

CLASS 75 SPECIALIZED METALLURGICAL PROCESSES, COMPOSITIONS FOR USE 75 - 1
THEREIN, CONSOLIDATED METAL POWDER COMPOSITIONS, AND LOOSE METAL
PARTICULATE MIXTURES

300	COMPOSITIONS	326	...Containing clay (e.g., bentonite, montmorillonite, etc.), cement, or Alkali metal silicate
301	.Reactive furnace lining		
302	.Welding rod or electrode defined by composition	327	...Containing Alkaline earth metal compound or Aluminum(Al) compound
303	.Solid treating composition for liquid metal (e.g., flux, slagging agent, casting agent, etc.) or charge	328	..Containing free metal
304	..In wire, container, or article with surface feature	329	..Containing Alkaline earth metal compound or Aluminum(Al) compound
305	..For casting or teeming operation	228	.Consolidated metal powder compositions
306	..For electrothermic operation (e.g., electroslag remelting, etc.)	229	..Flake or fibrous constituent or fibrous grain structure
307	..Containing Boron(B) compound	230	..With nonmetal constituent - Silicon(Si) considered a metal (e.g., cermet, etc.)
308	..Containing Halide	231	...Molybdenum sulfide or functional constituent (e.g., lubricant, abrasive, etc.)
309	...Containing Fluoride	232	...Oxide containing
310	...And consolidated	233	...With another nonmetal
311	...And consolidated	234	...Oxygen(O) associated with more than one metal
312	..Containing Carbide	235	...Oxide of Aluminum(Al), Beryllium(Be), Magnesium(Mg), Alkaline earth metal, Scandium(Sc), Yttrium(Y), Lanthanide metal, Actinide metal, Titanium (Ti), Zirconium(Zr), or Hafnium(Hf)
313	..Composition for or from consolidating by agglomerating, calcinating, compacting, indurating, roasting, sintering, or solidifying from molten mass	236	...Carbide containing
314	...Containing free metal	237	...With another nonmetal
315	...Aluminum(Al) or Magnesium(Mg) as free metal	238	....Nonmetal is Boron(B) or Nitrogen(N)
316	...Iron(Fe), Iron scrap, or Iron alloy as free metal	239	...Carbide only of Vanadium(V), Niobium(Nb) or Columbium(Cb), or Tantalum(Ta)
317	....And coal, coke, pitch, asphalt, or tar	240	...Carbide only of Chromium(Cr), Molybdenum(Mo), or Tungsten(W)
318	....And clay (e.g., bentonite, montmorillonite, etc.), cement, or Alkali metal silicate	241	...Carbon(C) associated with more than one metal
319	...Containing Iron(Fe) compound	242	....Free metal is Iron(Fe), Cobalt(Co), or Nickel(Ni) only
320	....And coal, coke, pitch, asphalt, or tar	243	...Nonmetal is elemental Carbon(C) only
321	....And synthetic polymer, natural polymer, or carbohydrate	244	..Containing Boron(B) or Nitrogen(N)
322	....And clay (e.g., bentonite, montmorillonite, etc.), cement, or Alkali metal silicate	245	..Base metal one or more Transition metal
323	....And Alkaline earth metal compound or Aluminum(Al) compound	246	..Base metal one or more of Iron group, Copper(Cu), or Noble metal
324	...Containing Zinc(Zn) compound		
325	...Containing coal, coke, pitch, asphalt, or tar		

