

282 **WITH NONLIQUID CLEANING MEANS FOR SEPARATING MEDIA**

Class 55 is an integral part of this Class (Class 96), as shown by the position of this box, and follows the schedule hierarchy of this Class, retaining all pertinent definitions and Class lines of this class.

282.1	.Having insulation	300	..Vibrating, jarring, or rapping means
282.2	.With heating or cooling means	301	.Cohesive filter media cleaning
282.3	..Residue burned	302	..Pneumatic reverse flushing
282.4	..Two confined fluids in indirect contact	303	...Draft diverted from one side of filter to other
282.5	...Heat exchanger is part of separator or is contiguous therewith	304	..Filter manipulation, shaking or flexing for precluding or removing encrustation
283	.With automatic control of cleaning means	305	...Attendant actuated manipulating means
284	.With sequential cleaning of plural units	306	AIRCRAFT ANTI-INGESTION MEANS (E.G., AIRCRAFT DEBRIS GUARD)
285	..Ferris wheel type filter unit arrangement	307	FILTER OR APERTURED DEFLECTOR UNIT DISCONTINUOUS ACROSS GAS FLOW WITHIN FLOW CONDUIT
286	..With gas flow arresting means	308	.Multiple members serially spaced in flow conduit
287	...Interconnected with cleaning means	309	WITH SEPARATING MEDIA BYPASS OR SYSTEM GAS PRESSURE RELIEF (E.G., RUPTURABLE OR DEFORMABLE)
288	.Interdependent or interoperated gas flow cutoff or apparatus shutdown and media cleaning	309.1	.With heating or cooling means
289	.Interdigitated comb and separating media	310	.Pressure relief means to or from atmosphere
290	.For moving indefinite or continuous length separating media	311	..Relief means is downstream of media (e.g., ambient air bypasses filter)
291	.Plural diverse cleaning means	312	.Valved bypass means
292	.Sonic type	313	..Gas force responsive
293	.With separating media pneumatically vibrated or flexed	314	..Shunt means for total flow
294	.Relatively movable pneumatic nozzle (e.g., scanning nozzle)	315	PLURAL SERIAL BASICALLY DIVERSE SEPARATING MEDIA
295	.Solid agent cleaning member movingly contacts apparatus	315.1	.With heating or cooling means or having insulation
296	..Agent has defined traversing motion relative to separating media	315.2	..Heat exchanger is part of separator or is contiguous therewith
297	...With motion effecting means interrelated with separating operation	317	.At least one mounted for continuous motion
298	....Gas flow actuates member	318	.Plural stages in unitary casing
299	..With resulting flexing or distortion of resilient or collapsible separating media	319	..Including expansion chamber
		320	..Deflector and fibrous, filamentary, particulate solids, or cohesive sheet filter type
		321	...Multiple of one type in series of parallel in flow path
		322	...Serially spaced with at least one of other type intermediately positioned
		323	....Filters
		324	....In parallel
		325	...Serially spaced deflectors

