Standard Operating Practice

S.O.P. No. 52-08-0000-00-011

ALCOHOL PENETRANT INSPECTION

1.0 PURPOSE

1.1 To define the method, list approved materials, designate controls, and establish uniform procedure.

2.0 DEFINITION

2.1 A nondestructive test for defects open to the surface of materials permeable to liquids. The part is completely immersed, then removed from the alcohol and placed in a ventilated area to permit surface evaporation. Normal surface will evaporate quickly -- areas of discontinuity will remain wet due to reservoir of alcohol entrapped below the surface. These areas are readily detected during drying cycle.

3.0 APPROVED MATERIAL

3.1 Commercial grade Isopropyl Alcohol. CAUTION: Inhalation of vapors or prolonged contact with the skin must be avoided. Do not get in eyes, nose, mouth, or on clothing.

Isopropyl Alcohol is flammable and must be kept away from heat, open flame, sparks, or unguarded lights.

Keep containers closed when not in use.

4.0 PROCEDURE

4.1 Part to be inspected must be thoroughly cleaned. This may be done by dry wiping and/or moderate air blast.

4.2 Immerse part in Isopropl Alcohol for ten (l0) seconds.

4.3 Observe part during complete drying cycle. Defects appear as persistent wet areas due to slower evaporation of the fluid from the defect.

5.0 ACCEPTANCE CRITERIA

5.1 No cracks, linear indications, or chips permitted.