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247	...Base metal one or more of Copper(Cu) or Noble metal	349	...Using Phosphorus(P), Boron(B), or Silicon(Si) or compound thereof
248	..Base metal confined to Tungsten(W)	350	...Using Alkaline earth metal or compound thereof
249	..Base metal one or more of Beryllium(Be), Magnesium(Mg), or Aluminum(Al)	351	..Producing alloy
250	...Base metal is Beryllium(Be) only	352	...Including comminution
255	..Loose particulate mixture (i.e., composition) containing metal particles	353	..Utilizing scrap material
252	..Mixture contains particles of nonmetal	354	..Including comminution
253	...Halogen containing particles	355	...Directly from liquid mass (e.g., by atomizing, etc.)
254	...Boron(B) containing particles	356	...And shaping or sintering prior to comminution
330	PROCESSES	357	...With step at 300 degrees C or greater
331	..Producing solid particulate free metal directly from liquid metal (e.g., liquid comminuting, etc.)	358	...Use of salt bath
332	..With subsequent coating of the particles	359	...Reduction
333	..Utilizing centrifugal force or rotating forming zone to comminute liquid metal	360	...Use of gas
334	...Including directing liquid metal onto rotating disc	361	...Using nonmetallic material which is liquid under standard conditions
335	..By vibrating or agitating	362	..Decomposition of organo- compound containing metal or metal carbonyl
336	..Utilizing electrothermic energy to comminute	363	..At 300 degrees C or greater
337	..By impinging plural liquid streams	364	...Combined with step at less than 300 degrees C using nonmetallic material which is liquid under standard conditions
338	..By impinging or atomizing with gaseous jet or blast	365	...Step at 300 degrees C or greater after step at less than 300 degrees C using nonmetallic material which is liquid under standard conditions
339	...Gas used is air	366	...Utilizing a fluidized bed
340	..By extrusion spraying or gravity fall through orifice	367	...Vaporizing or condensing free metal
341	..Into moving fluid	368	...Settling of powder in molten metal or salt bath
342	..Spheroidizing or rounding of existing solid metal particles	369	...Purifying powdered metal or reducing powdered metal compound to free metal
343	..Producing or purifying free metal powder or producing or purifying alloys in powder form (i.e., named or of size up to 1,000 microns in its largest dimension)	370	..Using nonmetallic material which is liquid under standard conditions
344	..Radioactive	371	...And settling of free metal from solution
345	..Utilizing electrothermic, magnetic, or wave energy	372	...Displacing by another metal (i.e., electromotive series)
346	...Utilizing plasma	373	...Copper(Cu) recovered
347	...Utilizing magnetism	374	...Nickel(Ni) or Cobalt(Co) recovered
348	..Producing or purifying named magnetic material		

