<u>2009 - 10</u>

S. NO.	NFNO	TITLE			COMP FILING DATE	APPLICATION NO.		PATENT NO.
1		MONITORING SYSTEM FOR OPENCAST MINES	LAKSHMI KANTA BANDYOPADHYAY, SWADES KUMAR CHAULYA, PANKAJ KUMAR MISHRA		21/04/2009	0832DEL2009		
2		SYSTEM FOR HEAVY EARTH MOVING MACHINERY	LAKSHMI KANTA BANDYOPADHYAY, SWADES KUMAR CHAULYA, PANKAJ KUMAR MISHRA		07/09/2009	1841DEL2009		
3			SUDHIR KUMAR KASHYAP, AMALENDU SINHA	19/02/2010	31/Jan/2011	0374DEL2010	-	-

<u>2010 - 11</u>

<u>Filed in India</u>

S.No	NFNO	Title			Comp. Filing Date	Application No.	Patent No.
1	0064NF2010/IN	A COMPOSITION AND MANUFACTURING PROCESS OF RESIN CAPSULES SUITABLE AS GROUTING MATERIAL FOR UNDERGROUND MINES		20/07/2010		1692DEL2010	
2		-	LAKSHMI KANTA BANDYOPADHYAY, SWADES KUMAR CHAULYA, PANKAJ KUMAR MISHRA, MANOJ KUMAR SINGH, SURAJIT DEY	02/11/2010		2619DEL2010	
3	0067NF2010/IN	PURGING OR VENTILATION SYSTEM AND CONTROL UNIT OR APPARATUS FOR INCREASED SAFETY AND NON- SPARKING MOTORS FOR EXPLOSIVE GAS AND DUST ATMOSPHERES	VISHWAKARMA RAJENDRA KUMAR, SINGH ARVIND KUMAR, AHIRWAL BHAGIRATH	29/03/2011		0865DEL2011	
4		HEAVY EARTH MOVING MACHINERY	LAKSHMI KANTA BANDYOPADHYAY, SWADES KUMAR CHAULYA, PANKAJ KUMAR MISHRA	07/09/2009	07/09/2010	1841DEL2009	
5	0117NF2009/IN	A DEVICE FOR ROOF SUPPORT OF UNDERGROUND MINE/TUNNEL	SUDHIR KUMAR KASHYAP, AMALENDU SINHA	19/02/2010	21/01/2011	0374DEL2010	

<u>2011 – 12</u>

S. NO.	NFNO	TITLE		PROV FILING DATE	COMP FILING DATE	APPLICATION NO.	PATENT NO.
1		A COMPOSITION AND MANUFACTURING PROCESS OF RESIN CAPSULES SUITABLE AS GROUTING MATERIAL FOR UNDERGROUND MINES	, , , ,	20/07/2010	20/07/2011	1692DEL2010	
2		ROAD DUST COLLECTING AND BRIQUETTING SYSTEM FOR COAL MINES	LAKSHMI KANTA BANDYOPADHYAY, SWADES KUMAR CHAULYA, PANKAJ KUMAR MISHRA, MANOJ KUMAR SINGH, SURAJIT DEY	02/11/2010	12/09/2011	2619DEL2010	
3			VISHWAKARMA RAJENDRA KUMAR, SINGH ARVIND KUMAR, AHIRWAL BHAGIRATH	29/03/2011	29/03/2012	0865DEL2011	

<u>2012 – 13</u>

S.	NFNO	TITLE	INVENTORS	PROV	СОМР	APPLICATION	GRANT	PATENT
NO.				FILING	FILING	NO.	DATE	NO.
				DATE	DATE			
1			BRAJ MOHAN PAT PINGUA,	22/09/2011	21/09/2012	2759DEL2011		
			NABIULLAH					
		OTHER EXCAVATION WORKS AND						
		A PROCESS FOR PREPARING THE						
		SAID EXPLOSIVE						
2	0012NF2012/IN	A BIODEGRADABLE AND ECO -	PANDEY JAI KRISHNA,	14/03/2012	13/03/2013	0410DEL2012		
		FRIENDLY DUST SUPPRESSANT	TRIVEDI SHRENIK					
		CHEMICAL FOR UNPAVED HAUL	MADHUSUDAN, TRIVEDI					
		ROADS AND STOCK PILE, BLASTED	RUSHAY SHRENIK, JANI					
		MATERIAL HANDLING IN MINES	URJA FALGUN, VYAS					
		AND OTHER DUST PRONE AREAS	BHAVTOSH RAJNIKANT,					
			KUMAR AJAY					

