222	6/29/2016



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CENTRIFUGAL PELLET DRYER SCREEN WITH INTEGRAL EMBOSSED DEFLECTOR STRIP	EP	2147272	8/17/2016
	AT (EP valid)	2147272	8/17/2016
	BE (EP valid)	2147272	8/17/2016
	CZ (EP valid)	2147272	8/17/2016
	DE (EP valid)	2147272	8/17/2016
	IT (EP valid)	2147272	8/17/2016
	NL (EP valid)	2147272	8/17/2016
	CA	2684414	7/15/2014
	CN	102016473	5/1/2013
	GC	GC00002993	5/24/2008
	JP	5795161	10/14/2015
	MX	308731	4/15/2013
	MY	MY-162101-A	5/31/2017
	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	CA	2733714	9/5/2017
	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
	KR	1717791	3/17/2017
	TH	52702	12/2/2016
	GCC	GC0005887	7/10/2017



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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
IT (valid. EP)	EP2296856	11/13/2013
IN	284824	6/30/2017
JP	5364789	9/13/2013
MX	314322	10/17/2013
TH	56428	8/4/2017
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
KR	1768353	8/8/2017
TW	I599463	9/21/2017
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



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OUTWARDLY PROJECTING EMBOSSED DEFLECTOR STRIP	CN	105324619	8/15/2017
	JP	6093094	2/17/2017
	EP	3014206	8/9/2017
	AT (EP valid.)	3014206	8/9/2017
	BE (EP valid.)	3014206	8/9/2017
	CZ (EP valid.)	3014206	8/9/2017
	DE (EP valid.)	3014206	8/9/2017
	IT (EP valid.)	3014206	8/9/2017
NL (EP valid.)	3014206	8/9/2017	
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
	US	9,789,640	10/17/2017
	KR	1264946	5/9/2013
KR	10-1239497	2/26/2013	
MELT CUTTER	EP	2747969	12/16/2015
	AT (valid. EP)	2747969	12/16/2015
	IT (valid. EP)	2747969	12/16/2015
	DE (valid. EP)	2747969	12/16/2015
	CN	ZL2012800414398	11/23/2016
CURVED PELLET OUTLET	DE-UM	20-2017-000499.2	1/30/2017
SCREEN HOUSING VIBRATION DAMPER	DE-UM	20-2016-006452.6	1/23/2017
ADJUSTABLE DEWATERING INLET	DE-UM	20-2016-006451.8	1/23/2017
INTERIOR BLOWER DUCTING	DE-UM	20-2017-000498.4	1/30/2017
MELT CUTTER II	DE (Util. Model)	202013001692U1	7/3/2014
	EP	2958722	10/4/2017
	DE (valid. EP)	2958722	10/4/2017
	AT (valid. EP)	2958722	10/4/2017
	IT (valid. EP)	2958722	10/4/2017



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POLYMER DIVERTER VALVE WITH RUPTURE DISC	DE (Util. Model)	202009011114U1	2/3/2011
SIEVE (EM SCREEN)	TW	I468227	11.01.2015
	TH	44161	5/11/2015
	CN	101675312	7/4/2012
	KR	1011534875	7/7/2015
	US	8,365,430	2/5/2013
	EP	EP2135023	9/28/2011
	AT (valid. EP)	EP2135023	9/28/2011
	BE (valid. EP)	EP2135023	9/28/2011
	DE (valid. EP)	EP2135023	9/28/2011
	IT (valid. EP)	EP2135023	9/28/2011
PELLETIZING DEVICE AND BLADE HEAD AND/OR GRINDING HEAD FOR SUCH A PELLETIZING DEVICE	US	9,079,333	7/14/2015
	TW	I503214	10/11/2015
	JP	5685684	30.01.2015
	KR	10-1455437	21.10.2014
	EP	2 212 077	10/16/2013
	DE (valid. EP)	2 212 077	10/16/2013
	NL (valid. EP)	2 212 077	10/16/2013
	IT (valid. EP)	2 212 077	10/16/2013
	BE (valid. EP)	2 212 077	10/16/2013
	AT (valid. EP)	2 212 077	10/16/2013
TR (valid. EP)	2 212 077	10/16/2013	
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)	2712664	5/31/2017
BE (valid. EP)	2712664	5/31/2017	



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FILTRATION DEVICE, cont'd	CZ (valid. EP)	2712664	5/31/2017
	DE (valid. EP)	2712664	5/31/2017
	GB (valid. EP)	2712664	5/31/2017
	IT (valid. EP)	2712664	5/31/2017
	NL (valid. EP)	2712664	5/31/2017
	PL (valid. EP)	2712664	5/31/2017
	TR (valid. EP)	2712664	5/31/2017
MELT COMPONENT CONNECTION ADAPTER	DE-UM	202016001455	6/8/2017
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
	US	9,676,121	6/13/2017

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