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10.1	..Electrothermic processes (e.g., microwave, induction, resistance, electric arc, plasma, etc.)	10.36	..Exhaust or top gas reused or treated
10.11	..With zone melting or fractional crystallization	10.37	...With production of electrical energy
10.12	..Controlling process through sensed condition	10.38	...Producing or treating Iron(Fe) or Iron alloy
10.13	..Electromagnetic wave energy (e.g., microwave, laser, etc.)	10.39	..Adding gaseous treating agent
10.14	..Electrical induction	10.4	...Gas contains gaseous Oxygen
10.15	...Producing or treating Iron(Fe) or Iron alloy	10.41	....Producing or treating Iron(Fe) or Iron alloy
10.16	...With induced magnetic stirring	10.42	....With charge melting by electrothermal energy
10.17	...With gaseous treating agent	10.43	...Hydrogen or Water vapor
10.18	...Producing or treating Aluminum(Al), Beryllium(Be), Cobalt(Co), Chromium(Cr), Magnesium(Mg), Nickel(Ni), Titanium(Ti), or alloy thereof	10.44	...Carbon monoxide or Carbon dioxide
10.19	..Plasma	10.45	...Noble gas, Nitrogen, or inert gas not otherwise identified
10.2	...Influenced by magnetic field	10.46	..Adding solid treating agent, slag or flux
10.21	...Producing or treating Aluminum(Al) or Aluminum alloy	10.47	...Magnesium(Mg) or compound thereof
10.22	...Producing or treating Iron(Fe) or Iron alloy	10.48	...Aluminum(Al) or compound thereof
10.23	..Consumable metal-containing electrode	10.49	...Boron(B) or compound thereof
10.24	...Electroslag remelting	10.5	...Silicon(Si) or compound thereof
10.25	...Producing or treating Chromium(Cr), Cobalt(Co), Copper(Cu), Iron(Fe), Manganese(Mn), Nickel(Ni), Titanium(Ti), or alloy thereof	10.51	....Ferrosilicon alloy
10.26	...Producing or treating Titanium(Ti) or Zirconium(Zr) or alloy thereof	10.52	....Silicon carbide
10.27	..Carbothermic reduction of Aluminum(Al) compound	10.53	....With lime present
10.28	..With volatilization of metal halide	10.54	...Alkali metal, Alkaline earth metal, or compound thereof
10.29	..Distillation or volatilization of refined metal or compound thereof	10.55	....Calcium fluoride (e.g., Fluorspar, Fluorite, etc.)
10.3	...Producing Zinc(Zn)	10.56	....Calcium carbide
10.31	....From consolidated material (e.g., briquette, pellet, etc.)	10.57	....Calcium carbonate (e.g., limestone, etc.)
10.32	....With electric arc	10.58	...Calcium oxide (e.g., lime, calx, etc.)
10.33	...Producing magnesium(Mg)	10.59	...Carbon(C) containing material (e.g., Carbon, carbonaceous material, Carbide, etc.)
10.34	..Rotating chamber	10.6	...Producing or treating Iron(Fe) or Iron alloy
10.35	..Reducing or smelting slag or dross as starting material	10.61	....With electric arc
		10.62	..Reducing or smelting
		10.63	...Producing or treating Iron(Fe) or Iron alloy
		10.64	..Vacuum purifying or degassing
		10.65	..Melting or holding melt
		10.66	...Producing or treating Iron(Fe) or Iron alloy
		10.67	..Magnetic (e.g., electromagnetic, etc.) or electrostatic processes

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375	..Process control responsive to sensed condition	406	..Adsorbing impurity from vaporous or liquid metal
376	..Removing material from process to sense condition	407	..Filtering vaporous or liquid metal
377	...Material removed is molten metal	408	...Alkali metal, singly or in combination
378	..Pressure sensed	409	...Magnesium(Mg)
379	...Of feed gas	410	...Noble metal, singly or in combination
380	..Temperature sensed	411	...Copper(Cu)
381	...Of waste gas	412	...Aluminum(Al)
382	...Of molten metal	413	..From metal carbonyl or Carbon monoxide complex
383	...Of sintered material	414	..At 300 degrees C or greater (e.g., pyrometallurgy, etc.)
384	..Composition sensed	415	...Foam
385	...Of waste gas	416	...Combined with step at less than 300 degrees C using nonmetallic material which is liquid under standard conditions (e.g., hydrometallurgy, etc.)
386	..Characteristic of treated material sensed (e.g., density, etc.)	417	....Obtaining metal from photographic waste
387	..Flow rate sensed	418	....Obtaining metal from electrolytic slime
388	..Preparing for amalgamation, preparing and amalgamating, or breaking amalgam to produce free metal	419	....Step at less than 300 degrees C using nonmetallic material which is liquid under standard conditions after a step at 300 degrees C or greater
389	..And displacing with a metal other than Mercury(Hg)	420	.....Step at less than 300 degrees C using nonmetallic material which is liquid under standard conditions is reduction to free metal
390	..Utilizing a Halogen containing agent	421	.....Noble metal
391	..Utilizing a Nitrogen(N) containing agent	422	.....Silver(Ag)
392	..Producing or treating free metal	423	.....Gold(Au)
393	..Utilizing Radioactive material, producing or treating Radioactive metal	424	.....Copper(Cu)
394	...Thorium(Th)	425	.....Iron(Fe), Cobalt(Co), or Nickel(Ni)
395	....Reduction	426	....Noble metal obtained
396	...Plutonium(Pu)	427	.....Silver(Ag)
397	....Reduction	428	.....Gold(Au)
398	...Uranium(U)	429	....Copper(Cu) obtained
399	....Reduction	430	....Iron(Fe), Cobalt(Co), or Nickel(Ni) obtained
400	..Free metal production from sea nodules	431	....Zinc(Zn), Cadmium(Cd), or Mercury(Hg) obtained
401	..Treating multicomponent metal-containing scrap having an integral substrate to separate metal therefrom by temperature modification or chemical process at least one metal remains solid during separation	432	....Tin(Sn) or Lead(Pb) obtained
402	...Utilizing molten salt bath	433	...Iron(Fe)
403	...Removing nonmetal from metal	434	...With concurrent production of hydraulic cement
404	..Separating liquid metal by centrifuging		
405	..Removing gas from liquid metal by use of gas permeable membrane		