<u>2013 – 14</u>

S. NO.	NFNO	TITLE		FILING	COMP FILING DATE	APPLICATION NO.	PATENT NO.
1			KUSHWAHA ANGAD, TEWARI SUBHASHISH, BHATTACHARJEE RANA		20/12/2013	3725DEL2013	
2		INFORMATION SYSTEM	PANKAJ KUMAR MISHRA, ANGAD KUSHWAHA, PRABHAT KUMAR MANDAL, AMALENDU SINHA		08/10/2013	2993DEL2013	
3		AND ALERTING SYSTEM USING WIRELESS SENSOR NETWORK	SWADES KUMAR CHAULYA, PANKAJ KUMAR MISHRA, GIRENDRA MOHAN PRASAD, SATYAJIT RATH, DEBI PRASAD SANDHA, SANJEEV KUMAR PANDEY, PRATAP CHANDRA SARMAH, KHIROD BURAGOHAIN, PRABHAT KOTOKY		19/08/2013	2444DEL2013	

<u>2014-15</u>

S. NO.	 TITLE		FILING		APPLICATION NO.	PATENT NO.
1	SYSTEM FOR OXY FUEL COAL	MANISH KUMAR, ASHIS MUKHERJEE, ASHIS KUMAR ADAK, SUBHASIS BISWAS		25/Sep/2014	2750DEL2014	
2	CARBON DIOXIDE CONCENTRATION IN FLUE GAS	ASHIS MUKHERJEE, MANISH KUMAR, SANTI GOPAL SAHU, ASHIS KUMAR ADAK, SUBHASIS BISWAS		28/Jan/2015	0232DEL2015	

<u>2015 – 16</u>

S. NO.	NFNO	TITLE	INVENTORS	FILING		APPLICATION NO.	PATENT NO.
1	0117NF2015/IN	OVERALL ASH PERCENTAGE OF COAL	DEVENDRA KUMAR SAKHARE, SHRIPAL SINGH, RANJIT KUMAR ACHARYA, PRAKASH D CHAVAN, RAHUL MEHATRE, SWATI SINGH		01/Jul/2015	1977DEL2015	
2	0106NF2015/IN				13/Jul/2015	2107DEL2015	
3	0118NF2015/IN	AND ENVIRONMENT MONITORING SYSTEM FOR UNDERGROUND	SWADES KUMAR CHAULYA, GIRENDRA MOHAN PRASAD, AJAY KUMAR SINGH		12/Aug/2015	2477DEL2015	
4	0243NF2015/IN		SINGH RAJENDRA, SINGH ARUN KUMAR, RAM SAHENDRA, KUMAR ASHOK, KUMAR RAKESH, SINGH AMIT KUMAR		18/Nov/2015	3765DEL2015	

5	STEMMING-PLUG AUGMENTING RESISTANCE TO STEMMING IN HOLES (SPARSH)	SAHARAN MANI RAM		11/Jan/2016	201611000896	
6		CHAULYA SWADES KUMAR, PRASAD GIRENDRA MOHAN, SINGH AJAY KUMAR	30/Mar/2016	06/Mar/2017	201611011071	
7.	WATER RESISTANT AMMONIUM NITRATE FUEL OIL MIXTURE FOR WATERY HOLE BLASTING AND PROCESS FOR PREPARING THE FUEL COMPOSITION	BRAJ MOHAN PAT PINGUA, MOHAMMAD NABIULLAH	27/10/15	26/10/16	3471DEL2015	

