

Figure 43.

Radial plane approximately 1/8 inch from fracture common to fracture pieces (1I) and (4) in the heavy wall area exhibiting several forms of entrapped dross, 1% NaOH etchant, X50.

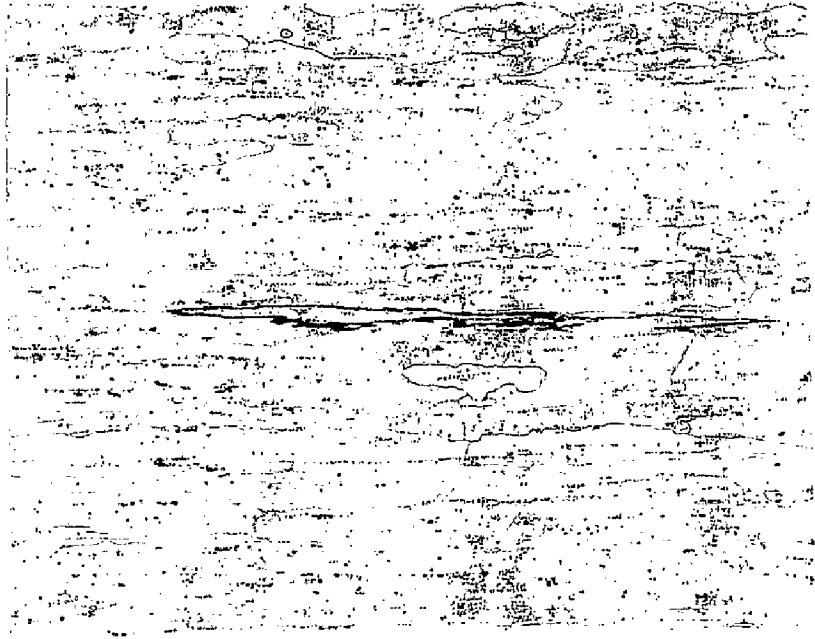


Figure 44. Dross entrapment in longitudinal section of threaded heavy wall area, 1% NaOH etchant, X50.

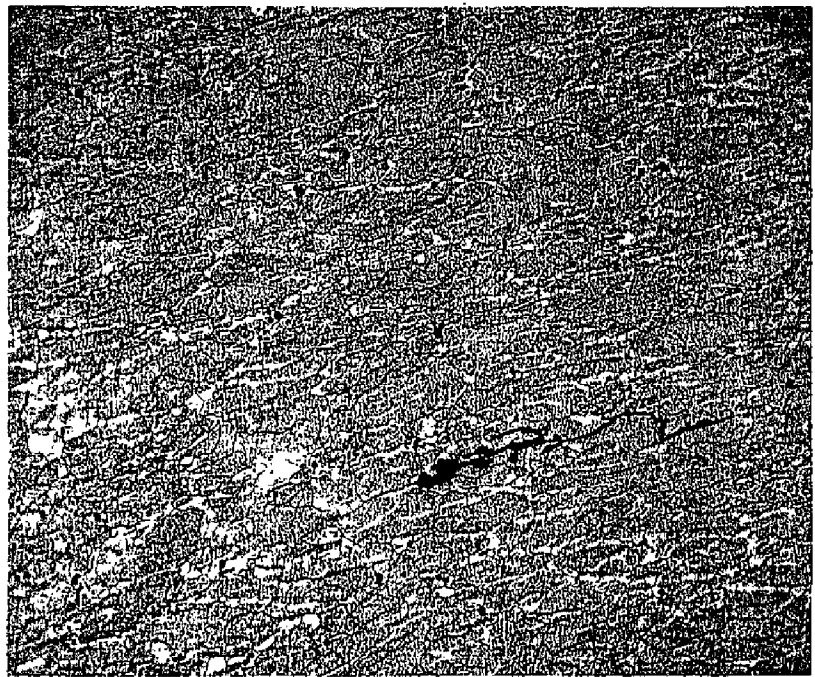


Figure 45. Dross entrapment in a radial section from the bottom of the fragmented cylinder, 1% NaOH etchant, X100.

