

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1837

October 5, 2004
Project No. CT001

	<u>Class</u>	<u>Subclass</u>	<u>Art Unit</u>	<u>Ex'r Search Room No.</u>
Abolished:	588	200-248	1754	None
Established:	588	249.5, 299-321, 400-415	1754	None

The following classes are impacted by this project:

Class(es): 34, 48, 53, 60, 65, 75, 86, 95, 110, 123, 126, 134, 149, 156, 162, 201, 202, 203, 204, 206, 208, 209, 210, 216, 260, 266, 405, 422, 423, 425, 427, 428, 431, 501, 540, 544, 546, 552, 556, 558, 560, 562, 564, 568, 570, 585

This order includes the following:

- A. CLASSIFICATION MANUAL CHANGES
- B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED
AND DISPOSITION OF ABOLISHED PAGES
- C. CHANGES TO THE U.S. – I.P.C. CONCORDANCE
- D. DEFINITION CHANGES

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Project Leader(s):	John Leonard
Project Classifier(s):	William Wright
Examiner(s):	William Wright
Editor:	Elma La Touche
Editorial Assistant:	Patty Randolph

CLASS 588 HAZARDOUS OR TOXIC WASTE DESTRUCTION OR CONTAINMENT

OCTOBER 2004

1	DESTRUCTION OR CONTAINMENT OF RADIOACTIVE WASTE	* 315	..By chemical fixing the harmful substance, e.g., by chelation or complexation (EPO/JPO)
2	.By fixation in stable solid media		
3	..Cement, concrete, or hydraulic setting	* 316	..Dehalogenation using reactive chemical agents able to degrade
4	...With additional solid material to enhance fixation of radioactivity		(dehalogenation in molten chemical reagent 314) (EPO/JPO)
5	..Bituminous		
6	..Resin or polymer; e.g., cellulose, polyethylene	* 317 * 318	..By hydrolysis (EPO/JPO) ..Detoxification by using acid or alkaline reagents (EPO/JPO)
7	...Ion exchange resin		
8	...Polymer derived from ethylenically unsaturated monomer	* 319	..By reduction, e.g., hydrogenation (EPO/JPO)
9	..Clay or claylike	* 320	..By oxidation; by combustion (EPO/JPO)
10	..Ceramic or ceramiclike	* 321	..By heating to effect chemical change. e.g., pyrolysis (EPO/JPO)
11	...Glass, glasslike, vitreous		
12	...Boron containing	* 400	..Harmful chemical substances made harmless, or less harmful, by effecting chemical change (EPO/JPO)
13	..Ion exchange material		
14	..Silicon containing	* 401	..Chemical warfare substances, e.g., cholinesterase inhibitor (EPO/JPO)
15	..Metal containing		
16	..Surrounding with specified material or structure	* 402	..Pesticides, e.g., insecticides, herbicides, fungicides, nematicides (EPO/JPO)
17	..Geological or extraterrestrial		
18	..Chemical conversion to a stable solid for disposal	* 403	..Explosives, propellants or pyrotechnics, e.g., rocket fuel, napalm (EPO/JPO)
19	..Incineration, calcination, pyrolyzing to obtain solid residue	* 404	..Toxic combustion residues, e.g., toxic substances contained in fly ash from waste incineration
20	..Treating radioactive liquid		
* 299	GERM WARFARE AGENTS DESTROYED		
* 300	PROCESSES FOR MAKING HARMFUL CHEMICAL SUBSTANCES HARMLESS, OR LESS HARMFUL, BY EFFECTING A CHEMICAL CHANGE IN THE SUBSTANCES (EPO/ JPO)	* 405 * 406 * 407 * 408	..Organic substances (EPO/JPO) ...Containing halogen (EPO/JPO) ...Containing heavy metals (EPO) ...Containing nitrogen or phosphorus (EPO/JPO)
	NOTE: WHEN CLASSIFYING IN SUBCLASSES 300-321, CLASSIFICATION IS ALSO MADE IN SUBCLASSES 400-415 TO IDENTIFY THE HAZ- ARDOUS SUBSTANCE.	* 409	...Containing oxygen, sulfur, selenium or tellurium, i.e., chalcogen (EPO/JPO)
		* 410	..Inorganic substances (EPO/JPO)
* 301	.By subjecting to electric or wave energy or particle or ionizing radiation (EPO/ JPO)	* 411	...Inorganic fibers, e.g., asbestos (EPO/JPO)
* 302	..Electrochemical processes, e.g., electrodialysis (EPO/JPO)	* 412	...Containing heavy metals, in the bonded or free state (EPO/JPO)
* 303	...Electrolytic degradation or conversion (EPO/JPO)	* 413	...Containing nitrogen phosphorus (EPO/JPO)
* 304	..Sonic energy (EPO/JPO)	* 414	...Containing oxygen, sulfur, selenium or tellurium, i.e., chalcogen (EPO/JPO)
* 305	..Particle radiation, e.g., electron beam radiation (EPO/JPO)	* 415	..Containing halogen (EPO/JPO)
* 306	..Electromagnetic radiation, e.g., laser (EPO/ JPO)	249	CONTAINMENT
* 307	...Gamma rays (about 0.003nm-0.03nm) (EPO/JPO)	* 249.5 250	.Chemical or germ warfare agents .Geologic marine or extraterrestrial storage and containment (e.g., tetonic, volcanic, deep natural, manmade earth cavity, submarine placement sites, lunar, earth orbital, and solar placement)
* 308	...X-rays (about 0.03nm-3nm) (EPO/JPO)		
* 309	...Ultraviolet radiations (about 3nm-400nm) (EPO/JPO)		
* 310	...Microwave radiations (about 0.3cm-30cm) (EPO/ JPO)	251	..Treating a solid (e.g., clay, slag, spent sorbent, active carbon, etc.) to prevent gas emissions
* 311	..Plasma (EPO/JPO)		
* 312	.By hydrolysis or destructive steam gasification, e.g., using water and heat to effect chemical change (EPO/JPO)		
* 313	.By reacting with chemical agents (EPO/JPO)		
* 314	..By treatment in molten chemical reagent, e.g., salts or metals (EPO/JPO)		

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

CONTAINMENT

- 252 .Solidification, vitrification, or cementation
- 253 ..In situ vitrification
- 254 ..Contains asbestos
- 255 ..Polymer or resin containing (e.g., foam, etc.)
- 256 ..Waste contains heavy metal (e.g., fly, ash, flue dust, and incinerator ash)
- 257 ...And confined in a cement type material (e.g., concrete)
- 258 .Storage to contain pathogenic organisms (e.g., virus, bacteria, and medical waste)
- 259 .Secondary containment
- 260 .With sensing, detecting, or monitoring

MISCELLANEOUS

 CROSS-REFERENCE ART COLLECTIONS

900 APPARATUS

901 COMPOSITIONS

 FOREIGN ART COLLECTION

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
106/38.27	1	588/201	44
110/234	1	588/208	7
110/346	1	588/201	44
	1	588/209	29
122/446	1	588/228	33
134/26	1	588/205	70
149/108.2	1	588/203	22
149/108.8	1	588/203	22
149/109.6	1	588/202	31
	1	588/203	22
162/31	1	588/241	1
166/267	2	588/228	33
203/37	1	588/228	33
203/50	1	588/209	29
203/87	1	588/228	33
204/157.3	1	588/204	37
	1	588/212	9
	1	588/227	25
	3	588/210	18
204/157.4	1	588/237	16
204/158.2	1	588/212	9
204/164	1	588/204	37
204/174	1	588/219	3
204/528	1	588/243	2

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
205/638	1	588/222	3
205/695	1	588/219	3
205/702	1	588/223	3
205/742	2	588/237	16
205/744	1	588/222	3
205/746	1	588/247	5
205/760	1	588/237	16
205/770	1	588/204	37
205/98	1	588/231	7
208/179	1	588/234	5
209/3	1	588/244	4
209/38	1	588/232	3
210/170	1	588/205	70
210/670	1	588/248	10
210/712	1	588/236	22
210/747	1	588/228	33
210/748	1	588/204	37
	1	588/225	3
	1	588/227	25
210/750	1	588/205	70

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
210/758	1	588/205	70
	1	588/228	33
210/759	1	588/206	29
210/808	1	588/202	31
252/186.41	1	588/200	41
252/372	1	588/200	41
373/30	1	588/201	44
404/17	1	588/242	8
405/128.45	1	588/227	25
405/128.5	1	588/204	37
	1	588/205	70
	1	588/206	29
405/128.55	1	588/227	25
405/128.7	1	588/228	33
422/186	1	588/212	9
422/22	1	588/227	25
423/12	1	588/205	70
	4	588/215	4
423/130	1	588/202	31
423/150.3	1	588/236	22
423/179.5	1	588/201	44
423/210	1	588/236	22
423/210.5	1	588/201	44

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
423/219	1	588/202	31
	1	588/207	38
	2	588/205	70
423/220	1	588/213	16
423/236	1	588/246	13
423/240 R	1	588/205	70
	1	588/248	10
	2	588/206	29
423/240 S	1	588/207	38
423/437.1	1	588/201	44
423/481	1	588/201	44
	1	588/228	33
	1	588/237	16
423/522	1	588/201	44
423/53	1	588/228	33
423/531	1	588/218	15
	1	588/239	1
	2	588/217	4
423/532	1	588/218	15
423/562	1	588/246	13
435/262.5	1	588/200	41

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
435/262.5	1	588/202	31
	1	588/203	22
	1	588/205	70
	1	588/207	38
	1	588/231	7
	2	588/206	29
	2	588/244	4
435/4	1	588/205	70
44/589	1	588/226	5
507/140	1	588/228	33
562/593	1	588/218	15
568/700	1	588/218	15
568/755	2	588/207	38
588/18	1	588/201	44
	1	588/204	37
588/2	1	588/236	22
588/20	1	588/204	37
588/249	1	588/212	9
588/249.5	1	588/200	41
588/256	1	588/242	8
588/299	1	588/203	22

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
588/302	1	588/202	31
	1	588/206	29
	1	588/222	3
	1	588/243	2
	1	588/247	5
	2	588/237	16
	6	588/204	37
588/303	1	588/212	9
	1	588/219	3
	1	588/223	3
	1	588/245	4
	2	588/247	5
	3	588/210	18
	3	588/237	16
588/304	15	588/204	37
	1	588/205	70
	1	588/209	29
588/305	1	588/237	16
	1	588/210	18
	1	588/212	9
588/306	1	588/227	25
	1	588/200	41
	1	588/210	18

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588/306	1	588/227	25
	2	588/204	37
588/307	1	588/200	41
588/309	1	588/202	31
	1	588/203	22
	1	588/209	29
	2	588/204	37
	2	588/210	18
	2	588/225	3
	7	588/227	25
588/310	1	588/210	18
	1	588/227	25
	1	588/237	16
	1	588/238	4
	2	588/212	9
	3	588/205	70
	588/311	1	588/201
1		588/212	9
1		588/237	16
2		588/200	41
2		588/209	29
2		588/210	18
7		588/227	25