<u>2016 - 17</u>

S. NO.	NFNO	TITLE	INVENTORS	FILING	COMP FILING DATE	APPLICATION NO.	PATENT NO.
1		WATER RESISTANT AMMONIUM NITRATE FUEL OIL MIXTURE FOR WATERY HOLE BLASTING AND PROCESS FOR PREPARING THE FUEL COMPOSITION	BRAJ MOHAN PAT PINGUA, MOHAMMAD NABIULLAH	27/10/2015	25/10/2016	3471DEL2015	
2		PROCESS FOR SEQUESTRATION OF CO ₂ AND TRACES OF HYDROCARBON FROM NATURAL GAS PROCESSING INDUSTRY BY MICRO ALGAE	VETRIVEL ANGUSELVI, LAL CHAND RAM, REGINALD EBHINMASTO, PARIVESH CHUGH, RAJ KUMAR KASHYAP, RENU SINHA	26/10/2016	26/Oct/2017	201611036660	
3		A PROCESS FOR HE PREPARATION OF SLOW RELEASE POTASSIUM FERTILIZER FROM COMBUSTION WASTES OF BIOMASS BASED POWER PLANTS	MASTO REGINALD EBHIN, RAM LAL CHAND, DUTTA PASHUPATI, THAKUR SANJAY KUMAR, GEORGE JOSHY, DAS TARIT BARAN, MUKHERJEE ASHIS, ANGUSELVI VETRIVEL		01/12/2016	201611041058	

4	0244NF2016/IN	RAM SAHENDRA, SINGH RAJENDRA, KUMAR DHEERAJ, SINGH ARUN KUMAR, KUMAR ASHOK, KUMAR RAKESH, SINGH AMIT KUMAR		10/01/2017	201711001140	
5.	0009NF2017/IN	SAHARAN MANI RAM, CHAULYA SWADES KUMAR, SAURABH KUNAL, RAJPUROHIT PUSHPENDRA		01/Mar/2017	201711007179	
6		CHAULYA SWADES KUMAR, PRASAD GIRENDRA MOHAN, SINGH AJAY KUMAR	30/Mar/2016	06/Mar/2017	201611011071	

2017-18

S. NO.	NFNO	TITLE		FILING		APPLICATION NO.	GRANT DATE	PATENT NO.
1		FLEXIBLE COLD MODEL SET UP FOR DEVELOPING CHEMICAL LOOPING COMBUSTION SYSTEM	PRADIP KUMAR CHATTERJEE, MALAY KUMAR KARMAKAR, CHANCHAL LOHA, BISWAJIT CHAKRABORTY, ASHIS MUKHERJEE, PINAKI SARKAR, MANISH KUMAR, SUDIPTA DATTA, SANTI GOPAL SAHU, ASHIS KUMAR ADAK, ASHWANI KUMAR DUBEY, SUJIT KUMAR DUTTA		28/Apr/2017	201711015095		
2		PROCESS FOR SEQUESTRATION OF CO ₂ AND TRACES OF HYDROCARBON FROM NATURAL GAS PROCESSING INDUSTRY BY MICRO ALGAE	V ANGUSELVI, LC RAM, R EBHINMASTO, P CHUGH, RK KASHYAP, R SINHA		26/Oct/2017	201611036660		
3		VISION IMPROVEMENT DEVICE FOR HARSH ATMOSPHERE CAUSED BY TEMPERATURE ATTENNUATION (VIDHATA)	SK CHAULYA, G BANERJEE, PK SINGH, GM PRASAD, V KUMAR, D CHATTERJEE, R KUMAR, KUNAL SAURAV		08/03/2018	201811808681		