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435With concurrent production of Titanium dioxide	472Defined composition of Iron(Fe) source
436	....With consolidation (e.g., pelletizing, etc.) of solid metallic Iron(Fe) product after reduction	473	....Reduction in closed retort (e.g., Hoganas process, etc.)
437	....Reducing Iron(Fe) halide	474	....Reduction in rotary kiln
438	....Making wrought Iron(Fe)	475	.....With melting of Iron(Fe) product
439	.....Pouring molten Iron(Fe) into molten slag (i.e., Aston process)	476	.....Iron(Fe) product melted within rotary kiln
440	.....Utilizing moving hearth	477	....Introducing solid reductant into rotary kiln
441	.....Directly from Iron(Fe) compound only (no metallic Iron)	478	.....Solid reductant is recycled
442	.....In moving furnace	479	.....Any part of the charge is consolidated by agglomerating, compacting, indurating, or sintering (e.g., pelletized ore, flux, or reductant, etc.)
443	....Reducing in gaseous suspension	480	.....Reducible Iron(Fe) compound and solid reductant fed through same end of rotary kiln
444	.....Fluidized bed	481	.....Mixed prior to charging
445	.....With melting of Iron(Fe)	482	....With generation of gaseous reductant outside rotary kiln
446	.....Outside the fluidized bed	483	....Superposed multiple hearth reduction
447	.....With solid in fluidized bed in addition to reducible Iron(Fe) compound	484	....Moving furnace or hearth (e.g., moving belt, etc.)
448	.....Carbon(C)	485	....Reduction in molten state
449	.....Generated in situ	486	....Heating reduction zone by heat conducted through walls of zone
450	.....Using plural fluidized bed furnaces	487	.....Shaft furnace
451	.....Using plural fluidized bed zones within a furnace	488	....Reduction to metallic Iron(Fe) within shaft furnace
452	....Solid product produced (without melting)	489	.....Externally supplied gas reductant
453	....Cyclone apparatus used	490	.....Solid Iron(Fe) produced within shaft furnace
454	....Using same inlet to feed solid and gas	491	.....With melting Iron(Fe) product outside shaft furnace
455	.....Inlet is a burner	492	.....With gasification of solid carbonaceous material in melt (e.g., coal, etc.)
456	.....Burner is horizontal	493	.....Using solid Carbon(C) to generate gas in separate furnace (e.g., Wiberg process, etc.)
457	.....Inlet feeds upwardly	494	.....Solid Carbon(C) is coal
458	....Blast furnace reduction to produce molten Iron(Fe)	495	.....Direct addition of gas containing gaseous Oxygen or water to shaft furnace (e.g., continuous HyL process, etc.)
459	....Using additive to the blast		
460	.....Carbonaceous		
461	.....Slurry of solid in liquid		
462	.....Liquid		
463	.....Gaseous		
464	.....Recycled off gas		
465	.....Water		
466	.....Oxygen enrichment		
467	....Tapping molten product		
468	....Top gas recovery		
469Specified method of charging burden		
470Defined composition of slag		
471Defined composition of reductant		