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
588/312	1	588/205	70
	1	588/210	18
	3	588/200	41
588/313	1	588/202	31
	1	588/203	22
	1	588/231	7
	1	588/242	8
	1	588/248	10
	3	588/236	22
	4	588/207	38
588/314	5	588/200	41
	1	588/200	41
	1	588/202	31
	1	588/209	29
	1	588/234	5
	1	588/244	4
588/315	30	588/201	44
	1	588/200	41
	1	588/205	70
	1	588/218	15
588/315	1	588/236	22
	1	588/248	10
	2	588/207	38

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
588/316	1	588/201	44
	1	588/202	31
	1	588/214	4
	1	588/231	7
	1	588/236	22
	2	588/228	33
	2	588/248	10
	3	588/208	7
	4	588/200	41
	5	588/213	16
	10	588/209	29
	16	588/206	29
	17	588/207	38
	27	588/205	70
588/317	1	588/201	44
	1	588/202	31
	1	588/203	22
	1	588/205	70
	1	588/206	29
	1	588/207	38
	1	588/208	7
	1	588/209	29
	1	588/224	4
	1	588/236	22

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
	1	588/242	8
	1	588/246	13
	2	588/226	5
	3	588/200	41
588/318	1	588/206	29
	1	588/213	16
	1	588/220	4
	1	588/223	3
	1	588/224	4
	1	588/228	33
	1	588/230	10
	1	588/231	7
	1	588/234	5
	1	588/238	4
	2	588/218	15
	3	588/202	31
	3	588/203	22
	3	588/207	38
588/318	3	588/242	8
	3	588/246	13
	3	588/248	10
	4	588/216	10
	5	588/200	41
	5	588/205	70

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	8	588/236	22
588/319	1	588/205	70
	1	588/209	29
	1	588/218	15
	1	588/224	4
	1	588/232	3
	1	588/234	5
	1	588/236	22
	1	588/238	4
	2	588/202	31
	2	588/206	29
	2	588/207	38
	3	588/203	22
588/320	1	588/204	37
	1	588/206	29
	1	588/208	7
	1	588/210	18
	1	588/211	3
	1	588/220	4
	1	588/221	1
	1	588/226	5
	1	588/227	25
	1	588/229	2
	1	588/235	2

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New Classification -----	Number Of ORs -----	Source Classification -----	Number of ORs -----
	1	588/236	22
	1	588/240	2
	2	588/207	38
	2	588/216	10
	2	588/217	4
	3	588/200	41
	3	588/213	16
	3	588/214	4
	3	588/218	15
	3	588/230	10
	3	588/245	4
	5	588/203	22
	5	588/246	13
	8	588/209	29
588/320	10	588/202	31
	10	588/228	33
	11	588/205	70
588/321	1	588/207	38
	1	588/216	10
	1	588/226	5
	1	588/230	10
	2	588/213	16
588/405	1	588/237	16
588/409	3	588/200	41

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588/413	1	588/218	15
65/19	1	588/238	4
71/1	1	588/202	31
71/32	1	588/246	13
75/670	1	588/234	5
75/706	1	588/231	7
95/228	1	588/209	29

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Source Classification	Number of ORs	New Classification	Number of ORs
588/200	41	252/372	1
		252/186.41	1
		435/262.5	1
		588/306	1
		588/307	1
		588/311	2
		588/312	3
		588/313	5
		588/314	1
		588/315	1
		588/316	4
		588/317	3
		588/318	5
		588/320	3
		588/409	3
588/249.5	1		
588/201	44	106/38.27	1
		110/346	1
		373/30	1
		423/481	1
		423/522	1
		423/179.5	1
		423/210.5	1
423/437.1	1		

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Source Classification	Number of ORs	New Classification	Number of ORs
		588/18	1
		588/311	1
		588/314	30
		588/316	1
		588/317	1
588/202	31	71/1	1
		149/109.6	1
		210/808	1
		423/130	1
		423/219	1
		435/262.5	1
		588/302	1
		588/309	1
		588/313	1
		588/314	1
		588/316	1
		588/317	1
		588/318	3
		588/319	2
		588/320	10
588/203	22	149/108.2	1
		149/108.8	1
588/203	22	149/109.6	1
		435/262.5	1
		588/299	1

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Source Classification	Number of ORs	New Classification	Number of ORs
		588/309	1
		588/313	1
		588/317	1
		588/318	3
		588/319	3
		588/320	5
588/204	37	204/164	1
		204/157.3	1
		205/770	1
		210/748	1
		405/128.5	1
		588/18	1
		588/20	1
		588/302	6
		588/303	15
		588/306	2
		588/309	2
		588/320	1
588/205	70	134/26	1
		210/170	1
		210/750	1
		210/758	1
		405/128.5	1
		423/12	1
		423/219	2

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Source Classification	Number of ORs	New Classification	Number of ORs
		423/240 R	1
		435/4	1
		435/262.5	1
		588/304	1
		588/310	3
		588/312	1
		588/315	1
		588/316	27
		588/317	1
		588/318	5
		588/319	1
		588/320	11
588/206	29	210/759	1
		405/128.5	1
		423/240 R	2
		435/262.5	2
		588/302	1
		588/316	16
588/206	29	588/317	1
		588/318	1
		588/319	2
		588/320	1
588/207	38	423/219	1
		423/240 S	1
		435/262.5	1

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Source Classification	Number of ORs	New Classification	Number of ORs
		568/755	2
		588/313	4
		588/315	2
		588/316	17
		588/317	1
		588/318	3
		588/319	2
		588/320	2
		588/321	1
588/208	7	110/234	1
		588/316	3
		588/317	1
		588/320	1
588/209	29	95/228	1
		110/346	1
		203/50	1
		588/304	1
		588/309	1
		588/311	2
		588/314	1
		588/316	10
		588/317	1
		588/319	1
		588/320	8
588/210	18	204/157.3	3

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Source Classification	Number of ORs	New Classification	Number of ORs
		588/303	3
		588/305	1
		588/306	1
		588/309	2
		588/310	1
		588/311	2
		588/312	1
		588/320	1
588/211	3	588/320	1
588/212	9	204/157.3	1
		204/158.2	1
		422/186	1
		588/249	1
		588/303	1

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Source Classification	Number of ORs	New Classification	Number of ORs
588/212	9	588/305	1
		588/310	2
		588/311	1
588/213	16	423/220	1
		588/316	5
		588/318	1
		588/320	3
		588/321	2
588/214	4	588/316	1
		588/320	3
588/215	4	423/12	4
588/216	10	588/318	4
		588/320	2
		588/321	1
588/217	4	423/531	2
		588/320	2
588/218	15	423/531	1
		423/532	1
		562/593	1
		568/700	1
		588/315	1
		588/318	2
		588/319	1
		588/320	3

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Source Classification	Number of ORs	New Classification	Number of ORs
		588/413	1
588/219	3	204/174	1
		205/695	1
		588/303	1
588/220	4	588/318	1
		588/320	1
588/221	1	588/320	1
588/222	3	205/638	1
		205/744	1
		588/302	1
588/223	3	205/702	1
		588/303	1
		588/318	1
588/224	4	588/317	1
		588/318	1
		588/319	1
588/225	3	210/748	1
		588/309	2
588/226	5	44/589	1
		588/317	2
		588/320	1
		588/321	1
588/227	25	204/157.3	1
		210/748	1
		405/128.45	1

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Source Classification	Number of ORs	New Classification	Number of ORs
		405/128.55	1
		422/22	1
		588/305	1
		588/306	1
		588/309	7
		588/310	1
		588/311	7
		588/320	1
588/228	33	122/446	1
		166/267	2
		203/37	1
		203/87	1
		210/747	1
		210/758	1
		405/128.7	1
		423/53	1
		423/481	1
		507/140	1
		588/316	2
		588/318	1
		588/320	10
588/229	2	588/320	1
588/230	10	588/318	1
		588/320	3
		588/321	1

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Source Classification	Number of ORs	New Classification	Number of ORs
588/231	7	75/706	1
		205/98	1
		435/262.5	1
		588/313	1
		588/316	1
		588/318	1
		588/232	3
588/232	3	588/319	1
		588/234	5
588/234	5	208/179	1
		588/314	1
		588/318	1
		588/319	1
		588/235	2
588/236	22	210/712	1
		423/210	1
		423/150.3	1
		588/2	1
588/236	22	588/313	3
		588/315	1
		588/316	1
		588/317	1
		588/318	8
		588/319	1
		588/320	1

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Source Classification	Number of ORs	New Classification	Number of ORs
588/237	16	204/157.4	1
		205/742	2
		205/760	1
		423/481	1
		588/302	2
		588/303	3
		588/304	1
		588/310	1
		588/311	1
		588/405	1
588/238	4	65/19	1
		588/310	1
		588/318	1
		588/319	1
588/239	1	423/531	1
588/240	2	588/320	1
588/241	1	162/31	1
588/242	8	404/17	1
		588/256	1
		588/313	1
		588/317	1
		588/318	3
588/243	2	204/528	1
		588/302	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS
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Source Classification	Number of ORs	New Classification	Number of ORs
588/244	4	209/3	1
		435/262.5	2
		588/314	1
588/245	4	588/303	1
		588/320	3
		588/246	13
588/246	13	423/236	1
		423/562	1
		588/317	1
		588/318	3
		588/320	5
		588/247	5
588/247	5	588/302	1
		588/303	2
		588/248	10
588/248	10	423/240 R	1
		588/313	1
		588/315	1
		588/316	2
		588/318	3

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C. CHANGES TO THE U.S. - I.P.C. CONCORDANCE

<u>Class</u>	<u>U.S.</u>		<u>I.P.C.</u>		<u>Class</u>	<u>U.S.</u>		<u>I.P.C.</u>	
	<u>Subclass</u>	<u>Subclass</u>	<u>Notation</u>	<u>Subclass</u>		<u>Subclass</u>	<u>Subclass</u>	<u>Notation</u>	
588	1	G21F	9/00		255	B09B	3/00		
	2-15	G21F	9/16		256	A62D	3/00		
	16	G21F	1/00			B09B	3/00		
	17	G21F	9/00		257	A62D	3/00		
			9/24			B09B	3/00		
	18-19	G21F	9/14			C04B	18/04		
	20	G21F	9/20		258	B09B	5/00		
	249	B09B	1/00		259	B09B	5/00		
			3/00			B65D	90/24		
			5/00				90/50		
	249.5	B09B	1/00			E02D	31/00		
	250	B09B	1/00		260	E02D	31/00		
			3/00		261	C02F	1/30		
	251	C21B	3/06				1/32		
	252	B09B	3/00				1/36		
		C02F	11/00				1/46		
		C03B	5/00				1/461		
			5/027				1/70		
	253	C03B	5/00				1/72		
		E02D	3/11			F23C	1/00		
		H05B	3/00			F23G	5/00		
	254	A62D	3/00		299	A62D	3/00		
		B09B	3/00		300-415	A62D	3/00		
		C04B	18/02						

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C. CHANGES TO THE U.S. - I.P.C. CONCORDANCE

<u>Class</u>	<u>U.S.</u> <u>Subclass</u>	<u>I.P.C.</u> <u>Subclass</u>	<u>I.P.C.</u> <u>Notation</u>	<u>Class</u>	<u>U.S.</u> <u>Subclass</u>	<u>I.P.C.</u> <u>Subclass</u>	<u>I.P.C.</u> <u>Notation</u>
588	900	A62D	3/00			F23C	1/00
		B09B	3/00			F23G	5/00
			5/00				7/00
		C02F	11/06	901	A62D		3/00
			11/08			B09B	3/00
			11/10			C02F	11/00
			11/18				
		C03B	5/00				
		C10B	53/00				

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 34 – DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS

Section II: In Section II, Lines With Other Classes and Within This Class, under Notes to Lines With Other Classes, (2) Note:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, this is the generic class for permanently containing any form of hazardous or toxic waste, or for chemically destroying non-gaseous hazardous or toxic waste (i.e., too hazardous or toxic to be placed in an ordinary municipal landfill).

