



Sargent Controls & Aerospace

SPECIAL PROCESS EVALUATION CHECKLIST

WELDING

SPEC & REV _____

DATE: _____

PROCESSOR _____

AUDITED BY _____

RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are welders certified as required? Verify spec/code limitations regarding qualification [welding positions, types and thicknesses of base and filler metals, weld process - GTA, MIG, SMA, etc.]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are weld procedure specifications [WPS] qualified per applicable spec/code? Verify limitations regarding qualification as above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are above qualification tests performed by DOD or ASTM certified lab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is equipment calibrated and maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are base and filler metal combinations per drawing and WPS? Are material heat/lot numbers traceable as required by code?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are the following steps controlled per the WPS? [a] preheat [b] joint temperature during welding [interpass temperature] [c] joint cooling rate after weld [d] post weld heat treatment, including stress relief?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is joint fit-up verified prior to welding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are shielding gases per WPS and of certified purity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are NDT methods and acceptance criteria per spec/code?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Are repairs properly authorized and documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

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SPECIAL PROCESS EVALUATION CHECKLIST

NON-DESTRUCTIVE TESTING

SPEC & REV _____

DATE: _____

PROCESSOR _____

AUDITED BY _____

RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are operators & inspectors certified, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is equipment calibrated and properly maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are black and white light intensity tests documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are periodic in-service tests made on substances and equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are times and temperatures documented for process solutions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Does the NDT process description document pre-clearing, sequence of operations, required standards, techniques, accept/reject criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are accepted and rejected parts properly stamped and identified, including markings on sampled parts, as acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are lot definitions, sample sizes, levels, AQL's, per specification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is required documentation maintained for all tests, regardless of result, and are reworks and repairs properly documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the general method in accordance with drawing requirements [MPI, LPI, RT, etc.]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is the specific method selected in accordance with specification [MPI, LPI, fluorescent or non-fluorescent LPI, etc.]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

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NON-DESTRUCTIVE TESTING

	YES	NO	N/A
12. Is the sensitivity level appropriate for detection of flaws outside specification limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are acceptance criteria clearly defined and per spec/drawing limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace SPECIAL PROCESS EVALUATION CHECKLIST

PROTECTIVE COATING

SPEC & REV _____

DATE: _____

PROCESSOR _____

AUDITED BY _____

RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are time sensitive materials marked with expiration dates?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is compressed air filtered, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is coating material viscosity monitored and controlled during application?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are times recorded and usage time not exceeded on batch mixes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are parts stress relieved as required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are parts post-baked when required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is measuring equipment adequate to assure that correct thickness is applied?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are test panels or parts checked for water break, thickness, adhesion, finish, hardness, corrosion resistance, hydrogen embrittlement, or other parameters, as required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are periodic process and product tests run and documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Are process acceptance criteria documented, such as thickness, uniform adhesion [tape test], smoothness, color free of smut, powder burns, pits, nodules, or blisters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Are sample sizes, inspection levels, AQL's per specification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

PROTECTIVE COATING

	YES	NO	N/A
12. Is the environment [temp, humidity, particle count] controlled within specified limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. For silicon based conformal coating [type SR] are special precautions taken to prevent surface contamination on PWA's prior to coating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is conformal coating integrity verified by ultraviolet light inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace

SPECIAL PROCESS EVALUATION CHECKLIST

HEAT TREATMENT

SPEC & REV _____

DATE: _____

PROCESSOR _____

AUDITED BY _____

RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Temperature uniformity: [a] Are temperature uniformity surveys run periodically? [b] Is furnace kept within specified range during heat treat cycle? [c] Are the minimum required number of thermocouples used? [d] Is the rate of furnace heat up and cool down controlled? [e] Is automatic controlling/recording equipment used when required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are chemistry and heat treat condition of incoming material verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are salt baths used for quenching tested initially and periodically?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do job instructions include pre-process inspection, pre-cleaning, furnace time, temperature, atmosphere, flow rates, dew points, and other controls, quench and quench delay, post process cleaning, certification, operator tests, inspector tests?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are recording charts identified for each lot/furnace charge and inspection accepted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is atmosphere [or vacuum] monitored for contamination or pressure variation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are mechanical and metallurgical properties checked after heat treatment to verify [a] hardness [b] tensile strength [c] impact strength [d] metallurgy [grain size, intergranular attack, etc.] [e] adequacy of hardening treatments [depth of nitriding, etc.] [f] visual examination for surface defects [g] special tests such as electrical conductivity for aluminum?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