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496With reformation of reducing gas in separate furnace (e.g., Midrex process, etc.)	517With addition of solid elemental Carbon(C) or employing elemental Carbon furnace lining
497	.....With plural reformers (e.g., Purofer process, etc.)	518	.....With compound containing Alkali metal and Oxygen (e.g., Sodium nitrate, Sodium carbonate, etc.)
498	.....With addition of steam to reformer (e.g., Armco process, etc.)	519	.....With Halogen or Halogen containing compound (e.g., Sodium chloride, Fluorspar, etc.)
499	....Molten Iron(Fe) produced in shaft furnace	520	.....With Alkaline earth metal or Magnesium(Mg) containing compound
500	....Reduction in molten state	521	.....With Transition metal compound
501	....Gas injection below surface of melt	522	.....Iron oxide
502	....Gas injection over surface of melt (e.g., as in reverberatory furnace, etc.)	523	.....Melting solid Iron(Fe)
503	....Reduction in presence of solid Carbon(C) containing material (e.g., coke, coal, carbides, etc.)	524	....Sequential treatment of molten Iron(Fe) in plural apparatus with different linings (e.g., acid Bessemer followed by basic Bessemer, etc.)
504	....Including consolidation of solid Carbon(C) containing material with reducible Iron(Fe) compound	525	....Impinging free falling molten metal stream or spray with a gas or solid agent or spraying (e.g., atomizing, etc.) of molten metal
505	....Reduction with externally applied gas (e.g., batch HyL process, etc.)	526	....Adding solid treating agent in form of wire, rod, or article with surface feature or in container or by plunging means
506	....Reduction in the presence of liquid carbonaceous reductant (e.g., petroleum, pitch, etc.)	527	....In rotary kiln (e.g., Kaldo process, etc.)
507	....Melting Iron(Fe) or treating molten Iron	528	....Injecting gas or nonmetalliferous liquid which gasifies into, onto, or through premelted Iron(Fe) or slag layer thereon
508	....Vacuum treatment of molten Iron(Fe)	529	....With hydrocarbon liquid or gas present
509	.....Free falling stream or spray of molten Iron(Fe)	530	.....And hydrocarbon in surrounding relationship to gaseous Oxygen (e.g., hydrocarbon in outer concentric tube, etc.)
510	.....Vacuum lift	531	.....And adding solid agent, slag, or flux to premelted Iron(Fe) or slag layer thereon
511	.....With addition of gas	532	.....Loose elemental Carbon(C), coal, or coke (e.g., carburizing, etc.)
512	.....With addition of gas		
513	....In reverberatory furnace (e.g., open-hearth, Siemens-Martin, puddling, etc.)		
514	.....With treating of molten Iron(Fe) with gas outside reverberatory furnace (e.g., in Bessemer converter, etc.)		
515With melting Iron(Fe) in shaft furnace		
516Using gaseous Oxygen in a higher concentration than in ambient air		