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 48 - GAS: HEATING AND ILLUMINATING

Section II: In Section II, Lines With Other Classes and Within This Class:

Delete:

This class does not provide for the destruction of gaseous hazardous or toxic waste. See Class 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 208, 213, 226, 233, and 239 wherein the use of hydrolysis or destructive steam gasification is used. For the use of heat or vacuum to drive off or produce a volatile substance, see Class 588, subclasses 209, 213, 216, 220, 228, 234, 240, and 245. Also, see Class 588, subclasses 218, 221, 224, 236, 242, and 246 for the use of chemical agents in the destruction or containment of hazardous or toxic waste.

Insert:

This class does not provide for the destruction of gaseous hazardous or toxic waste. See Class 423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for the chemical destruction of gaseous hazardous or toxic waste. Note that subclasses 245.1-245.3 provide for an organic component.

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire references to Class 423 and Class 588.

Insert:

423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for the chemical destruction of gaseous hazardous or toxic waste, and subclasses 237+ and 352+ for processes of purifying or producing ammonia involving a chemical reaction.

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for the containment of a hazardous or toxic gas.

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Subclass 197: Under See or Search Class:

Insert:

423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for the chemical destruction of gaseous hazardous or toxic waste. Note that subclasses 245.1-245.3 provide for an organic component.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 53 – PACKAGE MAKING

Section IV: In Section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, this is the generic class for chemically destroying or permanently containing any form of hazardous or toxic waste. The containment methods include packaging, binding, an immobilization of hazardous or toxic waste for the sole intent of permanently containing the waste. (See “A. Packaging And Binding Elsewhere Classified” above).

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 60 – POWER PLANTS

Section II: In Section II, Lines With Other Classes and Within This Class:

Delete:

Combustion product generators in which hazardous or toxic waste is used as the fuel to produce useful work. See Class 588 for the processes of destruction or containment of hazardous or toxic waste.

Insert:

Combustion product generators in which hazardous or toxic waste is used as the fuel to produce useful work. See Class 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the processes of chemical destruction or containment of hazardous or toxic waste.

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 for the destruction of hazardous or toxic waste by combustion in a power plant. Class 60 takes the use of hazardous or toxic waste as a useful fuel for power production.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 65 – GLASS MANUFACTURING

Subclass 17.1: In subclass 17.1, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 251, 252-257, and 313-320 for the solidification or vitrification of waste for purposes of containment and for the treatment of slag to prevent the emission of hazardous or toxic gases.

Subclass 134.1: In subclass 134.1, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 251, 252-257 and 313-320 for the solidification or vitrification of waste for purposes of containment and for the treatment of slag to prevent the emission of hazardous or toxic gases.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 75 – SPECIALIZED METALLURGICAL PROCESSES, COMPOSITIONS FOR USE THEREIN, CONSOLIDATED METAL POWDER COMPOSITIONS, AND LOOSE METAL PARTICULATE MIXTURES

Section I: In Section I, Lines With Other Classes and Within This Class, under C. LIST OF PROCESS CLASSES:

Delete:

588, Hazardous or Toxic Waste Destruction or Containment.

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 for the use of metals (molten or otherwise) in the destruction or containment of hazardous or toxic waste. (Process class).

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 86 – AMMUNITION AND EXPLOSIVE- CHARGE MAKING

Section IV: In Section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 403 for the chemical destruction of explosives, propellants, or pyrotechnics, and the chemical destruction of bombs other than by detonation.

Subclass 50: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 403 for the chemical destruction of explosives, and the chemical destruction of bombs other than by detonation.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 95 – GAS SEPARATION: PROCESSES

Section II: In Section II, Lines With Other Classes and Within This Class:

Delete:

The gas separation processes for this class generally involve the use of physical chemistry, chromatography, solid sorption, gas and liquid contact, gas contact, electrical fields, magnetic fields, wave energy, selective diffusion, filtration, deflection, or other mechanical means. See the class search note in section III for Class 423, Chemistry of Inorganic Compounds, for the line concerning the processes in which the gas separation is caused by a chemical reaction. Also, see the class search note in section III for Class 588, Hazardous or Toxic Waste Destruction or Containment, for the line concerning the processes in which the gas separation is caused by destruction or permanent containment of the hazardous or toxic waste.

Insert:

The gas separation processes for this class generally involve the use of physical chemistry, chromatography, solid sorption, gas and liquid contact, gas contact, electrical fields, magnetic fields, wave energy, selective diffusion, filtration, deflection, or other mechanical means. See the class search note in section III for Class 423, Chemistry of Inorganic Compounds, for the line concerning the processes in which the gas separation is caused by a chemical reaction. Also, see the class search note in section III for Class 588, Hazardous or Toxic Waste Destruction or Containment, for the line concerning the processes in which the gas separation is caused by destruction of the hazardous or toxic waste.

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, for non-gaseous hazardous or toxic waste destruction by any chemical means, including heating, chemical agents, or the interaction with any form of radiation to cause a chemical change which results in an environmentally safe substance. Class 588 provides for the destruction

of gaseous chemical warfare agents, and includes gas separation when it is incidental to the destruction of non-gaseous hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 110 – FURNACES

Section IV: In Section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 for the process of burning hazardous or toxic waste. Additionally, see cross-reference art collection, subclass 900, for the apparatus used in the treating of hazardous and toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 123 – INTERNAL-COMBUSTION ENGINES

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 wherein the waste is destroyed by burning it in an internal - combustion engine. Also, see cross-reference art collection, subclass 900, for apparatus used to treat hazardous or toxic waste.

Subclass 1: In subclass 1, under the subclass definition:

Delete:

(2) Note. The use of unconventional fuels as found in this subclass are commonly hazardous and toxic waste and their destruction or containment is found in Class 588, Hazardous or Toxic Waste Destruction or Containment.

Insert:

(2) Note. The use of unconventional fuels as found in this subclass are commonly hazardous and toxic waste and their chemical destruction or containment is found in Class 588, Hazardous or Toxic Waste Destruction or Containment.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 126 – STOVES AND FURNACES

Section II: In Section II, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 for processes wherein toxic or hazardous waste is burned in a stove or furnace. See cross-reference art collection, subclass 900, for apparatus useful in the destruction of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 134 – CLEANING AND LIQUID CONTACT WITH SOLIDS

Subclass 1: Under the subclass definition:

Delete:

- (2) Note. The use of electric, wave, or radiant energy to destroy hazardous or toxic waste is found in Class 588, appropriate subclasses.

Insert:

- (2) Note. The use of electric, wave, or radiant energy to destroy hazardous or toxic waste is found in Class 588, subclasses 301-311.

Subclass 21: Under the subclass definition:

Delete:

- (4) Note. The use of a vacuum to destroy hazardous or toxic waste is found in Class 588, appropriate subclasses.

Under See or Search Class:

Insert:

- 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for processes to chemically destroy hazardous or toxic waste which may include use of a vacuum.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 149 – EXPLOSIVE AND THERMIC COMPOSITIONS OR CHARGES

Section III: In section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 403 for the destruction of explosives, propellants, and pyrotechnics.

Subclass 124: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for processes to make chemical substances harmless by effecting a chemical change in the substance, and subclass 403 for the destruction of explosives, propellants, and pyrotechnics.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 156 – ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE

Section IV In section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction or containment of hazardous or toxic waste. (See “C. Chemical Manufactures” above).

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 162 – PAPER MAKING AND FIBER LIBERATION

Subclass 29: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction of hazardous digestion or treating fluid chemicals, per se.

Subclass 51: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for chemically removing, modifying or destroying a component of normally gaseous mixture containing hazardous or toxic waste

Subclass 153: Under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 411 for the chemical destruction of asbestos, and subclass 154 for the permanent containment of asbestos.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 201 – DISTILLATION: PROCESSES, THERMOLYTIC

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 312 and 313-320 for the use of process distillation and thermolytic processes to destroy hazardous waste.

Subclass 10: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 314 and 321 for the use of preheated inert disparate solid or preheated liquid to destroy hazardous waste.

Subclass 13: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-321 for the use of a carbonization product as an indirect heat source to destroy hazardous or toxic waste.

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Subclass 19: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 302-303 for the use of electrical energy in the destruction of hazardous or toxic waste.

Subclass 20: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 for using an added substance to destroy hazardous or toxic waste.

Subclass 27: Under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-320 for the burning of the vaporized product.

Subclass 35: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 321 for carbonizing, which may include treating under pressure or a vacuum to destroy hazardous or toxic waste.

Subclass 36: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 312 and 313-320 for the use of gaseous material in a process for destroying hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 202 – DISTILLATION: APPARATUS

Section II: Under Section II, Lines With Other Classes and Within This Class, (B)
Distillation Apparatus:

Delete:

(8) Class 588, Hazardous or Toxic Waste Destruction or Containment, is noted at appropriate subclasses for the use of apparatus in the destruction of hazardous or toxic waste

Insert:

(8) Class 588, Hazardous or Toxic Waste Destruction or Containment, a process class, subclass 900 for a cross-reference art collection of apparatus used in the destruction of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 203 – DISTILLATION: PROCESSES, SEPARATORY

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-320 for distillation process in the chemical destruction of hazardous or toxic waste.

Subclass 28: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-320 for the use of a chemical reaction with distillation as part of a process of the destruction of hazardous or toxic waste.

Subclass 91: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for the use of heat or vacuum in the destruction of hazardous or toxic waste.

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Subclass 95: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 312
wherein the use of water or steam is used in the destruction of
hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 204 – CHEMISTRY: ELECTRICAL AND WAVE ENERGY

Section IV: In Section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588 Hazardous or Toxic Waste Destruction or Containment, for chemical destruction of hazardous or toxic waste by using electrical wave energy, especially subclasses 302 and 303 for electrolytic or electro-dialytic degradation.