326	....With connected trough or channel	347	...Gas inlet and outlet at linearly opposite ends of separating zone
327	...Filter is most upstream	348	...Plural gas inflow openings, slots, or whirl vanes in each separator
328	...Movable or movable mounted for adjustment or nonuse	349	...Tangential inlet to each separator
329	...Filamentary brush type or fibrous mass	350.1	.Filters
330	...Tubular or annular for radial gas flow	351	WITH MEANS FOR ADVANCING CLEAN PORTIONS OF CONTINUOUS OR INDEFINITE LENGTH SEPARATING MEDIA INTO GAS STREAM
331	...Conical deflector with curved or parabolic radially extending wide downstream end	352	.Advancing means initiated by flow, pressure, or pressure differential of gas
332	...Cohesive sheet-like filter	353	.Multiple distinct units
333	...Multiple contiguous layers or coils with radial gas flow	354	.Indefinite or running length
334	...Bag type	355	WITH LIQUID TRAP SEAL OR VALVE
335	....Including imperforate upstream bag end deflector	356	WITH MEANS FACILITATING TRANSPORTABILITY OR HANDLING OF APPARATUS
336	...Conical	357	.Handle feature for apparatus or part thereof
337	...Cyclone or centrifugal whirl type deflector	358	WITH GROUND SUPPORT MEANS (NONFLOW CONDUCTING)
338	WITH RECYCLE MEANS	359	WITH PORTION OF COVER REMOVABLE
338.1	.With heating or cooling means	360	WITH ELECTRICAL GROUNDING MEANS
339	.For concentrate entrained in effluent gas outlet means	361	FLEXIBLE OR COLLAPSIBLE BAG TYPE
340	..Return conduit is external of apparatus	362	.With bag ejecting means
341.1	MULTIPLE BAG TYPE FILTERS IN CHAMBER	363	.Toroidal or annular bag
341.11	.With heating or cooling means or having insulation	364	.Impervious bag with pervious portion
341.2	.Gas flow from inside to outside of filter	365	.Bag carried strain relief means between bag supports
341.3	..Modular compartments	366	.With separable nonfiltering residue container
341.4	..Horizontally mounted filters	367	.Valved, self-closing, or apparatus contained bag closing means
341.5	.Modular compartments	368	.Spaced interior inflow path or with means modifying gas flow in bag
341.6	.Partitioned bag filter chamber	369	.Closure means other than coupler to flow line for filter or cover bag
341.7	.Horizontally mounted filters	370	..Use position residue removal means
342	MULTIPLE SEPARATORS, EACH WITH DISCRETE AND LONGITUDINALLY CONFINED GAS INLET OR OUTLET FLOW PATH	371	...Inner filter bag removal
342.1	.With heating or cooling means or having insulation	372	.With additional nonbag type filter
342.2	..Heat exchanger is part of separator or is contiguous therewith	373	.Housing closure secures bag
343	.Combined serial and parallel arrangement	374	.With flow line coupling means
344	.With flow equalizing, controlling, or distributing means		
345	.Centrifugal		
346	..Parallel		

375	..Flexible conduit joins line to bag	406	.Differentially deflected system fluid constituents
376	..Coupling part inseparable from bag	407	..Concentrate flow groove, guide, or channel on moving member
377	...Resilient or expansible	408	..Separated gas conducted axially through rotating member
378	.With securing or supporting means	409	...Hollow shaft
379	..Bag internally supported	410	WITH SEPARATED GAS OUTFLOW CONTROL (E.G., APERTURED CONDUIT)
380	.Nested bags or folded wall with spaced or unsecured faces		
381	.Seaming, reinforcing or bag structure	410.1	.With heating or cooling means
382	..Multi-ply, strata, or laminated	411	.Movable gas outlet conduit
383	WITH REMOTE FAN OR PUMP AND UNCONFINED FLOW TO SEPARATOR COMBINED OR CONVERTIBLE	412	..Longitudinal
385.1		413	.Baffle or flow guide
385.2	.In environmental air enclosure	414	..Within or downstream of gas outlet conduit
385.3	.In motor vehicle	415	...Movable baffle of flow guide
385.4	.In vented container	416	...Flow straightener
385.5	.Involving mining or metallurgical apparatus	417	.Valve
385.6	.Involving communication receiving or transmitting apparatus	418	WITH INFLOW GAS CONTROL OR DISTRIBUTION
385.7	.Involving shielding apparatus	418.1	.With heating or cooling means or having insulation
385.8	.Involving ash tray	419	.Multiple inlets
391	RESTRICTED ANNULAR MIXTURE INLET TO COLLECTOR ZONE AROUND GAS OUTLET CONDUIT ATTACHED BAFFLE WITH GUIDE MEANS EFFECTING REMOVAL OF CONSTITUENT LAYER OUT OF GAS STREAM	420	.Check valve
392		421	WITH MEANS FOR LIQUID SEPARATION SEPARATING MEDIA ADJUSTABLE TO VARIOUS POSITIONS OF USE OR TO NONUSE
392.1	.With heating or cooling means	422	MEANS WITHIN GAS STREAM FOR CONDUCTING CONCENTRATE TO COLLECTOR
393	.Movably mounted for adjustment	423	WITH CONCENTRATE BACKFLOW OR RE-ENTRAINMENT PREVENTING MEANS
394	.At escape means for heavier constituent	424	.Closure between separating and collecting zones
395	..And separable residue receptacle	425	.Baffle intermediate concentrate collector zone and gas outlet conduit
396	..Annular outlet around gas outflow path	426	..Adjustably mounted
397	..Spaced, overlapped walls	427	RESIDUE ACCESS, HANDLING OR REMOVING MEANS
398	..Plural, angularly spaced	428	
399	.Spiral guide	428.1	.With heating or cooling means
400	MOUNTED OR SUPPORTED FOR CONTINUOUS MOTION	429	.Separable collection container
401	.Plural distinct separating media or stages	430	.With means effecting or assisting discharge of residue (e.g., endless belt)
402	..Overlapping moving separators	431	..Gaseous or liquid
403	..Plural moving separators serially arranged	432	.With movable or manipulable means controlling escape of residue
404	.Moved by system fluid in confined flow path	433	..Manually actuated
405	..Fluid flow normal to axis of moving member	434	DEFLECTOR
		434.1	.Having insulation
		434.2	.With heating or cooling means