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533With solid entrained in gas or injected by gas pressure	560Treating premelted Iron(Fe) or slag layer thereon by adding solid agent, slag, or flux
534	.....Boron(B) or compound thereof used in process	561	.....Loose elemental Carbon(C), coal, or coke (e.g., carburizing, etc.)
535	.....Metal halide used in process	562	.....Sulfur(S) or compound thereof
536	.....Carbide used in process	563	.....Nitrate, Chlorate, Permanganate, or Peroxide
537	.....Elemental metal or elemental Silicon(Si) used in process	564	.....Boron(B) or compound thereof
538	.....Iron(Fe) containing compound used in process	565	.....Metal halide
539	.....Alkali metal compound or Alkaline earth metal compound used in process	566	.....Carbide
540	.....Gas contains gaseous Oxygen	567	.....Elemental metal or elemental Silicon(Si)
541	.....Metal halide	568	.....Aluminum(Al) or Magnesium(Mg)
542	.....Carbide	569	.....Iron(Fe) containing compound
543	.....Elemental metal or elemental Silicon(Si)	570	.....Alkali metal compound or Alkaline earth metal compound
544	.....Iron(Fe) containing compound	571	.....Melting solid Iron(Fe)
545	.....Alkali metal compound or Alkaline earth metal compound	572	.....Melting packaged Iron(Fe) or Iron of specified structure to facilitate melting (e.g., shaped bale of scrap, etc.)
546	.....Noble gas or inert gas not otherwise identified	573	.....In shaft furnace (e.g., cupola, etc.)
547	.....Gas compound containing Oxygen (e.g., Carbon monoxide, Carbon dioxide, Water, etc.)	574	.....Without the use of solid, carbonaceous material (e.g., without coke, etc.)
548	.....Gas contains gaseous Oxygen	575	.....Using Oxygen in a higher concentration than ambient air
549	.....With treatment of exhaust gas	576	.....Using both a solid carbonaceous fuel (e.g., coke, etc.) and a fluid (e.g., natural gas, etc.)
550	.....And adding gaseous Oxygen or inert gas to exhaust gas	577	.....Defined composition of solid fuel other than nominal "coke"
551	.....Injecting from above and below melt surface	578	.....With Calcium carbide
552	.....Including other gas from below	579	.....With Alkali metal compound
553	.....Injecting only from above melt surface	580	.....In closed vessel with heat conducted through walls only (e.g., crucible melting, etc.)
554	.....Including other gas from above	581	.....Melting scrap
555	.....Including other gas from below	582	.....Separating slag from molten Iron(Fe)
556	.....Injecting only from below melt surface	583	.....Stirring or agitating molten Iron(Fe)
557	.....Including other gas from below	584	.....Pouring or tapping molten Iron(Fe)
558	.....Noble gas or inert gas not otherwise identified	585	...Nonferrous
559Gas compound containing Oxygen (e.g., Carbon monoxide, Carbon dioxide, Water, etc.)		

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586Concurrent production of Nonferrous metal and other desired nonmetallic product (e.g., cement, etc.)	618Free metal or alloy reductant contains Magnesium(Mg)
587	....Countercurrent liquid-liquid extraction of molten Nonferrous metal	619	.....Metal produced is Titanium(Ti)
588	....Fractionation of molten Nonferrous metal (e.g., with reflux, etc.)	620	.....Of Titanium(Ti), Zirconium(Zr), or Hafnium(Hf) compound containing Halogen
589	....Alkali metal, singly or in combination	621	.....Treating molten Titanium(Ti), Zirconium(Zr), or Hafnium(Hf)
590	....Vaporizing or condensing	622	....Vanadium(V), Niobium(Nb) or Columbium(Cb), or
591	.....Cesium(Cs)		Tantalum(Ta), singly or in combination
592	....Precipitating impurities from molten Alkali metal	623	....Chromium(Cr), Molybdenum(Mo), or
593	....Beryllium(Be)		Tungsten(W), singly or in combination
594	....Magnesium(Mg)	624	....Manganese(Mn)
595	....Vaporizing or condensing	625	....Reduction
596	.....Reduction	626	....Cobalt(Co)
597	.....Using metal or metal compound reductant	627	....Reduction
598	.....And Carbon(C)	628	....Nickel(Ni)
599	.....Using Carbon(C)	629	....Reduction
600	....Treating molten Magnesium(Mg)	630	.....Segregation process
601	.....Precipitating impurities from molten Magnesium(Mg)	631	....Noble metal, singly or in combination
602	.....Adding gas	632	....Palladium(Pd)
603	.....And solid	633	....Platinum(Pt)
604	.....Adding solid	634	....Silver(Ag)
605	....Alkaline earth metal, singly or in combination	635	.....Recovering Silver(Ag) from photographic material
606	....Reducing halide	636	.....Reduction
607	....Vaporizing or condensing	637	.....Gold(Au)
608	.....Reduction	638	....Copper(Cu)
609	....Treating molten Alkaline earth metal	639	....Treating material in gaseous suspension
610	....Rare earth metal, singly or in combination	640	.....Treating slag or dross
611	....Refractory metal, singly or in combination	641	.....Reduction
612	.....Titanium(Ti), Zirconium(Zr), or Hafnium(Hf), singly or in combination	642	.....Segregation process
613	.....Reduction	643	.....Treating matte or sulfide
614	.....Using free metal or alloy reductant	644	.....Treating waste gas
615	.....Of Titanium(Ti), Zirconium(Zr), or Hafnium(Hf), compound containing Halogen	645	.....With prior production of matte or sulfide
616	.....Of binary halide - MX(4)	646	....Treating molten Copper(Cu)
617	.....Of chloride - MCl(4)	647	.....By vacuum
		648	.....Adding gas
		649	.....Containing gaseous Oxygen
		650	.....And adding solid
		651And solid
		652Adding solid
		653Melting Copper(Cu) in shaft furnace
		654Zinc(Zn)