Subclass 155: Under See or Search Class:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 301 for the use of electrical energy magnetic force in the chemical destruction of hazardous or toxic waste.

Subclass 157.15: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 301-310 for the use of wave energy in the chemical destruction of hazardous or toxic waste.

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Subclass 164: Under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses
301-303 for the use of electrostatic field or electrical discharges in the
chemical destruction of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 206 – SPECIAL RECEPTACLE OR PACKAGE

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses
249-260 for containment or storage of hazardous or toxic waste.

Subclass 528: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses
249+ for the containment of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 208 – MINERAL OILS: PROCESSES AND PRODUCTS

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses wherein mineral oils are treated with hazardous or toxic waste or they are the hazardous or toxic waste being destroyed or contained. (Processes of treating mineral oil).

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-321 and 405-415 wherein mineral are the hazardous or toxic waste being destroyed or contained. (Processes of treating mineral oil).

Subclass 2: Under See or Search Class:

Delete:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the destruction or containment of phenolic or toxic oil waste.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-321, 405-415 and 249-260 for the destruction or containment of phenolic or toxic oil waste.

Subclass 13: Under See or Search Class:

Delete:

The entire reference to Class 588..

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-321 and 405-415 for the destruction of hazardous or toxic waste refining sludge.

Subclass 177: Under See or Search Class:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 313-321 and 406 for the destruction of hazardous or toxic waste in the form of refined hydrocarbons.

Subclass 308: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 405 for the destruction or containment of hazardous or toxic waste in the form of fractionated hydrocarbons.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 209 – CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS

Section IV: In Section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for chemically destroying or containing hazardous or toxic waste.

Subclass 212: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300 for chemically destroying hazardous or toxic waste, which may additionally include the use of magnetic force.

Subclass 213: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 300 for chemically destroying hazardous or toxic waste, which may additionally include the use of magnetic force.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 210 – LIQUID PURIFICATION OR SEPARATION

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260, for the chemical destruction or containment of hazardous or toxic waste. Class 210 provides for the purification of water (liquids) as useful product even though hazardous or toxic waste may be removed from or destroyed in the water (liquids).

Subclass 601: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 158 for the containment of hazardous or toxic micro-organisms.

Subclass 632: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for the containment of hazardous or toxic micro-organisms.

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Subclass 668: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the destruction or containment of hazardous or toxic waste by way or chemically modifying or inhibiting dispersed constituent(s). Class 210 provides for the purification of water (liquids) as useful product even though hazardous or toxic waste may be removed from or destroyed in the water (liquids).

Subclass 749: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the destruction of hazardous or toxic waste by way of chemical treatment. Class 210 provides for the purification of water (liquids) as useful product even though hazardous or toxic waste may be removed from or destroyed in the water (liquids).

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 216 – ETCHING A SUBSTRATE: PROCESSES

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction or containment of hazardous or toxic etching waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 260 – ETCHING A SUBSTRATE: PROCESSES

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction or containment of hazardous or toxic waste that contains an organic carbon compound.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 266 – METALLURGICAL APPARATUS

Section III: In Section III, References to Other Classes, under See or Search Class:

Insert:

- 423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for processes modifying or chemically removing a component of a normally gaseous mixture which may contain hazardous or toxic waste.

- 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for processes for the chemical destruction of non-gaseous hazardous or toxic waste, and subclass 900 for a Cross Reference Art Collection of apparatus.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 405 – HYDRAULIC AND EARTH ENGINEERING

Section II: In Section II, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 250 and 253 for earth burial of hazardous or toxic waste. Waste proper for classification in Class 588 is considered to be too hazardous or toxic for placement in an ordinary municipal landfill.

Subclass 53: Under See or Search Class:

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 250 for the storage of hazardous or toxic waste in an earthen cavity.

Subclass 60: Under See or Search Class:

Delete:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249+ .

Subclass 128.1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-320 for a chemical process of destroying or containing hazardous or toxic waste, or making the waste environmentally safe, where any products of the process are intended to be safely discarded or whose

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production is only incidental to the destruction or containment. Waste proper for classification in Class 588 is considered to be too hazardous or toxic for placement in an ordinary municipal landfill.

Subclass 128.2: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-320 for a chemical process of destroying hazardous or toxic waste, prior to or subsequent to vacuuming.

Subclass 128.65: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 252 and 253 for a process of containing hazardous or toxic waste by the use of vitrification as a means for immobilizing hazardous or toxic waste.

Subclass 128.75: Under See or Search Class:

Insert:

SEE OR SEARCH CLASS:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-320 for a chemical process of destroying or containing hazardous or toxic waste, or making the waste environmentally safe. Waste proper for classification in Class 588 is considered to be too hazardous or toxic for placement in an ordinary municipal landfill.

Subclass 129.1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 250 for a process of containing hazardous or toxic waste in an earth formation.

Subclass 129.2 Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for a chemical process of destroying hazardous or toxic waste, or making hazardous or toxic waste environmentally safe.

Subclass 129.25: Under See or Search Class:

Insert:

SEE OR SEARCH CLASS:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-320 for a chemical process of destroying hazardous or toxic waste, or making hazardous or toxic waste environmentally safe.

Subclass 129.3: Under the subclass definition:

Insert:

SEE OR SEARCH CLASS:

588, Hazardous of Toxic Waste Destruction or Containment, subclasses 252-257 for a process of containing hazardous or toxic waste by solidification, vitrification or cementation.

Subclass 129.35: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous of Toxic Waste Destruction or Containment, subclass 250
for a process of containing hazardous or toxic waste in earthen cavities.

Subclass 129.45: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous of Toxic Waste Destruction or Containment, subclass 259
for a process of containing hazardous or toxic waste.

Subclass 132: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 250
for the containment of hazardous or toxic waste in underground areas.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 422 – CHEMICAL APPARATUS AND PROCESS DISINFECTING, DEODORIZING, PRESERVING, OR STERILIZING

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 299 for the destruction of germ warfare agents by any method, subclasses 300-321 for processes of destruction by any chemical means of hazardous or toxic waste to make such waste safe for landfill disposal, and subclasses 249-260 for processes of permanently storing hazardous or toxic waste per se, particularly subclass 258 for storage of pathogenic organisms (e.g., virus, bacteria, or medical waste).

Subclass 1 Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for processes of destruction by any chemical means of hazardous or toxic waste to make such waste safe for landfill disposal, and subclasses 249-260 for processes of permanently storing hazardous or toxic waste per se, particularly subclass 258 for storage of pathogenic organisms (e.g., virus, bacteria, or medical waste).

Subclass 292: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

- 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-321 for processes of destruction by any chemical means of hazardous or toxic waste to make such waste safe for landfill disposal, and subclasses 249-260 for processes of permanently storing hazardous or toxic waste per se, particularly subclass 258 for storage of pathogenic organisms (e.g., virus, bacteria, or medical waste).

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 423 – CHEMISTRY OF INORGANIC COMPOUNDS

Section IV: In Section IV, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the process of chemical destruction of hazardous or toxic waste, other than gas (except chemical warfare agents), by way of incineration heating or other chemical reactions when the destruction of the waste is the intended purpose. Class 423 takes all intended production or recovery of marketable products in the form of inorganic compounds or elements, and subclasses 210+ provide for the chemical destruction of gaseous hazardous or toxic waste (except chemical warfare agents). Note that subclasses 245.1+ provide for an organic component.

Subclass 21.1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 for the treatment of hazardous or toxic waste containing rare earth metals (atomic numbers 21, 39, or 57-71).

Subclass 22: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 407, 412 and 249-260 for the destruction or containment of hazardous or toxic waste containing platinum group elements (ruthenium, rhodium, palladium, osmium, iridium, or platinum).

Subclass 23: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste being volatilized or containing Cu, Ag, or Au.

Subclass 49: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing Mn, Tc, or Re.

Subclass 53: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste being volatilized or containing Cr, Mo, or W.

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Subclass 62: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing V, Nb, or Ta.

Subclass 69: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 407 and 412 for the treatment of hazardous or toxic waste containing Ti, Zr, or Hf.

Subclass 87 Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing Sb, Bi, or As.

Subclass 89: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing Ge, Sn, or Pb

Subclass 99: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 407, 412 and 249-260 for the destruction or containment of hazardous or toxic waste containing Zn, Cd, or Hg.

Subclass 111: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing, Al, Ga, In, Tl, or Be.

Subclass 138: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 407, 412 and 249-260 for the destruction or containment of hazardous or toxic waste containing Fe, Co, and Ni.

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Subclass 155: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing Mg, Ca, Sr, or Ba.

Subclass 167.1: Under the subclass definition:

Insert:

SEE OR SEARCH CLASS:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 411 for the chemical destruction of asbestos, and subclass 154 for the permanent containment of asbestos.

Subclass 179: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste being volatilized and containing Li, Na, K, Rb, and Cs.

Subclass 210: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 401 for the chemical destruction of chemical warfare agents, which may be

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gaseous. This class, 423, provides for the treatment or chemical destruction of hazardous or toxic gasses in general.

Subclass 263: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 407, 412, and 249-260 for the destruction or containment of hazardous or toxic waste containing rare earth or lanthanide elements (atomic numbers 21, 39, or 57-71).

Subclass 299: Under See or Search Class:

Delete:

The entire reference to Class 588

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing, halogen, oxygen, sulfur, metal, and phosphorus.

Subclass 324: Under See or Search Class:

Delete:

The entire reference to Class 588

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing silicon, oxygen, and metals.

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Subclass 351: Under See or Search Class:

Delete:

The entire reference to class 588.

Insert:

:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing nitrogen, oxygen, halogen, and metals.

Subclass 414: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing carbon, oxygen, sulfur, and metals.

Subclass 462: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing halogens, oxygen, sulfur, and metals.

Subclass 508: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing Se or Te.

Subclass 511 Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing sulfur, halogen, nitrogen, and metals.

Subclass 579: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 300-415 and 249-260 for the destruction or containment of hazardous or toxic waste containing oxygen, sulfur, halogen, nitrogen, and metals.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 425 – PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING:
APPARATUS

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Cass 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses
249-260 for the permanent enclosing or encapsulating of hazardous or
toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 427 – COATING PROCESSES

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for a coating or a covering process to permanently contain hazardous or toxic waste (Named Fluid Treatments of Textiles); appropriate subclasses for the chemical destruction or containment of hazardous or toxic waste. (Hazardous or Toxic Waste Product in Coating Processes).

Subclass 294: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for the use of a vacuum in a coating process to permanently contain hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 428 – STOCK MATERIAL OR MISCELLANEOUS ARTICLES

Section II: In Section II, Lines With Other Classes: and Within This Class, C. Articles* and Stock-materials*, 3. Static Objects and materials, d. Other structures and static object. A patent to a rigid laminate or stock-material* merely...Class 428:

Delete:

Class 588, provides for the production of articles made with or from hazardous or toxic waste to contain the waste

Insert:

Class 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for permanent containment of hazardous or toxic waste, particularly subclasses 252+ for solidification, vitrification, or cementation.

