



CAUSES OF BOLT FAILURE

1) ENVIRONMENT

- a) Corrosive or restive environment will cause reduction in dimension hence bolt failure
- b) Hydrogen embrittlement will cause loss of hardness hence failure
- c) Frequent heating and cooling will cause loss of tensile strength hence bolt failure

2) IMPROPER JOINT

- a) Improper Bolt and Nut mating surface will cause localized loading, hence bolt failure
- b) Loose joint will cause vibration and bolt failure

3) IMPROPER LOAD

- a) Over tension will cause bolt failure
- b) Loose bolt will cause vibration and bolt failure

4) FAULTY DESIGN

- a) Bolt is subjected to more load than specified cause bolt failure
- b) Bolt subjected to more shear load then tensile load may cause bolt failure
- c) Excessive momentary high load due to heavy wind or other natural causes may cause bolt failure.

5) INFERIOR QUALITY

- a) Bolt having less than designated strength may cause failure in tightening
- b) Cracks, material internal fault, Head non alignment to shank or forging fault will add in bolt failure.