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655Treating slag or dross	696Of Lead-Sulfur compound
656Reduction	697Treating molten Lead(Pb)
657	.....Using Halogen containing material	698	.....By vacuum
658	.....Vaporizing or condensing	699	.....Adding gas
659	.....Treating material in gaseous suspension	700	.....Containing Halogen atom
660	.....Treating material in blast furnace or cupola	701	.....Adding solid
661	.....Treating material in vertical retort	702	.....Containing free metal
662	.....Treating material in rotary kiln	703	...Antimony(Sb)
663	.....Treating molten or vaporous Zinc(Zn)	704	....Reduction
664	.....Using Halogen containing material	705	...Bismuth(Bi)
665	.....Vaporizing or condensing	706	...Arsenic(As)
666	.....Condensing with Lead(Pb) coolant	707	...Reducing or smelting unnamed ore
667	.....Condensing with use of molten metal slinger	708	...Stirring or agitating of molten material
668	...Cadmium(Cd)	709	...Covering the surface of molten metal
669	....Vaporizing or condensing	710	..Below 300 degrees C
670	...Mercury(Hg)	711	...Using nonmetallic material which is liquid under standard conditions (e.g., hydrometallurgy, etc.)
671	...Aluminum(Al)	712	...Involving mining or in situ operation
672	.....Treating slag or dross	713	...From photography material
673	.....Reduction	714	...From electrolytic or cementation slime
674	.....Carbothermic	715	...Removing coating to recover free metal from substrate or coating
675	.....Decomposition of organo-compound containing Aluminum(Al)	716	.....From Tin(Sn) scrap or Tin plate
676	.....Of Aluminum(Al) halide	717	...Reducing to free metal with gas
677	.....Of subhalide	718	....Copper (Cu) recovered as free metal
678	.....Treating molten Aluminum(Al)	719	.....Using Sulfur dioxide
679	.....Fractional crystallization	720	....Noble metal recovered as free metal
680	.....Adding gas	721	...Utilizing organic reducing agent
681	.....Containing Halogen atom	722	...Involving organic compound containing metal or organic agent for agglomerating metal
682	.....And adding solid	723	....Natural or synthetic polymer
683	.....And solid	724	...Displacing by another metal (i.e., electromotive series)
684	.....Adding solid	725	....Lead(Pb) or Zinc(Zn) recovered as free metal
685	.....Containing Halogen	726	....Copper(Cu) recovered as free metal
686	....Melting Aluminum(Al)	727	.....And flotation
687	.....Scrap	728	.....And injecting or pressurizing with air or Oxygen
688	....Gallium(Ga) or Indium(In)		
689	....Germanium(Ge)		
690	....Tin(Sn)		
691	.....Reduction		
692	.....Of Halogen containing material		
693	....Lead(Pb)		
694Treating material in gaseous suspension or gaseous state		
695Reduction		