Subclass 2: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for permanent containment of hazardous or toxic waste.

Subclass 357: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for permanent containment of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 431 – COMBUSTION

Section IV: Under Section IV, References to Other Classes, See or Search Class:

Delete:

The entire reference to Class 588.

Subclass 2: Under See or Search Class:

Delete:

The entire reference to Class 588.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 501 – COMPOSITIONS: CERAMIC

Section III: Under Section III, References to Other Classes, See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 249-260 for the permanent containment and storage of hazardous or toxic waste, particularly subclasses 252-253 which may involve vitrification. (Process class)

Subclass 155 Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 252-253 for the solidification, vitrification, or cementation of hazardous or toxic waste for permanent containment and storage.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 540 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 544 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 546 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses
300-415 for the chemical destruction of hazardous or toxic waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 552 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 408
for the chemical destruction of organic hazardous or toxic waste
containing nitrogen.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 556 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 407 for the chemical destruction of organic hazardous or toxic waste containing a heavy metal.

Subclass 170: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing aluminum.

Subclass 400: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing at least Si.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 558 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogens or nitrogen.

Subclass 6: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, or nitrogen.

Subclass 10: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, or nitrogen.

Subclass 20: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, or metals.

Subclass 70: Under See or Search Class

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, phosphorus, or metals.

Subclass 230: Under See or Search Class

Delete:

The entire reference to Class 588.

Insert:

:588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, phosphorus, or metals.

Subclass 280: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, or metals.

Subclass 299: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 300: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction or containment of organic hazardous or toxic waste containing oxygen or nitrogen.

Subclass 302: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 408 for the chemical destruction of organic hazardous or toxic waste containing nitrogen.

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Subclass 303: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing, halogen, chalcogen, nitrogen, phosphorus, or metals.

Subclass 480: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing, halogen, chalcogen, or nitrogen.

Subclass 488: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 560 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 8: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, phosphorus, or metals.

Subclass 300: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 406 for the chemical destruction of organic hazardous or toxic waste containing halogen.

Subclass 301: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen and nitrogen.

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Subclass 302: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogens or nitrogen.

Subclass 303: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, or nitrogen.

Subclass 304: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen or nitrogen.

Subclass 305: Under See or Search Class;

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogens.

Subclass 306: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen.

Subclass 307: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogens or chalcogens.

Subclass 310: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogens.

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Subclass 311: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogens or nitrogen.

Subclass 312: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen and nitrogen.

Subclass 316: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen or nitrogen.

Subclass 317: Under See or Search class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, or nitrogen.

Subclass 318: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing sulfur and oxygen.

Subclass 319: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, or nitrogen.

Subclass 330: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing, halogen, oxygen, sulfur, phosphorus, or nitrogen.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 562 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen, sulfur nitrogen and group IA or IIA light metals.

Subclass 2: Under See and Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen, nitrogen, and group IA or IIA light metals.

Subclass 7: Under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing, chalcogens, nitrogen, and group IA or IIA light metals.

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Subclass 8: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 406, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, phosphorus, nitrogen, and group IA or IIA light metals.

Subclass 26: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen, nitrogen, and group IA or IIA light metals.

Subclass 29: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing sulfur, nitrogen, and group IA or IIA light metals.

Subclass 30: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, phosphorus, and group IA or IIA light metals.

Subclass 125: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, nitrogen, phosphorus, and group IA or IIA light metals.

Subclass 620: Under see or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen, nitrogen, and group IA or IIA light metals.

Subclass 621: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen, nitrogen, and group IA or IIA light metals.

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Subclass 624: Under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen, nitrogen, the groups IA or IIA light metals.

Subclass 625: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen, nitrogen, the groups IA or IIA light metals.

Subclass 800: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, or nitrogen.

Subclass 802: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, or nitrogen.

Subclass 806: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 408 for the chemical destruction of organic hazardous or toxic waste containing nitrogen or phosphorus.

Subclass 808: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406 and 408 for the chemical destruction of organic hazardous or toxic waste containing halogen, nitrogen, or phosphorus.

Subclass 821: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408, and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, chalcogen, or phosphorus.

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Subclass 837: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing sulfur, oxygen, or nitrogen.

Subclass 838 Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, or nitrogen.

Subclass 840: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, oxygen, and nitrogen.

Subclass 869: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 870: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen, sulfur, or nitrogen.

Subclass 871: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 872: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen or sulfur.

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Subclass 873: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen, sulfur, or nitrogen.

Subclass 874: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 875: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 876: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or phosphorus.

Subclass 877: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen, nitrogen, or phosphorus.

Subclass 878: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen chalcogen or phosphorus.

Subclass 879: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

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Subclass 880: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment note subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 881: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen or nitrogen.

Subclass 882: Under See or Search Class:

Delete:

The entire reference to Class 588..

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen.

Subclass 883: Under See or Search Class:

Delete:

The entire reference to Class 588..

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen or chalcogen.

Subclass 884: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen or sulfur.

Subclass 885: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing sulfur or nitrogen.

Subclass 886: Under See or Search Class;

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing chalcogen.

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Subclass 887: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 409 for the chemical destruction of organic hazardous or toxic waste containing oxygen.

Subclass 899: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, selenium, tellurium, or phosphorus.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 564 – DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS

Subclass 1: Under See or Search Class::

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, nitrogen, phosphorus, or metals.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 568 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532 - 570 SERIES

Subclass 1: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, phosphorus, or metals.

Subclass 8: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 406, 408 and 409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, or phosphorus.

Subclass 18: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, nitrogen, phosphorus, or metals.

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Subclass 300: Under See or Search Class

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 405-409 for the chemical destruction of organic hazardous or toxic waste containing halogen, sulfur, oxygen, nitrogen, phosphorus, or metals.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 570 – ORGANIC COMPOUNDS -- PART OF THE CLASS 532 - 570 SERIES

Subclass 101: Under See or Search Class::

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclass 255 and subclasses 405-409 for the chemical destruction or containment of organic hazardous or toxic waste containing halogen, sulfur, oxygen, nitrogen, or metals.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 585 – CHEMISTRY OF HYDROCARBON COMPOUNDS

Section II: In Section II, Lines With Other Classes and Within This Class:

Delete:

This class is the residual class of all Patent Office classes concerned with categories B, C, D, and E listed above. See Class 588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the destruction of hydrocarbon hazardous or toxic waste. The particular subject matter of each such class which is provided for in that class, rather than in Class 585, is dealt with below and in search notes in individual subclasses listed in section IV of this class definition.

Insert:

This class is the residual class of all Patent Office classes concerned with categories B, C, D, and E listed above. See Class 588, Hazardous or Toxic Waste Destruction or Containment, subclasses 312-321 for the chemical destruction of hydrocarbon hazardous or toxic waste.

Subclass 16: Under See or Search Class:

Delete:

The entire reference to Class 588.

Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 312-321 for the chemical destruction of hydrocarbon hazardous or toxic waste.

Subclass 240: Under See or Search Class:

Delete:

The entire reference to Class 588.

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Insert:

588, Hazardous or Toxic Waste Destruction or Containment, subclasses 312
–321 for the chemical destruction of hydrocarbon hazardous or toxic
waste.

D. CHANGES TO THE DEFINITIONS (Project No. CT001)

CLASS 588 – HAZARDOUS OR TOXIC WASTE DESTRUCTION OR CONTAINMENT

Definitions Abolished

Subclasses

200 - 248

Definitions Modified (Place modifications in numerical sequence, where applicable):

Class Definition: In Section I – Class Definition,

Delete:

This class does not provide for apparatus. Apparatus is classified based on its function without regard to whether or not hazardous or toxic waste is the substance acted on. Significant disclosure to processes of treating hazardous or toxic waste in apparatus patents may be cross-referenced to Class 588 as appropriate. Some exemplary classes providing for apparatus employed in the processes of this class are as follows.

Insert:

This class does not provide for apparatus. Apparatus is classified based on its function without regard to whether or not hazardous or toxic waste is the substance acted on. Significant disclosure to processes of treating hazardous or toxic waste in apparatus patents may be cross-referenced to Class 588 as appropriate.

Class Definition: After Section I – CLASS DEFINITION:

Delete:

SECTION II - NOTES TO THE CLASS DEFINITION

(1) Note. Chemical substances that move through commerce and are used or treated in some useful application are not considered to be hazardous or toxic waste. These substances may be considered hazardous or toxic waste in the event they are introduced into the environment in a manner not consistent with their intended utility.

(2) Note. Waste proper for classification in Class 588 is considered to be too hazardous or toxic for placement in an ordinary municipal landfill.

Class Definition: Under the first paragraph, "This is the generic class for (1) hazardous or toxic waste... as the actual destruction or containment." and before "Line With Classes Producing Desired Useful Product":

Insert:

- (1) Note. Chemical substances that move through commerce and are used or treated in some useful application are not considered to be hazardous or toxic waste. These substances may be considered hazardous or toxic waste in the event they are introduced into the environment in a manner not consistent with their intended utility.
- (2) Note. Waste proper for classification in Class 588 is considered to be too hazardous or toxic for placement in an ordinary municipal landfill.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Section III: In Section III, References to Other Classes, under See or Search Class:

Delete:

ALL of the references in See or Search Class

Insert:

- 34, Drying and Gas or Vapor Contact With Solids, for separation of liquid hazardous or toxic waste from solids and the process of using gases or vapors to contact solids for the removal of hazardous or toxic waste.
- 48, Gas: Heating and Illuminating, for a process directed to the production of a combustible gas from hazardous or toxic waste (see Line With Classes Producing Desired Useful Product).
- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, for a process which produces elemental metal as a desired product and which may also destroy hazardous or toxic waste, particularly subclasses 507-584 for the methods of adding hazardous or toxic waste to melting or molten iron and subclasses 585-706 for methods of adding hazardous or toxic waste to nonferrous metals at above 300°C (see Line With Classes Producing Desired Useful Product).

- 86, Ammunition and Explosive-Charge Making, subclass 50 for an apparatus for bomb disposal, or a method of bomb disposal by detonation (see Line With Apparatus Classes). This class, 588, takes the chemical destruction of bombs other than by detonation.
- 106, Compositions: Coating or Plastic, subclasses 600+ for the production of cement using hazardous or toxic waste (see Line With Classes Producing Desired Useful Product).
- 110, Furnaces, subclasses 235+ for apparatus which may be used for the incineration of hazardous or toxic waste (see Line With Apparatus Classes).
- 196, Mineral Oils: Apparatus, for apparatus that may be used in the treating of hazardous or toxic waste in mineral oils (see Line With Apparatus Classes).
- 201, Distillation: Processes, Thermolytic, for the use of thermolytic processes to destroy substances other than hazardous or toxic waste.
- 202, Distillation: Apparatus, for distillation apparatus which may be used in the treating of hazardous or toxic waste (see Line With Apparatus Classes).
- 203, Distillation: Processes, Separatory, for separating a liquid mixture with one or more of the components being hazardous or toxic waste, and subclasses 95+ for the additional use of water or steam in the separation.
- 204, Chemistry: Electrical and Wave Energy, for the interaction of electrical and wave energy with hazardous or toxic waste to produce a product (See Line With Classes Producing Desired Useful Product), and subclasses 193+ for electrical and wave energy apparatus used in the treatment of hazardous or toxic waste (see Line With Apparatus Classes).
- 208, Mineral Oils: Processes and Products, for the removal of hazardous or toxic substances from mineral oils, particularly subclasses 262.1+ for processes of removing halogen contaminants, e.g., PCB's from mineral oils (see Line With Classes Producing Desired Useful Product).
- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water,

is obtained as a desired product, the process is proper for Class 210 (see Line With Classes Producing Desired Useful Product).

