

Other Considerations

Cavitation. Cavitation is the formation of bubbles from small gas nuclei as the local pressure allows the flow to momentarily enter the vapor phase. These bubbles subsequently collapse as they enter an area of higher pressure. Minute bubbles form and collapse as shown in Figure 3-23. The collapse is characterized as an implosion in which the surface is attacked by high pressure intensity of the

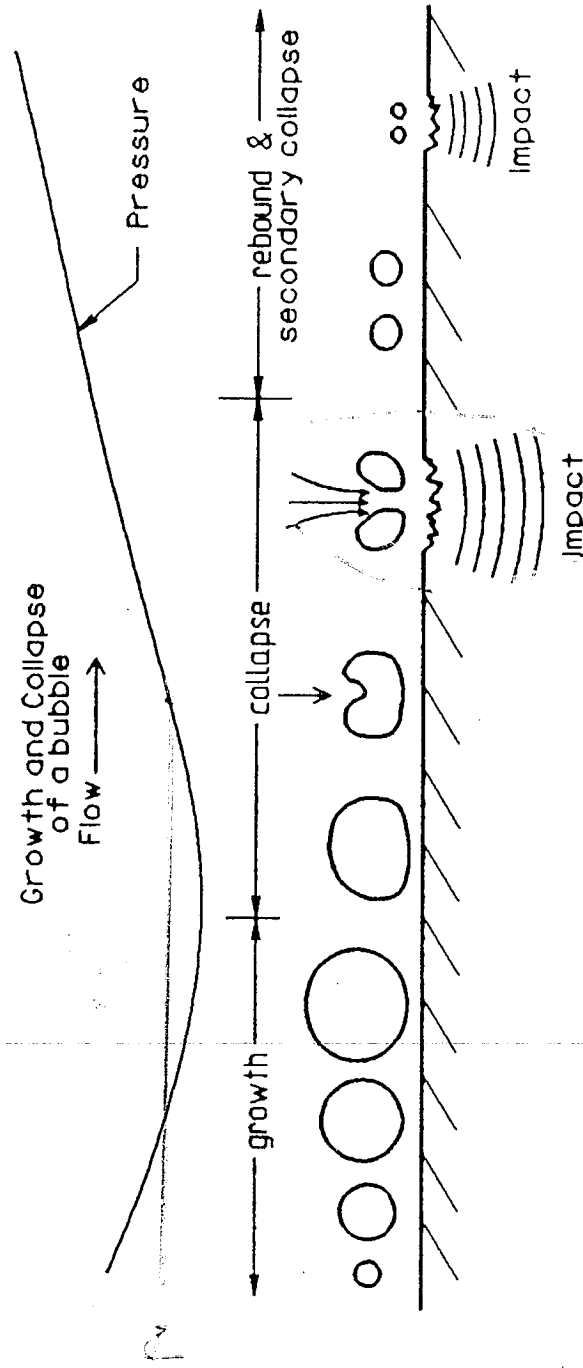


FIGURE 3-23: Pitting Caused by Cavitation. Cavitation is the formation of bubbles from small gas nuclei as the local pressure allows the flow to momentarily enter the vapor phase. These bubbles subsequently collapse as they enter an area of higher pressure, as shown in this figure. The collapse acts like an implosion in which the surface is attacked by high pressure intensity of the impinging jet. This pressure alters the micro structure of the metal, causing a flake to peel out. Eventually, these microscopic-sized flakes form a visible pit and, if not repaired, will develop into major damage.