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729From Cyanide solution	755	...On moving grate, moving pallet, or endless belt
730	.....With agitating or abrading	756	...Using multi-layers
731	.....Utilizing leaching agent containing Sulfur(S)	757	...With gas recycling or reusing
732	.....Noble metal recovered as free metal	758	...Sintering
733	.....Silver(Ag) recovered as free metal	759	.....Of consolidated starting material
734	.....And injecting or pressurizing with air or Oxygen	760	...In shaft furnace or multi- hearth furnace
735	.....From Cyanide solution	761	...Sintering
736	.....Gold(Au) recovered as free metal	762	...In rotary kiln
737	.....From Cyanide solution	763	...Sintering
738	.....Nickel(Ni) or Cobalt(Co) recovered as free metal	764	...Coking of binder or additive
739	...Utilizing chemical agent to precipitate free metal	765	...Sintering or with agglomerating or compacting
740	.....Copper(Cu) recovered as free metal	766	...With coal, coke, pitch, asphalt, or tar
741	.....Noble metal recovered as free metal	767	...With synthetic polymer, natural polymer, or carbohydrate
742	...Cleaning, leaching, or dissolving of Mercury(Hg)	768	...With Alkaline earth metal compound, clay, or hydrosetting agent
743	...With leaching or dissolving	769	...Sintering
744	.....Noble metal recovered as free metal	770	..Agglomerating or compacting
745	...Alkali metal, singly or in combination	771	...With coal, coke, pitch, asphalt, or tar
746	.Consolidating metalliferous material (e.g., ore, tailings, flue dust, fluxes, etc.) by agglomerating, compacting, or heat treating; preparatory process therefor; or treating consolidated material therefrom	772	...With synthetic polymer, natural polymer, or carbohydrate
747	..Noble metal containing metalliferous material	773	...With Alkaline earth metal compound, clay, or hydrosetting agent
748	..With vaporization of impurity as metal halide	<u>CROSS-REFERENCE ART COLLECTIONS</u>	
749	..With physical separation or classification of solids	950	CONSOLIDATED METAL POWDER COMPOSITIONS OF >95% THEORETICAL DENSITY (E.G., WROUGHT, ETC.)
750	...By sifting	951	.Oxide containing (e.g., dispersion strengthened, etc.)
751	..With heat treatment (e.g., calcinating, fusing, indurating, roasting, sintering, vaporizing, etc.)	952	PRODUCING FIBERS, FILAMENTS, OR WHISKERS
752	...Vaporizing metalliferous impurity	953	PRODUCING SPHERES
753	...With leaching, dissolving, or washing	954	PRODUCING FLAKES OR CRYSTALS
754	...By suspension (e.g., fluid bed, cyclone, etc.)	955	PRODUCING DENTAL PRODUCT
		956	PRODUCING PARTICLES CONTAINING A DISPERSED PHASE
		957	CONTINUOUS REFINING OF MOLTEN IRON(Fe)

CLASS 75 SPECIALIZED METALLURGICAL PROCESSES, COMPOSITIONS FOR USE THEREIN, CONSOLIDATED METAL POWDER COMPOSITIONS, AND LOOSE METAL PARTICULATE MIXTURES 75 - 11

- 958 WITH CONCURRENT PRODUCTION OF
IRON(Fe) AND OTHER DESIRED
NONMETALLIC PRODUCT (E.G.,
ENERGY, FERTILIZER, ETC.)
- 959 THERMIT-TYPE REACTION OF SOLID
MATERIALS ONLY TO YIELD MOLTEN
METAL
- 960 IN ZERO GRAVITY ENVIRONMENT
- 961 TREATING FLUE DUST TO OBTAIN
METAL (OTHER THAN BY
CONSOLIDATION)
- 962 TREATING OR USING MILL SCALE

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

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