CHEMICAL CONVERSION COATINGS, ALUMINUM

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are materials per MIL-DTL-81706, listed on the QPL, and applied by treatment method for which product was approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are process bath records maintained? Do critical parameters include temperature, PH, contamination level?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does job instruction sheet describe pre-cleaning [including abrasive prohibitions], specific processing conditions, times, temperatures, and final inspections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are processed parts dried below maximum permissible temperature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are specimens examined visually to verify coating integrity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are the following quality tests performed once per month: [a] Wet tape adhesion test [b] Salt spray test [c] Special tests required by the drawing or contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are test samples selected randomly and in accordance with ANSI/ASQC Z1.4-1993 procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace

SPECIAL PROCESS EVALUATION CHECKLIST

ELECTROSTATIC DISCHARGE CONTROL

SPEC & REV _____

DATE: _____

PROCESSOR _____

AUDITED BY _____

RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are personnel training records available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are conductive or static proof containers used during transfer and storage of all static sensitive components and assemblies [including conformally coated assemblies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are pin shunting devices used for connectors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are workstations protected by conductive mats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are wrist or boot straps worn by personnel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is integrity of ground connections checked periodically?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are ESD caution notes and the MIL-HDBK-129 sensitive device symbol displayed on parts and assemblies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Just prior to plugging in connectors to receptacles and prior to removing protective coverings, are electrical potentials discharged by momentarily contacting both surfaces?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are bars, clips, or conductive shunting foam applied on connectors for shipping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Do shipping package surfaces contain an ESD caution note or symbol?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

ALUMINUM ALLOY CASTINGS

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Is equipment calibrated and certified, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the job instruction sheet detail all operations including tests and inspections required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Has first production part inspection been performed and approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are new samples inspected when changes in mold, pattern, process occur?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are foundry controls documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are production castings inspected by penetrant and radiographic methods using NAS 410, Level II certified personnel [unless otherwise specified]? Are NDI procedures approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Do mechanical test specimens [test bars, coupons] conform to location and test requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are electrical conductivity, surface roughness & chemical analysis tests conducted, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are castings heat treated, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is rework documented? Is weld repair authorized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Are identification and marking methods per specification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

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SPECIAL PROCESS EVALUATION CHECKLIST
ALUMINUM ALLOY CASTINGS

	YES	NO	N/A
12. Are workmanship and surface quality accept/reject criteria defined?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

FORGINGS, STEEL

SPEC & REV _____ DATE: _____
PROCESSOR _____
AUDITED BY _____
RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Is equipment calibrated and certified, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the job description sheet detail all operations, including tests and inspection required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is weld repair prohibited except when authorized by customer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are the heat treating and NDI sources approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are first production part inspections and foundry control tests accomplished, as applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are chemical analysis, grain flow, mechanical properties, hardness, metallographic, and fracture tests performed per specification requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Has workmanship accept/reject criteria been established?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are rejections properly documented? Is rationale for resubmittal of rejected forgings documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are unit part markings per FED-STD-183 and packaging markings per MIL-HDBK-129?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

PLATING, ELECTRODEPOSITED

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are surfaces cleaned and otherwise prepared as required before plating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is plating applied after all other base metal processing [e.g., heat treating, machining, etc.] is complete, unless otherwise specified by drawing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are plating bath and rinse tanks monitored for contamination level, temperature, PH, or other critical parameters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are solutions and rinses replenished, recycled, or replaced as required by specification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are tanks and containers labeled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is embrittlement relief performed after plating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are quality tests in compliance with requirements and documented? [adhesion, corrosion resistance, mechanical properties - hardness, strength, impact resistance, appearance, chemical composition of plating, thickness?]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are test results documented and verified by QA?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is test equipment calibrated and certified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