434.3	..Two confined fluids in indirect contact	458	..Inflow pipe projects within casing
434.4	..Heat exchanger is part of separator or is contiguous therewith	459.1	..Tangential gas inlet opening in casing
435	..Wear liners or surface characteristics (e.g., anti-erosion)	459.2	...Inclined inflow
436	..Removably supported deflector surface	459.3	...Scroll
437	..With gas pump or fan	459.4	...Inflow nozzle or vane
438	..Within separator	459.5	...Varying inlet area
439	..Downstream of separator	460	...With tangential gas outlet
440	..Parallel and continuous nonplanar members (e.g., crimped, corrugated, curved)	461	..Continuous confined flow path
441	..Concentric, nested conduits with closed and open ends for flow reversal	462	..Impingement baffle
442	..Plural deflectors overlapped and spaced serially in gas flow	463	..Conical with apex facing upstream
443	..Plural deflectors in row across gas flow	464	..Corrugated, ribbed, crimped, or with projections
444	...Deflectors in alternate rows aligned (i.e., staggered)	465	..Planar
445	..Deflectors apertured or closely spaced from flow path wall	466	WITH SEPARATED NONGASEOUS MATERIAL CONDUCTING OR TREATING MEANS
446	...Space or aperture opposed by solid deflector surface	467	WITH GAS FLOW EFFECTING MEANS
447	..Fixed gas whirler or rotator means	467.1	..With heating or cooling means
448	..With outlet gas conduit wall common to surrounding gas inlet or concentrate outlet or collector	468	..Injector or jet pump type
449	...Gas inlet and outlet have common wall	469	..Manual, weight, or traction operated gas pump
450	...With outlet from collector	470	..Plurality of impellers arranged in parallel or performing diverse functions
451	....Tangential outlet pipe	471	..Impeller within or proximate to space encompassed by separating media
452	..With plural concentrate outlets in arcuate, axially extending whirl chamber wall	472	..Upright or multichambered casing
453	..With concentrate outlet means in one of parallel plates mounting spaced whirler vanes	473	..Impeller upstream of separating media
454	..With tangential concentrate outlet pipe	474	WITH PARTICULATE SOLIDS MOVEMENT DURING USE OR AGITATING MEANS THEREFOR
455	..Plural nonradial gas passages in peripheral wall (e.g., tuyere)	475	WITH MEANS ADJUSTABLE TO CONTROL COMPACTNESS OF SEPARATING MEDIA
456	..Helical vane or baffle within flow conduit	476	WITH MEANS INTRODUCING GAS INTO MIDST OF SEPARATING MEDIA
457	..Between gas flow path wall and central core	477	STRANDS OR BRISTLES WITH UNSUPPORTED OR FREE EXTREMITIES (E.G., BRUSH TYPE)
		478	WITH SEPARATE FLOW LINE ACCESS MEANS OR FILTER MEDIA PASSAGE MEANS OFFSET TO FLOW PATH
		479	..For discrete filter particles
		480	..Access means is clamping or coupling means for unit filter media
		481	..Unit transversely slidable through flow path

