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Adhesion Theory Review

A comprehensive review of adhesion theories and bond failure mechanisms has been compiled. The bonding theories reviewed include physical adsorption, hydrogen bonding, chemisorption and surface energy; the bond failure mechanisms include phase discontinuity, swelling and corrosion. The presentation attempts to differentiate between the basic factors affecting adhesion and the contributory factors which work for or against bond strength.

The concept of bond failure by water desorption is introduced and discussed. In addition 59 references to articles on adhesion technology are included.

Notes:

1. The following documentation may be obtained from:
National Technical Information Service
Springfield, Virginia 22151
Single document price \$3.00
(or microfiche \$0.95)
Reference: SC-RR-70-915 Adhesion Theory
Review and Critique
2. Technical questions may be directed to:
Mr. Glenn K. Ellis
Technology Utilization Officer
Office of Information Services
U.S. Atomic Energy Commission
Washington, D.C. 20545
Reference: TSP72-10231

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