ANODIZING OF ALUMINUM

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Has the correct type of anodic coating been selected for the alloy[s] called out on the drawing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are surfaces cleaned before anodizing/is cleanliness verified afterward?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
electrically isolated to prevent galvanic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
and contamination level monitored to assure compliance with specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is bath history documented? Is history maintained for one year minimum?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is sealing performed only when required by spec or drawing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are the following tests performed routinely: [a] weight of coating, [b] thickness of coating, [c] corrosion resistance, [d] visual and dimensional inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

PASSIVATION OF CRES STEEL

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Has the correct type of passivation treatment been specified for the alloy[s] called out on the drawing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are part surfaces cleaned before treatment and cleanliness verified afterward?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is incoming water PH and chloride controlled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the bath controlled per spec requirements [composition of solution, temperature, PH, contamination level]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are non-passivated metal parts masked or galvanically isolated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are parts rinsed in water immediately after treatment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are ferritic and martensitic steels chromate treated within one hour of water rinse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are the correct tests run for the alloy used? Are test results audited by QA to ensure compliance with drawing and spec requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

BRAZING - TYPE: _____ **GRADE:** _____

SPEC & REV _____ **DATE:** _____
PROCESSOR _____
AUDITED BY _____
RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are furnaces and equipment calibrated and certified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Do furnaces have automatic temperature controlling and recording devices?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are parts processed in accordance with a job sheet which details the steps for pre-cleaning, fit-up, fixturing, flux application and immediate removal process parameters, and inspection points?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are rework and repair procedures documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are accept/reject criteria documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Do sample AQL's and lot definitions comply with specified requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are grade A joint radiographically and ultrasonically inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are flux removal tests conducted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

TITANIUM ALLOY BAR AND WIRE

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are the latest issues of specifications referenced in AMS 4958 available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is calibration/certification of furnace controllers and recorders current?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are furnace surveys conducted per MIL-H-81200?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is alloy produced by multiple melting, with at least one cycle under vacuum?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Does the process description sheet detail methods for determining composition, require centerless grind after heat treat followed by acid pickle, and include testing before and after aging?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is there a procedure, which documents wrapping, coiling, grain size determination, and tensile test requirements, including accept/reject criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is penetrant or eddy current inspection performed and have acceptance standards been agreed to?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are there additional specimens tested for each original nonconforming specimen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is only one retest [three specimens] permitted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Are inspection acceptance criteria documented, such as a smooth finish, free of pits, abrasions, foreign material, kinks, twists, scrapes, or splits? Is the material required to be cylindrical, with a clean uniform cast?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

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SPECIAL PROCESS EVALUATION CHECKLIST
TITANIUM ALLOY BAR AND WIRE

	YES	NO	N/A
11. Do test reports contain all spec requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is identification per AMS 2809?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace

SPECIAL PROCESS EVALUATION CHECKLIST

CHEMICAL CLEANING

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are materials procured from approved source?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are incoming and periodic chemical tests performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are tanks labeled with contents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are adequate part racks used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is equipment instrumentation calibrated and certified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are cleaning solutions monitored and limited with respect to contamination? Are fluids recycled or replaced periodically to ensure adequate cleaning strength?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are materials marked for expiration date and control?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Does the process description sheet specify immersion times, temperatures, means of drying, and handling care?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are post-cleaning tests run to verify cleanliness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Are accept/reject criteria documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Are clean parts protected from contamination?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Are there restrictions on prohibited material/cleaning solution combinations, such as vapor degreasing of titanium parts, which is prohibited by MIL-S-5002?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace SPECIAL PROCESS EVALUATION CHECKLIST

CHEMICAL CLEANING

	YES	NO	N/A
personnel trained per the equipment manufacturer's procedures? Are reworked PWA's retested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Are solvents used capable of removing both polar and non-polar contaminants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace
SPECIAL PROCESS EVALUATION CHECKLIST
HEAT TREATMENT OF TITANIUM ALLOYS