- 252, Compositions, subclasses 625+ for useful products (compositions) that contain radioactive hazardous or toxic waste (see Line With Classes Producing Desired Useful Product).
- 261, Gas and Liquid Contact Apparatus, for apparatus which may be used in the treatment of gas or liquid hazardous or toxic waste (see Line With Apparatus Classes).
- 266, Metallurgical Apparatus, for means of treating hazardous or toxic substances produced during the operation of a metallurgical apparatus, particularly subclasses 144+ for treating gaseous substances and 200+ for treating liquefied substances (see Line With Apparatus Classes).
- 373, Industrial Electrical Heating Furnaces, for electric heating furnaces that may be used in the treatment of hazardous or toxic waste (see Line With Apparatus Classes).
- 405, Hydraulic and Earth Engineering, subclasses 128.1-128.9 for soil remediation involving hazardous or toxic substances, and subclasses 129.1-129.95 for the deposition of waste, which is not hazardous or toxic, in an earth formation or the confinement of such waste in a structure in the earth.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, for apparatus acting on hazardous or toxic waste for disinfection or sterilization thereof (see Line With Apparatus Classes). Class 422 provides for processes of destruction of hazardous or toxic material, such as noxious micro-organisms, by disinfecting or sterilizing when a desired useful product or article results (i.e., not a waste), and not elsewhere provided for (see Line With Classes Producing Desired Useful Product). Class 422, subclasses 1+ provides for processes of sterilizing wastes (such as household garbage or waste) not considered hazardous or toxic for Class 588.
- 423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for chemically removing, modifying or destroying a hazardous or toxic component of normally gaseous mixture, except for the chemical destruction of chemical weapons which may gas, which is in this Class 588 (see Line With Other Classes That Provide for Destroying Hazardous or Toxic Waste); and for recovering inorganic elements or compounds from hazardous or toxic waste (See Line With Classes Producing Desired Useful Product).
- 431, Combustion, for combustion processes for purposes other than to destroy hazardous or toxic waste.

- 435, Chemistry: Molecular Biology and Microbiology, for the methods of making micro-organisms, per se, and subclass 262.5 for methods of using the micro-organisms to destroy hazardous or toxic waste (see Line With Other Classes That Provide for Destroying Hazardous or Toxic Waste).
- 532, Organic Compounds, for the production of useful products from hazardous or toxic waste (see Line With Classes Producing Desired Useful Product).
- 976 Nuclear Technology, for the methods and apparatus used in the production of nuclear fuel, manufacturing of nuclear reactors, and nuclear technology in general (see Line With Apparatus Classes and Line With Classes Producing Desired Useful Product).

Section IV: In Section IV, Glossary, before HAZARDOUS WASTE:

Insert:

HARMFUL CHEMICAL SUBSTANCE

Harmful chemical substances are chemical waste substances which are too hazardous or toxic to be discarded in an ordinary municipal landfill.

Under SLUDGE:

Delete:

Residue (usually viscous) from an industrial, home, or agricultural process commonly containing heavy metals, sulfur compounds, phosphorus compounds, nitrogen compounds, and halogenated compounds any of which may be organic, however these specific compounds are not required

Insert:

Residue (usually viscous) from an industrial, home, or agricultural process which may contain a harmful chemical substance. Examples of harmful chemical substances are: heavy metals, sulfur compounds, phosphorus compounds, nitrogen compounds, and halogenated compounds any of which may be organic.

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Subclass 249: Under See or Search Class:

Delete:

53, Package Making, appropriate subclasses for methods or apparatus used in package making to contain hazardous or toxic waste.

Insert:

53, Package Making, appropriate subclasses for methods or apparatus used in package making to contain hazardous or toxic waste, and for methods of packaging to move hazardous or toxic materials through commerce where the materials are removed from the container for subsequent use or treatment.

Subclass 250: Under the subclass definition:

Insert:

SEE OR SEARCH CLASS:

405, Hydraulic and Earth Engineering, subclasses 129.1-129.95 for the deposition of waste, which is not hazardous or toxic, in an earth formation or the confinement of such waste in a structure in the earth.

Subclass 252: Under (3) Note:

Insert:

SEARCH OR SEARCH THIS CLASS, SUBCLASS:

312-320, for the use of a chemical reaction to stabilize a substance which is subject to solidification, vitrification or cementation.

Cross-Reference
Art Collection

901: Under the definition:

Insert:

SEE OR SEARCH CLASS:

106, Compositions: Coating or Plastic, subclasses 600+ for the production of cement using hazardous or toxic waste.

- 252, Compositions, subclasses 625+ for useful products (compositions) that contain radioactive hazardous toxic waste.
- 501, Compositions: Ceramic, for containment of hazardous or toxic waste in a ceramic.
- 520-528, Synthetic Resins or Natural Rubbers – Part of the Class 520 Series, for encapsulating or binding hazardous or toxic waste in a synthetic resin or natural rubber.

Definitions Established (Place established subclasses in numerical sequence.):

249.5 Chemical or germ warfare agents, or pathogenic organisms (e.g., sarin, VX, anthrax, virus, bacteria and medical waste):

Processes under subclass 249 wherein a material intended to be employed as a chemical or germ warfare agent, or a disease causing organism, is the hazardous or toxic substance which is contained.

SEE OR SEARCH THIS CLASS, SUBCLASS:

300-320, for the use of a chemical process to stabilize a substance which is subject to containment, or to destroy a chemical or germ warfare agent.

SEE OR SEARCH CLASS:

- 210, Liquid Purification or Separation, subclasses 749+ for a chemical treatment process to purify a liquid to obtain a desired product, e.g., water.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 1-43 for methods using disinfecting or sterilizing to destroy micro-organisms other than germ warfare agents.
- 435, Chemistry: Molecular Biology and Microbiology, subclasses 235.1-239 for virus, bacteriophage, composition thereof, preparation or purification thereof, or production of viral subunits.

299 GERM WARFARE AGENTS DESTROYED:

Process under the class definition wherein a material, e.g. micro-organism, intended to be employed as a germ warfare agent is the hazardous or toxic substance destroyed or converted.

- (1) Note. This subclass includes the destruction of micro-organisms intended to be used in warfare.

SEE OR SEARCH THIS CLASS, SUBCLASS:

249.5, for processes of storage or containment of chemical or germ warfare agents.

SEE OR SEARCH CLASS:

- 110, Furnaces, for apparatus which may be used to destroy hazardous or toxic waste.
- 201, Distillation: Processes, Thermolytic, for the use of thermolytic processes to destroy substances other than hazardous or toxic waste.
- 261, Gas and Liquid Contact Apparatus, for apparatus which may be used in the treatment of gas or liquid hazardous or toxic waste.
- 266, Metallurgical Apparatus, for metallurgical apparatus which could be used to destroy hazardous or toxic waste, particularly subclasses 144+ for treating gaseous substances and 200+ for treating liquefied substances.
- 373, Industrial Electrical Heating Furnaces, for electric heating furnaces that may be used to destroy hazardous or toxic waste.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, for the methods and apparatus used in destroying micro-organisms other than germ warfare agents.
- 431, Combustion, for combustion processes for purposes other than to destroy hazardous or toxic waste.
- 435, Chemistry: Molecular Biology and Microbiology, subclass 262.5 for methods of using the micro-organisms to destroy hazardous or toxic waste.

300 PROCESSES FOR MAKING HARMFUL CHEMICAL SUBSTANCES HARMLESS, OR LESS HARMFUL, BY EFFECTING A CHEMICAL CHANGE IN THE SUBSTANCES (EPO/JPO)

This subclass is indented under the class definition. Processes for chemically changing harmful chemical substances into substances which are harmless or less harmful. These processes are chemical processes which change the chemical composition of the harmful chemical substance. The harmful chemical substance can be one component of a mixture. The use of special chemical reagents for chemical fixing is included. These processes can comprise the step of dissolving or dispersing the harmful chemical substances in water for the purpose of treating them, or the step of producing a gaseous product from a non-gaseous harmful chemical substance.

- (1) Note. When classifying in subclasses 300–321, classification is normally also made in subclasses 400-415 to identify the hazardous substance.
- (2) Note. Harmful chemical substances are chemical waste substances which are too hazardous or toxic to be discarded in an ordinary municipal landfill.
- (3) Note. The production or recovery of marketable products is covered elsewhere, as indicated by the references below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

299, for the destruction of germ warfare agents.

SEE OR SEARCH CLASS:

- 48, Gas: Heating and Illuminating, for a process directed to the production of a combustible gas from hazardous or toxic waste.
- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, for processes of preparing or treating elemental metal employing hazardous or toxic waste as a raw material or agent, particularly subclasses 507+ for the methods of adding hazardous or toxic waste to melting or molten iron and subclasses 585+ for methods of adding hazardous or toxic waste to nonferrous metals at above 300°C.
- 86, Ammunition and Explosive-Charge Making, subclass 50 for an apparatus for bomb disposal, or a method of bomb disposal

by detonation. This class, 588, takes the chemical destruction of bombs other than by detonation.

- 106, Compositions: Coating or Plastic, subclasses 600+ for the production of cement using hazardous or toxic waste.
- 110, Furnaces, subclasses 235+ for apparatus which may be used for the incineration of hazardous or toxic waste.
- 201, Distillation: Processes, Thermolytic, for the use of thermolytic processes to destroy substances other than hazardous or toxic waste.
- 203, Distillation: Processes, Separatory, for separating a liquid mixture with one or more of the components being hazardous or toxic waste, and subclasses 95+ for the additional use of water or steam in the separation.
- 204, Chemistry: Electrical and Wave Energy, for the interaction of electrical and wave energy with hazardous or toxic waste to produce a product, and subclasses 193+ for electrical and wave energy apparatus used in the treatment of hazardous or toxic waste.
- 208, Mineral Oils: Processes and Products, for the removal of hazardous or toxic substances from mineral oils, particularly subclasses 262.1+ for processes of removing halogen contaminants, e.g., PCB's from mineral oils.
- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claimed disclosure that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.
- 261, Gas and Liquid Contact Apparatus, for apparatus which may be used in the treatment of gas or liquid hazardous or toxic waste.
- 266, Metallurgical Apparatus, for means of treating hazardous or toxic substances produced during the operation of a metallurgical apparatus, particularly subclasses 144+ for

treating gaseous substances and 200+ for treating liquefied substances.