- 482 **TWO OR MORE SEPARATORS (E.G., SPACED FILTERS IN FLOW LINE OR CASING)**
- 482.1 ..With heating or cooling means
- 483 ..With framework for edge to edge relation
- 484 ..Spaced for parallel flow of gas
- 485 ..Three or more serially spaced
- 486 ..Plies or layers of different characteristics or orientation
- 487 ..Differing mesh sizes
- 488 ..Variation in shape or size
- 489 ..Orientation of elements
- 490 **WITH MEANS SECURING OR RETAINING SEPARATING MEDIA**
- 490.1 ..With heating or cooling means
- 490.2 ..Two confined fluids in indirect contact
- 491 ..Fastening means pierces or penetrates media
- 492 ..Internal frame or support means
- 493 ..Hinged or pivoted retainer or clamp on backing frame or in flow line
- 494 ..Grid or tray type for bottom support only
- 495 ..Unit or cohesive sheet-like media in flow line or frame
- 496 ..With adjustable connector or size adjusting means
- 497 ..Edge supporting or securing means for nonplanar sheet form filter (e.g., zigzag)
- 498 ...Spiral or cylindrical
- 499 ..With additional transversely arranged members
- 500 ..Flexible sheet type maintained in nonplanar configuration
- 501 ..With additional support means not positively engaged or joined to media (e.g., across face of filter)
- 502 ..Gasket or sealing means
- 503 ..Media within joinable or separable flow line sections
- 504 ..Aligned stop, media and removable retainer
- 505 ..Flow line end coupling (e.g., pipe end)
- 506 ...Flange or track on flow line for slidably retaining media
- 507 ...Resilient attaching means
- 508 ..Suspended or supported by bracket or from top of frame
- 509 ..Distorted media in flow line or resilient retaining means
- 510 ..Annular unit held between dished or plate-like end members for top and bottom support
- 511 ..Edge supported or secured only
- 512 ..Discrete fibrous or particulate solids
- 513 ..Resilient securing means
- 514 ..Fused or bonded to a supporting or backing member
- 515 ..Foraminous container
- 516 ..Held between openwork
- 517 ...Between telescoped or nonplanar retainers
- 518 ...Between perforated plates
- 519 ...Between reticulated end closures
- 520 **SPIRAL FILTER MEDIA**
- 521 **ZIGZAG, CORRUGATED, OR CONICAL**
- 522 **SPECIFIC MEDIA MATERIAL**
- 523 ..Ceramic or sintered
- 524 ..With coating, impregnant, or bonding agent
- 525 ..Metal mesh or expanded material
- 526 ..Wadded or compressed
- 527 ..Fibrous or strand form
- 528 ..Organic (e.g., vegetable)
- 529 **MISCELLANEOUS (E.G., SHAPES)**
- FOREIGN ART COLLECTIONS**
- FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**
- DIGESTS**
- DIG 1 **GRADUATED ELECTROSTATIC FIELD**
- DIG 2 **VACUUM CLEANER BAGS**
- DIG 3 **VACUUM CLEANER**
- DIG 5 **METHODS OF MAKING FILTER**
- DIG 6 **MAGNETIC COUPLINGS**
- DIG 7 **BLACK LIQUOR TREATMENT**
- DIG 8 **BUILT-IN VACUUM CLEANERS**
- DIG 9 **RADIOACTIVE FILTERS**
- DIG 10 **RESIDUE BURNED**
- DIG 12 **POCKET TYPE FILTER**
- DIG 13 **POLYURETHANE FILTERS**
- DIG 14 **INERTIA SEPARATOR**
- DIG 15 **COLD TRAPS**

DIG 17 COMPRESSED AIR WATER REMOVAL
DIG 18 WORK BENCH
DIG 19 CRANKCASE VENTILATION
DIG 20 SPARK ARRESTER
DIG 21 SILENCER CLEANER
DIG 23 STEAM SEPARATORS
DIG 24 VISCOUS COATED FILTER
DIG 25 AGGLOMERATORS
DIG 26 BAG COUPLING
DIG 27 CLEANERS, LIQUID
DIG 28 CARBURETOR ATTACHED
DIG 29 AIR CURTAINS
DIG 30 EXHAUST TREATMENT
DIG 31 FILTER FRAME
DIG 32 GASEOUS FLUID CONVEYING
DIG 33 GAS MASK CANISTER
DIG 34 INDICATOR AND CONTROLLERS
DIG 35 RESPIRATORS AND REGISTER FILTERS
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