SPEC & REV _____ DATE: _____
PROCESSOR _____
AUDITED BY _____
RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are incoming material properties verified [chemical composition, heat treat condition, grain size per ASTM-E-112, tensile, and NDT]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does supplier's heat treat equipment meet contract requirements for temperature uniformity, minimum number of temperature checkpoints, accuracy of readings, and types of controlling and recording instruments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are solution treatment and aging time and temperature controlled within specified limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do test samples confirm conformance to metallurgical and mechanical properties requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are the test samples representative of the final part [same thickness, rolling direction, etc.]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are cool down rates and methods per spec?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace SPECIAL PROCESS EVALUATION CHECKLIST

SHOT PEENING

SPEC & REV _____

DATE: _____

PROCESSOR _____

AUDITED BY _____

RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are size and composition requirements of the shot per appropriate specification? [Intensity, material composition, coverage index]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is shot maintained in the machine controlled so that no more than the maximum percent allowable by weight will pass through a specific screen size?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is an intensity determination made for every "X" hours of continuous machine operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is a finished article visually inspected for compliance with coverage requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is lot acceptability determined by inspection of finished parts in accordance with a recognized sampling plan, such as ANSI/ASQC Z1.4-1993, or by 100% inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace

SPECIAL PROCESS EVALUATION CHECKLIST

PAINTING

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Is surface contamination removed by specified mechanical and/or other chemical means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are spray applicators kept free of condensation of oil and water by filtration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are environmental conditions controlled [humidity, temperature, particulate matter]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the spacing between spray booths sufficient to prevent crossover of spray?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is primary drying time per spec?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is a series of coats applied to prevent runs, blisters, etc? Is touch-up performed within spec limitations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are finished articles tested for dry film thickness and adhesion and visually inspected for appearance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the paint system [primer, tie coats, finish coat] in accordance with drawing requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

SOLDERING, ELECTRICAL [MANUAL]

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Do solder and flux comply with appropriate specification requirements? Is use of type RA flux controlled and restricted as noted in spec?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is residual flux removed within one hour after soldering?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are soldering iron tip temperature monitored to assure optimum heat transfer? Are they controlled within spec tolerances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are wiping pads kept clean and moist?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is visual inspection performed at minimum magnification per spec? Is higher magnification available and used for referee decisions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are operators and inspectors qualified annually to appropriate spec? Are personnel tested annually for visual acuity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Does work station lighting meet minimum requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are work areas maintained in a clean and orderly condition? Are ESD precautions complied with?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Do wire and leads meet solderability test requirements for each component and manufacturer? Are leads pre-tinned as required? Does tinning pot solder meet spec requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Are leads, components, and assemblies protected from damage, contamination and corrosion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Sargent Controls & Aerospace
SPECIAL PROCESS EVALUATION CHECKLIST

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Sargent Controls & Aerospace
SPECIAL PROCESS EVALUATION CHECKLIST
SOLDERING, ELECTRICAL [MANUAL]

	YES	NO	N/A
11. Is 100% inspection performed on all soldered connections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

ELECTRONIC ASSEMBLY

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are production personnel and inspectors certified when required by spec?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Do facilities and equipment conform to specification requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is equipment calibrated and certified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are workmanship standards documented? Boeing approved, if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are soldered assemblies cleaned within time limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are cleaning materials and equipment acceptable per spec?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are cleanliness tests performed prior to conformal coating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Do solder and flux conform to specification requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is protection and handling of parts and assemblies in the shop acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is rework and repair conducted in accordance with approved MRB procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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SPECIAL PROCESS EVALUATION CHECKLIST

ELECTRICAL WIRING

SPEC & REV _____ DATE: _____
 PROCESSOR _____
 AUDITED BY _____
 RECOMMENDED FREQUENCY: _____

	YES	NO	N/A
1. Are wiring and ferrule classifications per drawing/statement of work with respect to type [depending on ferrule], class [grounded or ungrounded], terminating method, securing method?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are crimping tools certified and regularly checked for clearance prior to start of production?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are failed tools segregated and properly dispositioned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are pull tests run using calibrated equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is visual inspection performed on all connectors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Do threaded connectors meet torque requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Do soldered terminal lugs meet requirements of appropriate MIL-STD or drawing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are types of connections in accordance with drawing or MIL-STD [for example, are splice connectors not permitted on coaxial cabling]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are color coding, wipe materials, and connectors checked routinely by QA for compliance with drawing and MIL-STD's?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>