- 373, Industrial Electrical Heating Furnaces, for electric heating furnaces used in the treatment of hazardous or toxic waste.
- 405, Hydraulic and Earth Engineering, subclasses 128.1-128.9 for soil remediation involving hazardous or toxic substance.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, for apparatus using disinfection or sterilization to destroy micro-organisms, and for methods using disinfection or sterilization to destroy micro-organisms other than germ warfare agents.
- 423, Chemistry of Inorganic Compounds, subclasses 210-215.5 for chemically removing, modifying or destroying a hazardous or toxic component of normally gaseous mixture (except for the chemical destruction of chemical weapons which may gas, which is in this Class 588); and for recovering inorganic elements or compounds from hazardous or toxic waste.
- 431, Combustion, for combustion processes for purposes other than to destroy hazardous or toxic waste.
- 435, Chemistry: Molecular Biology and Microbiology, for processes whereby a micro-organism is used in degradation of hazardous or toxic waste, e.g., degrading PCBs.
- 532, Organic Compounds, for the production of useful products from hazardous or toxic waste.

301 By subjecting to electric or wave energy or particle or ionizing radiation (EPO/JPO):

Subject matter under 300 wherein electric or wave energy or particle or ionizing radiation is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G) and FI (A62D 3/00 100).

SEE OR SEARCH CLASS:

- 209, Classifying, Separating, and Assorting Solids, subclasses 12+ for combined operations including the use of magnetic operations; subclasses 509+ for sorting special items, and certain methods and apparatus some of which use magnetic

properties and note subclasses 212 through 232 for magnetic separation, per se. (Class 588 provides for the magnetic separation of any hazardous or toxic waste in combination with the destruction of the waste).

302 Electrochemical processes, e.g., electro dialysis (EPO/JPO):

Subject matter under 301 wherein an electrochemical process is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G2) and FI (A62D 3/00 110).

SEE OR SEARCH CLASS:

204, Chemistry: Electrical and Wave Energy, for processes of electro dialysis or electrolysis.

210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is placed in Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, place the process in Class 210.

303 Electrolytic degradation or conversion (EPO/JPO):

Subject matter under 302 wherein electrolysis is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G2B) and FI (A62D 3/00 111).

304 Sonic energy (EPO/JPO):

Subject matter under 301 wherein energy in sound waves is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G4) and FI (A62D 3/00 120).

305 Particle radiation, e.g., electron beam radiation (EPO/JPO):

Subject matter under 301 wherein particle radiation is used to chemically change the harmful chemical substance. Particles include molecules, atoms, protons or electrons.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G6) and FI (A62D 3/00 130).

306 Electromagnetic radiation, e.g., laser (EPO/JPO):

Subject matter under 301 wherein electromagnetic radiation is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G8) and FI (A62D 3/00 140).

307 Gamma rays (about 0.003nm-0.03nm) (EPO/JPO):

Subject matter under 306 wherein the wavelengths range from 0.003nm–0.03nm.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G8B) and FI (A62D 3/00 141).

308 X – Rays (about 0.03nm-3nm) (EPO/JPO):

Subject matter under 306 wherein the wavelengths range from 0.03nm–3nm.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G8D) and FI (A62D 3/00 142).

309 Ultraviolet radiations (about 3nm-400nm) (EPO/JPO):

Subject matter under 306 wherein the wavelengths range from 3nm–400nm.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G8F) and FI (A62D 3/00 143).

310 Microwave radiations (about 0.3cm-30cm) (EPO/JPO):

Subject matter under 306 wherein the wavelengths range from 0.3cm–30cm.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G8H) and FI (A62D 3/00 144).

311 Plasma (EPO/JPO):

Subject matter under 301 wherein plasma is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00G10) and FI (A62D 3/00 150).

312 By hydrolysis or destructive steam gasification, e.g., using water and heat or supercritical water, to effect chemical change (EPO/JPO):

Subject matter under 300 wherein water or steam is used in a thermal process to achieve chemical change.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00J) and FI (A62D 3/00 200).

SEE OR SEARCH CLASS:

- 48, Gas: Heating and Illuminating, subclasses 197+ for processes of gasification to produce a heating or illuminating gas.
- 201, Distillation: Processes, Thermolytic, subclasses 32+ for the addition of disparate gaseous material to a carbonizing zone.
- 202, Distillation: Apparatus, subclasses 96+ for thermolytic type apparatus.
- 203, Distillation: Processes, Separatory, subclasses 28+ for the processes with a chemical reaction and subclasses 95+ for the addition of water or steam.
- 431, Combustion, subclass 4 for feeding a flame modifying additive and subclass 5 for burning waste gas.

313 By reacting with chemical agents (EPO/JPO):

Subject matter under subclass 300 wherein an additional chemical material is used to react with the harmful chemical substance.

- (1) Note. The substance that is destroyed maybe a mixture of hazardous or toxic waste with nonhazardous or nontoxic waste. Either component of the mixture being destroyed is sufficient for classification here. Mandatory XR (cross-

reference) into subclass(es) for the actual hazardous or toxic substance (component) destroyed is noted.

- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K) and FI (A62D 3/00 300).

SEE OR SEARCH THIS CLASS, SUBCLASS:

252-257, for the containment of hazardous substances through solidification, vitrification or cementation.

532-570, for the production of useful organic compounds from hazardous or toxic substances.

SEE OR SEARCH CLASS:

- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, for a process which produces elemental metal as a desired product and which may also destroy hazardous or toxic waste, particularly subclasses 507+ for the methods of adding hazardous or toxic waste to melting or molten iron and subclasses 585+ for methods adding hazardous or toxic waste to nonferrous metals at above 300°C.
- 86, Ammunition and Explosive-Charge Making, subclass 50 for an apparatus for bomb disposal, or a method of bomb disposal by detonation. This class, 588, takes the chemical destruction of bombs other than by detonation.
- 106, Compositions: Coating or Plastic, subclasses 600+ for the production of cement using hazardous or toxic waste.
- 110, Furnaces, subclasses 235+ for apparatus which may be used for the incineration of hazardous or toxic waste.
- 201, Distillation: Processes, Thermolytic, for thermolytic distillation processes in general.
- 202, Distillation: Apparatus, for distillation apparatus which may be used in the treating of hazardous or toxic waste.
- 203, Distillation: Processes, Separatory, for separating a liquid mixture with one or more component being hazardous or toxic waste, and subclasses 95+ for the additional use of water or steam in the separation.

- 204, Chemistry: Electrical and Wave Energy, for the interaction of electrical and wave energy with hazardous or toxic waste to produce a product, and subclasses 193+ for electrical and wave energy apparatus used in the treatment of hazardous or toxic waste.
- 208 Mineral Oils: Processes and Products, subclasses 208+ for sulfur removal from mineral oils.
- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, for apparatus acting on hazardous or toxic waste for disinfection or sterilization thereof. Class 422 provides for processes of destruction of hazardous or toxic material, such as noxious micro-organisms, by disinfecting or sterilizing when a desired useful product or article results (i.e., not a waste), and not elsewhere provided for. Class 422, subclasses 1+ provides for processes of sterilizing wastes (such as household garbage or waste) not considered hazardous or toxic for Class 588.
- 423, Chemistry of Inorganic Compounds, for the production of a desired inorganic substance or product for a hazardous or toxic substance.
- 585, Chemistry of Hydrocarbon Compounds, for processes employing chalcogen (O, S, Se, or Te) containing compounds in the manufacture of hydrocarbons containing the chalcogen. subclasses 240+ for the production of a hydrocarbon mixture from refuse or vegetation.

314 By treatment in molten chemical reagent, e.g., salts or metals (EPO/JPO):

Process under 313 wherein the reaction takes place in a chemical reagent which is normally solid at room temperature is used in a molten state.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K2) and FI (A62D 3/00 310).

SEE OR SEARCH CLASS:

- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, for a process which produces elemental metal as a desired product and which may also destroy hazardous or toxic waste, particularly subclasses 507+ for the methods of adding hazardous or toxic waste to melting or molten iron and subclasses 585+ for methods of adding hazardous or toxic waste to nonferrous metals at above 300°C.
- 110, Furnaces, subclasses 235+ for apparatus which may be used for the incineration of hazardous or toxic waste.
- 201, Distillation: Processes, Thermolytic, subclass 11 for the use of liquid metal in a thermolytic distillation for purposes other than the destruction of hazardous or toxic waste.
- 266, Metallurgical Apparatus, for means of treating hazardous or toxic substances produced during the operation of a metallurgical apparatus, particularly subclasses 144+ for treating gaseous substances and 200+ for treating liquefied substances.
- 423, Chemistry of Inorganic Compounds, digest 12 for the use of molten media in chemical reactions.
- 431, Combustion, for processes of combustion in general, and for the combustion of hazardous or toxic waste which produces a useful product.

315 By chemical fixing the harmful substance, e.g., by chelation or complexation (EPO/JPO):

Process under 313 wherein the reaction results in a chemical fixing of the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K4) and FI (A62D 3/00 320).

316 Dehalogenation using reactive chemical agents able to degrade (dehalogenation in molten chemical reagent 314) (EPO/JPO):

Process under 313 wherein halogen is removed from the harmful chemical substance by using reactive chemical agents.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K6) and FI (A62D 3/00 330).

SEE OR SEARCH THIS CLASS, SUBCLASS:

314, for dehalogenation in molten chemical reagent.

317 By hydrolysis (EPO/JPO):

Subject matter under 313 wherein water is used to chemically change the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K8) and FI (A62D 3/00 340).

318 Detoxification by using acid or alkaline reagents (EPO/JPO):

Subject matter under 313 wherein an acid or a base is used to chemically change the harmful chemical substance.

- (1) Note. The added material may be, for example, acids, bases, or hydrogen.
- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K10) and FI (A62D 3/00 350).

319 By reduction, e.g., hydrogenation (EPO/JPO):

Subject matter under 313 wherein the chemical reaction is reductive, i.e. gain of electrons.

- (1) Note. The added material may be, for example, acids, bases, or hydrogen.
- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K12) and FI (A62D 3/00 360).

320 By oxidation; by combustion (EPO/JPO):

Subject matter under 313 wherein the chemical reaction is oxidative, i.e. loss of electrons.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00K14) and FI (A62D 3/00 370).

SEE OR SEARCH CLASS:

- 110, Furnaces, subclass 237 for incinerators intended for use with explosive material.

321 By heating to effect chemical change, e.g., pyrolysis (EPO/JPO):

Subject matter under 300 wherein thermal degradation is used to decompose the harmful chemical substance.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00L) and FI (A62D 3/00 400).

SEE OR SEARCH CLASS:

- 201, Distillation: Processes, Thermolytic, for thermolytic distillation processes in general.

400 Harmful chemical substances made harmless, or less harmful, by effecting chemical change (EPO/JPO):

Subject matter under subclass 300 wherein the harmful chemical substance is identified.

