

CORROSION FATIGUE

3.4.1 Corrosion Fatigue

3.4.1.1 Locations

- Water Touched Tubes (Economizers, Evaporators, Feedwater Heaters)
- Steam Cooled Tubes (Superheaters, Reheaters, Vents) where condensate can accumulate during shutdown

Corrosion Fatigue occurs mostly on the interior surface of tubes. Susceptible HRSG locations include all areas where water can occur including condensate during shutdown. The affected locations on the tube are those with high cyclic stresses. These include: welds, straight and bent tube locations.

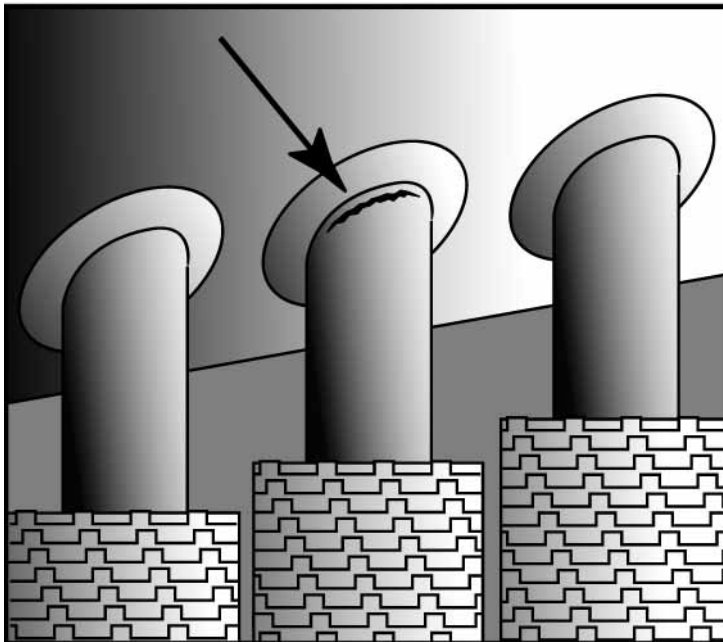


Figure 3-23 Locations Affected by Corrosion Fatigue

3.4.1.2 Failure Appearance

- Pin Hole Leaks (Exterior)
- Cracks (Exterior or Interior)
- Tube Failure (Guillotine Rupture)



Figure 3-24 Corrosion Fatigue Appearance – Pin Hole Leak



Figure 3-25 Corrosion Fatigue Appearance – Crack