<u>2018-19</u>

S. NO.	NFNO	TITLE		FILING		APPLICATION NO.	PATENT NO.
1		BED GASIFICATION PILOT	PRAKASH D. CHAVAN, SUDIPTADATTA, SUJAN Saha, GajananSahu, Pashupati Dutta, Pradeep Kumar Singh			201811014119	
2		SUPPRESSION SYSTEM FOR MINING APPLICATIONS	SWADES KUMAR CHAULYA, TEJ BAHADUR SINGH, GAUTAM BANERJEE, PRADEEP KUMAR SINGH, NARESH KUMAR, VIRENDRA KUMAR, SINGH JITENDRA KUMAR, TANMOYA NEMAI GHOSH, RANJEET MANDAL, DEBASHIS CHATTERJEE		16/04/2018	201811014398	
3		A NOVEL PORTABLE DEVICE FOR PROVIDING HYDRATION IN REMOTE AREAS	PALLABI DAS, S.K. KASHYAP, G.C. MONDAL, K.K.K. SINGH, PRADEEP KUMAR SINGH		16/04/2018	201811014399	

4		COMPOSITION FOR CONTROLLING AND COMBATING HIGH	RAN VIJAY KUMAR SINGH, NIROJ KUMAR MOHALIK, RAKESH KUMAR MISHRA, DURGA DUTT TRIPATHI, AJAY KHALKHO, JITENDRA PANDEY, PRADEEP KUMAR SINGH, RAJESH HIRALAL SABDRA.	24/05/2018	201811019438	
5.	0216NF2017		CHAULYASWADES KUMAR, ROY SANJAY KUMAR, Pal Roy Pijush, Singh Pradeep Kumar, Banerjee Gautam, Singh Jitendra Kumar, Naresh Kumar, Virendra Kumar, Chatterjee Debashis, Ghosh TanmoyaNemai	26/10/2018	201811040426	
6.	0012NF2018	Control Device for Two Wheelers	SWADES KUMAR CHAULYA, GAUTAM BANERJEE PRADEEP KUMAR SINGH, NARESH KUMAR, VIRENDRA KUMAR, DEBASHIS CHATTERJEE, TANMOYA NEMAI GHOSH	26/10/2018	201811040428	
7.	0083NF2018	DIMMING DEVICE.	SWADES KUMAR CHAULYA, GAUTAM BANERJEE, PRADEEP KUMAR SINGH, GIRENDRA MOHAN PRASAD, DEBASHIS CHATTERJEE, NARESH KUMAR, VIRENDRA KUMAR, JITENDRA KUMAR SINGH, KUNAL SAURABH	26/10/2018	201811040427	
8.	0089NF2018	MANUFACTURING PROCESS USING MINE WASTES	SWADES KUMAR CHAULYA, RAJ SHEKHAR SINGH, SAILENDRA KUMAR SINGH, KRISHNA KANT KUMAR SINGH, GAUTAM BANERJEE, PRADEEP KUMAR SINGH, RANJIT KUMAR SINGH, DEBASHIS CHATTERJEE, KUNAL SAURABH, VIRENDRA KUMAR	26/10/2018	201811040429	
9.	0178NF2017		Ranjan Kumar, Niraj Kumar, Gautam Banerjee	26/10/2018	201811040691	

10.	0151NF2018	INTRINSICALLY SAFE DIGITAL	JITENDRA	KUMAR	SINGH,	17/12/2018	201811047607	
		FIIFI METER	SWADESH KUMA	,	GAUTAM			
			<i>,</i>	RADEEP KUMA	R SINGH,			
			GIRENDRA MOH	AN PRASAD,				
			ABHISHEK CHOW	VDHURY ,	NARESH			
			KUMAR, VIREND	RA KUMAR				

