**Process Surveillance Checklist for MIL-DTL-16232G, Type Z, Class 3 ( Zinc Phosphate, No Oil)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Requirements** | **Yes/Noor NA** | **Comments** |
| **Prior to Production** | 1) Has the phosphating procedure been submitted to the Navy, and has it been approved? |  |  |
| 2) Do parts require stress relief baking prior to phosphating (Rc 39 or above, or ground, cold formed or cold straightened)? |  |  |
| 3) When parts to be processed are hardened (Rc 39 min), has hydrogen embrittlement relief testing been performed within the last 120 days? |  |  |
| 4) Has the phosphate bath been analyzed for total acid, free acid, and iron content within the last 4 hours, and does it meet established parameters for these constituents? |  |  |
| 5) Has the chromic acid rinse been analyzed for total acid, free acid, and pH within the last 8 hours, and are these within required parameters (total:free ratio less than 7:1, & pH 2 - 4)? |  |  |
| 6) Are proper test specimens, and the right number, available for processing and testing (for quantity ref. sampling plan in procedure approved by Navy; specimens are required for coating weight and salt spray testing for each 8 hrs of production)? |  |  |
| **During Production** | 7) Is abrasive blasting performed in-house, and is this process accomplished immediately prior to phosphating, with no other steps (acid or alkaline dips) in-between? |  |  |
| 8) Are the test specimens being processed throughout the lot? |  |  |
| 9) Is the phosphate bath at the proper temperature (ref. contractor’s approved procedure)? |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **During Production**  ***(continued)*** | 10) Is the phosphate bath temperature regulator calibrated? |  |  |
| 11) Are the parts immersed for the proper amount of time (ref. contractor’s approved procedure)? |  |  |
| 12) Is the water rinse after phosphating clean and flowing? |  |  |
|  | 13) Are the parts water rinsed for at least one minute? |  |  |
|  | 14) Is the final rinse (chromic acid) at the proper temperature  (150 - 200 F)? Is the temperature regulator calibrated? |  |  |
|  | 15) Is the chromic acid rinse temperature regulator calibrated? |  |  |
|  | 16) Are the parts chromic acid rinsed for at least one minute? |  |  |
|  | 17) Are the baths re-analyzed at the proper frequency during production (every 4 hrs for the phosphate bath; every 8 hrs for the chromic acid rinse)? |  |  |
| **Following Production** | 18) Are parts gray with a uniform crystalline texture? |  |  |
| 19) Do test specimens have a coating weight of at least  11 g/m2? |  |  |
| 20) Do test specimens, after 2 hrs of 5% salt spray exposure, show any evidence of corrosion? |  |  |