- (1) Note. When classifying into subclasses 401–404, classification is also made in subclasses 405–415 according to the specific substance, if of interest.
- (2) Harmful chemical substances are chemical waste substances which are too hazardous or toxic to be discarded in an ordinary municipal landfill.
- (3) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M) and FI (A62D 3/00 600).

SEE OR SEARCH CLASS:

- 75, Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures, for a process which produces elemental metal as a desired product and which may also destroy hazardous or toxic waste, particularly subclasses 507+ for the methods of adding hazardous or toxic waste to melting or molten iron and subclasses 585+ for methods of adding hazardous or toxic waste to nonferrous metals at above 300°C.
- 86, Ammunition and Explosive-Charge Making, subclass 50 for an apparatus for bomb disposal, or a method of bomb disposal by detonation. This class, 588, takes the chemical destruction of bombs other than by detonation.
- 106, Compositions: Coating or Plastic, subclasses 600+ for the production of cement using hazardous or toxic waste.

401 Chemical warfare substances, e.g., cholinesterase inhibitor (EPO/JPO):

Subject matter under 400 wherein the hazardous or toxic substance is intended to incapacitate or destroy a human enemy. Chemical warfare substances include nerve, blister/vesicant, blood and pulmonary affecting substances.

- (1) Note. This subclass includes the destruction of nerve gases and mustard agents.
- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M2) and FI (A62D 3/00 610).

SEE OR SEARCH CLASS:

- 423, Chemistry of Inorganic Compounds, for recovering inorganic elements or compounds from hazardous or toxic waste, and subclasses 210-215.5 for chemically removing, modifying or destroying a component of normally gaseous mixture containing hazardous or toxic waste. Class 588 provides for the chemical destruction of chemical weapons, which may contain gas.

402 Pesticides, e.g., insecticides, herbicides, fungicides, nematocides (EPO/JPO):

Subject matter under 400 wherein the hazardous or toxic substance is intended to prevent, repel, destroy or mitigate pests. A pest is plant or animal which is detrimental to humans or human concerns, e.g. agriculture or livestock production.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M4) and FI (A62D 3/00 620).

SEE OR SEARCH CLASS:

424, Drug, Bio-Affecting and Body Treating Compositions, particularly subclasses 400-502 for preparations characterized by special physical form, including insect repellants, anti-fungal and anti-bacterial compositions.

504, Plant Protecting and Regulating Compositions, for herbicides.

403 Explosives, propellants or pyrotechnics, e.g., rocket fuel, napalm (EPO/JPO):

Subject matter under 400 wherein the hazardous or toxic substance is an explosive, chemical reaction propellant, e.g. for rocket or gun, or a pyrotechnic, e.g. fireworks.

- (1) Note. The added material may be, for example, acids, bases, or hydrogen.
- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M6) and FI (A62D 3/00 630).

SEE OR SEARCH CLASS:

86, Ammunition and Explosive-Charge Making, subclass 50 for an apparatus for bomb disposal, or a method of bomb disposal by detonation. This class, 588, takes the chemical destruction of bombs other than by detonation.

110, Furnaces, subclass 237 for incinerators intended for use with explosive material.

- 149, Explosive and Thermic Compositions or Charges, subclass 124 for an art collection of methods reclaiming or disposing of explosive or thermic charges or component materials thereof.
- 431, Combustion, for processes of combustion in general, and for the combustion of hazardous or toxic waste which produces a useful product.

404 Toxic combustion residues, e.g., toxic substances contained in fly ash from waste incineration (EPO/JPO):

Subject matter under 400 wherein the hazardous or toxic substance is a by-product of combustion, often found in industrial and municipal fly ash. The combustion of a non-hazardous substance may result in a hazardous residue.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M8) and FI (A62D 3/00 640).

SEE OR SEARCH CLASS:

- 110, Furnaces, subclasses 235+ for apparatus which may be used for the incineration of hazardous or toxic waste.
- 431, Combustion, for processes of combustion in general, and for the combustion of hazardous or toxic waste which produces a useful product.

405 Organic substances (EPO/JPO):

Subject matter under 400 wherein the hazardous or toxic substance contains either two atoms of carbon bonded to each other, one atom of carbon bonded to an atom of hydrogen or halogen, or one atom of carbon bonded to at least one atom of nitrogen by a single or double bond.

- (1) Note. Certain substances falling under the above definition are excluded from this and indented subclasses. Their destruction and conversion are classified in the subclasses below, to wit; hydrocyanic acid, cyanogen, isocyanic acid, cyanamide, cyanogen halides, isothiocyanic acid, fulmenic acid, and metal carbides.
- (2) Note. The substance(s) that is destroyed maybe a mixture of hazardous or toxic waste with nonhazardous or nontoxic waste. Either component of the mixture being destroyed is sufficient for classification in subclass 205. Mandatory XR (cross-reference) into subclass(es) for the actual hazardous or toxic substance (component) destroyed in noted.

- (3) Note. If the hazardous or toxic material is destroyed and a purified compound or composition is recovered search the appropriate compound or composition class.
- (4) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M10) and FI (A62D 3/00 650).

SEE OR SEARCH CLASS:

- 532, Organic Compounds, for the production of useful products from hazardous or toxic waste.
- 585, Chemistry of Hydrocarbon Compounds, for organic hydrocarbons.

406 Containing halogen (EPO/JPO):

Subject matter under 405 wherein the organic substance contains fluorine, chlorine, bromine, iodine, or astatine.

- (1) Note. This subclass includes hydrolysis and destructive stream gasification.
- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M10B) and FI (A62D 3/00 651).

SEE OR SEARCH CLASS:

- 568, Organic Compounds, for the production of halogen containing organic compounds.
- 570, Organic Compounds, for the production of halogen containing organic compounds.
- 585, Chemistry of Hydrocarbon Compounds, for process employing halogen containing compounds in the manufacture of hydrocarbons.

407 Containing heavy metals (EPO/JPO):

Subject matter under 405 wherein the organic substance contains a metal other than the following (light) metals – lithium (Li), sodium (Na), Potassium (K), Rubidium (Rb), Cesium (Cs), Francium (Fr), Calcium (Ca), Strontium (Sr), Barium (Ba), Beryllium (Be), Magnesium (Mg), and Aluminum (Al).

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M10D) and FI (A62D 3/00 652).

SEE OR SEARCH CLASS:

- 532, Organic Compounds, appropriate classes for the production of a desired metal containing organic compound.

408 Containing nitrogen or phosphorus (EPO/JPO):

Subject matter under 405 wherein the organic substance contains nitrogen or phosphorus.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/0010F) and FI (A62D 3/00 653).

SEE OR SEARCH CLASS:

- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.

- 423, Chemistry of Inorganic Compounds, for recovering inorganic elements or compounds from organic hazardous or toxic waste.

409 Containing oxygen, sulfur, selenium or tellurium, i.e., chalcogen (EPO/JPO):

Subject matter under 405 wherein the organic substance contains oxygen, sulfur, selenium or tellurium.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/0010H) and FI (A62D 3/00 654).

SEE OR SEARCH CLASS:

- 423, Chemistry of Inorganic Compounds, for recovering inorganic elements or compounds from organic hazardous or toxic waste.

410 Inorganic substances (EPO/JPO):

Subject matter under 400 wherein the hazardous or toxic substance is not an organic substance or does not contain any component which is an organic substance.

- (1) Note. The substance that is destroyed maybe a mixture of hazardous or toxic waste with nonhazardous or nontoxic waste. Either component of the mixture being destroyed is sufficient for classification here. Mandatory XR (cross-reference) into subclass(es) for the actual hazardous or toxic substance (component) destroyed is noted.
- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M12) and FI (A62D 3/00 660).

SEE OR SEARCH CLASS:

- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.
- 423, Chemistry of Inorganic Compounds, for recovering inorganic elements or compounds from organic hazardous or toxic waste.

411 Inorganic fibers, e.g., asbestos (EPO/JPO):

Subject matter under 410 wherein the inorganic substance is fibrous, and made primarily from rock, clay, slag or glass.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M12B) and FI (A62D 3/00 661).

412 Containing heavy metals, in the bonded or free state (EPO/JPO):

Subject matter under 410 wherein the inorganic substance contains a metal other than the following (light) metals – lithium (Li), sodium (Na), Potassium (K), Rubidium (Rb), Cesium (Cs), Francium (Fr), Calcium (Ca), Strontium (Sr), Barium (Ba), Beryllium (Be), Magnesium (Mg), and Aluminum (Al).

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M12D) and FI (A62D 3/00 662).

SEE OR SEARCH CLASS:

- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.
- 423, Chemistry of Inorganic Compounds, subclasses 1– 209 for treating to obtain a desired metal containing compound.

413 Containing nitrogen or phosphorus (EPO/JPO):

Subject matter under 410 wherein the inorganic substance contains nitrogen or phosphorus.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M12F) and FI (A62D 3/00 663).

SEE OR SEARCH CLASS:

- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process

is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.

423, Chemistry of Inorganic Compounds, subclasses 299+ for the production of phosphorus or phosphorus compounds and subclasses 351+ for the production of nitrogen or nitrogen compounds.

414 Containing oxygen, sulfur, selenium or tellurium, i.e., chalcogen (EPO/JPO):

Subject matter under 410 wherein the organic substance contains oxygen, sulfur, selenium or tellurium.

- (1) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M12H) and FI (A62D 3/00 664).

SEE OR SEARCH CLASS:

210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.

423, Chemistry of Inorganic Compounds, for the production of the desired inorganic substance or product, subclasses 508+ for substance or products containing selenium or tellurium, subclasses 511+ for substances or products containing sulfur, and subclasses 579+ for substances or products containing oxygen.

415 Containing halogen (EPO/JPO):

Subject matter under 410 wherein the inorganic substance contains fluorine, chlorine, bromine, iodine, or astatine.

- (1) Note. The substance that is destroyed maybe a mixture of hazardous or toxic waste with nonhazardous or nontoxic waste. Either component of the mixture being destroyed is sufficient for classification here. Mandatory XR (cross-reference) into subclass(es) for the actual hazardous or toxic substance (component) destroyed is noted.

- (2) Note. Included in this subclass are the foreign patent documents from ECLA (A62D 3/00M12K) and FI (A62D 3/00 665).

SEE OR SEARCH CLASS:

- 210, Liquid Purification or Separation, for processes in general for liquid purification or separation of liquid phases, particularly subclasses 749+ for the use of chemical treatment; and subclasses 911+, an art collection, for the removal of cumulative poison from a liquid. The line between Class 210 and Class 588 is that, if there is a specific statement in the claim that hazardous or toxic waste is destroyed, separated, or converted into an environmentally safe substance, the process is proper for Class 588; however, if purified liquid, e.g., water, is obtained as a desired product, the process is proper for Class 210.
- 423, Chemistry of Inorganic Compounds, subclasses 462+ for the production of halogen or compounds containing halogen.