<u>2019-20</u>

Patent Filed in India

SL.	NF	TITLE	INVENTORS	PROVISIONAL	COMPLETE	APPLICATION	DATE OF	PATENT
No.	NUMBER			FILING DATE	FILING DATE	NUMBER	GRANT	NUMBER
1.	0056NF2019	SELF-RETRACTABLE COVER SYSTEM FOR DUMP TRUCKS	Ranjan Kumar, Ashish Narayan, Niraj Kumar, Afzal Hussain, Gautam Banerjee		02-MAY-19	201911017477		
2.	0095NF2017	A DEVICE FOR WHEEL CONTROLLED ODOURLESS AND WATERLESS SEWAGE DISCHARGE SYSTEM IN TRAINS	SUDHIR KUMAR KASHYAP, PRADEEP KUMAR SINGH		14-Jun-19	201911023586		
3.	0090NF2018	A SYSTEM AND METHOD FOR REAL-TIME MONITORING OF STRATA BEHAVIOR IN UNDERGROUND AND OPENCAST MINE	RANJAN KUMAR, DilipKumbhakar, Sujit Kumar Mandal, Jitendra Kumar Singh, SandipOraon, Gautam Banerjee		15-Nov-19	201911046581		
4.	0173NF2019	A COMPOSITION AND METHOD FOR PREPARATION THEREOF FOR SUPPRESSION OF DUST GENERATED IN BLASTING OPERATIONS	Firoj Ali, Braj Mohan Pat Pingua, Pradeep Kumar Singh		03-Jan-20	202011000277		

<u>2020-21</u>

SNO	NFNO	TITLE	INVENTORS	COMP. Filing Date	APPLICATION NO.	Patent No.
1		PREPARATION OF BIO- METHANE AND VALUE	VETRIVELANGUSELVI, ASHISH MUKHERJEE, Ashok Kumar Singh, Pradeep Kumar Singh, Reginald EbhinMasto, Piyush Srivastava, Rajiv Satyakam, Pranay, Satya Prakash	 17/Jun/2020	202011025412	
2		FOR REAL TIME	KUMBHAKARDILIP, BANERJEE GAUTAM, MANDAL Sujit Kumar, YadavaKeshar Prasad, Chatterjee Aditi, MahatoPrem Chand	 29/Jun/2020	202011027504	
3	0002NF2020/IN	THINGS	CHAULYASWADES KUMAR, PRASAD GIRENDRA Mohan, Mandal Sujit Kumar, Banerjee Gautam, Singh Pradeep Kumar, Chowdhury Abhishek, Preity, Naresh Kumar, Virendra Kumar, Singh Jitendra Kumar, Chandan Kumar, PanditDewangshu, MitraMitrabarun, Mishra ShyamSundar, KhusbhuKumari, Mishra Richa, KunalSaurabh, DeyPrasanjit, Md. Nadim, Saw Gopaljee	10/Jul/2020	202011029344	
4		GRAPHITIZATION OF HEAT ALTERED COAL WASTE IN THE FORM OF NATURAL COKE	Ashok Kumar Singh, Pradeep Kumar Singh	 15/Jul/2020	202011030084	

5	0006NF2020/IN	ENVIRONMENT MONITORING SYSTEM	CHAULYASWADES KUMAR, PRASAD GIRENDER Mohan, Mandal Sujit Kumar, Banerjee Gautam, Singh Pradeep Kumar, ChandanKumar, Md. Nadeem, PanditDewangshu, Mishra Richa			202011037361	
6		COMPLETE CARBONIZATION OF VOLATILE MATTER	MANISH KUMAR, GAUTAM KUMAR BAYEN, MONALISA GANGOPADHYAY, RAJIV RANJAN, TARUN PRAMANIK, ASHISH MUKHARJEE, PRADEEP KUMAR SINGH		31/Aug/2020	202011037374	
7			MORE RAMULU, PARTHO BISWAPATI CHOUDHURY, PRADEEP KUMAR SINGH		15/Ост/2020	202011045348	
8		DETERMINATION OF EQUILIBRATED MOISTURE	Ashok Kumar Singh, Sanjay kumar Thakur, Pradeep Kumar Singh, Arnold LuwangUsham, Prabal Boral, BodhisatwaHazra, Sujan Saha		19/Ост/2020	202011045585	
9			THONANGIGOURICHARAN, SUBHASH CHANDRA Maji, Pradeep Kumar Singh	11/Jan/2021		202111001135	
10				11/JAN/2021		202111001133	
11	0031NF2021/IN				31/Mar/2021	202111014942	