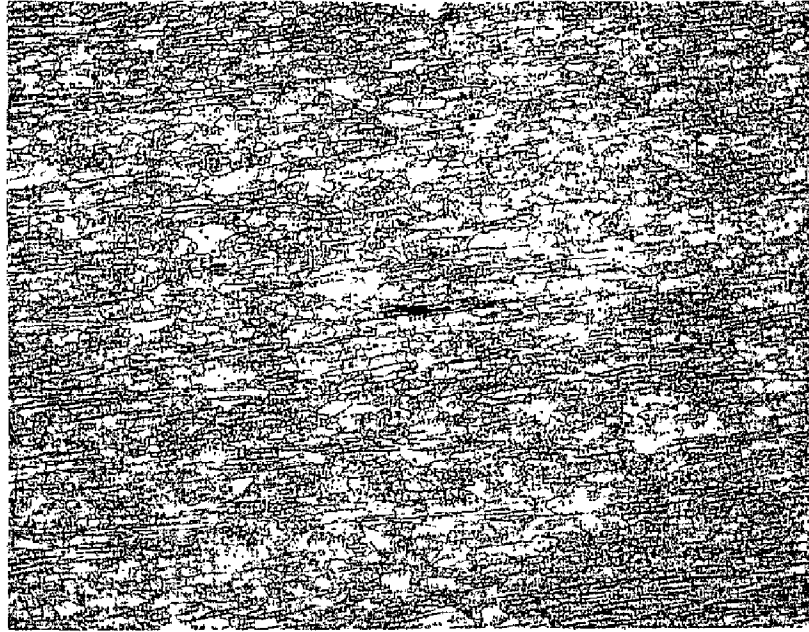


Figure 46. Dross entrapment in a transverse section from fracture piece (2), 1% NaOH etchant, X50.

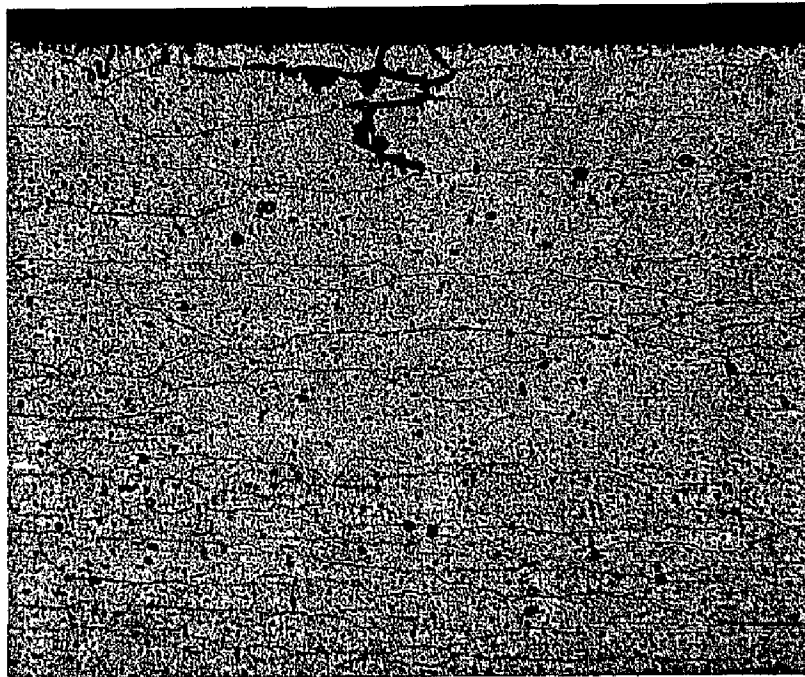


Figure 47. Grain boundary corrosion observed on interior surface in a radial section through the angular transition area of bottom to side wall, 1% NaOH etchant X200.

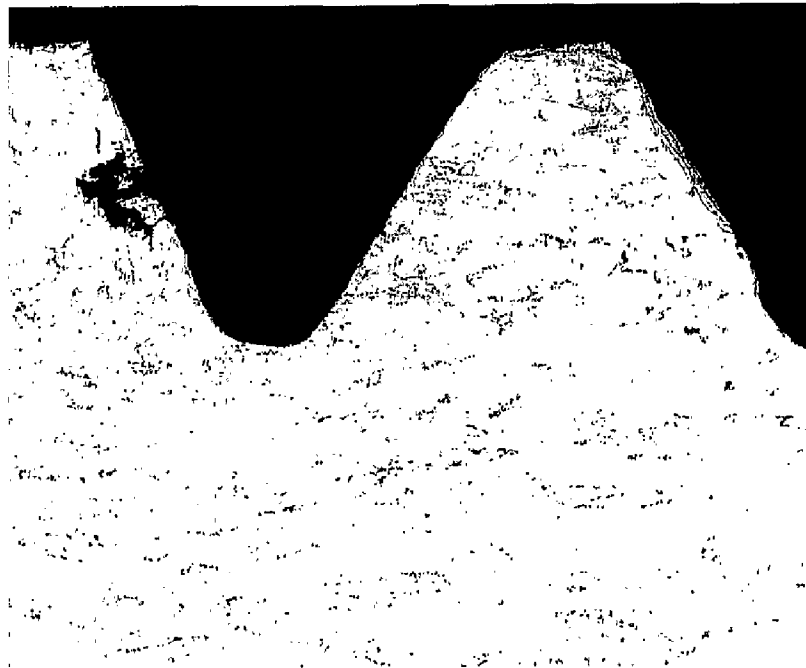


Figure 48.

Radial section through top area of threads, exhibiting corrosion attack normal to thread surface and along grain boundaries, 1% NaOH etchant, X50.

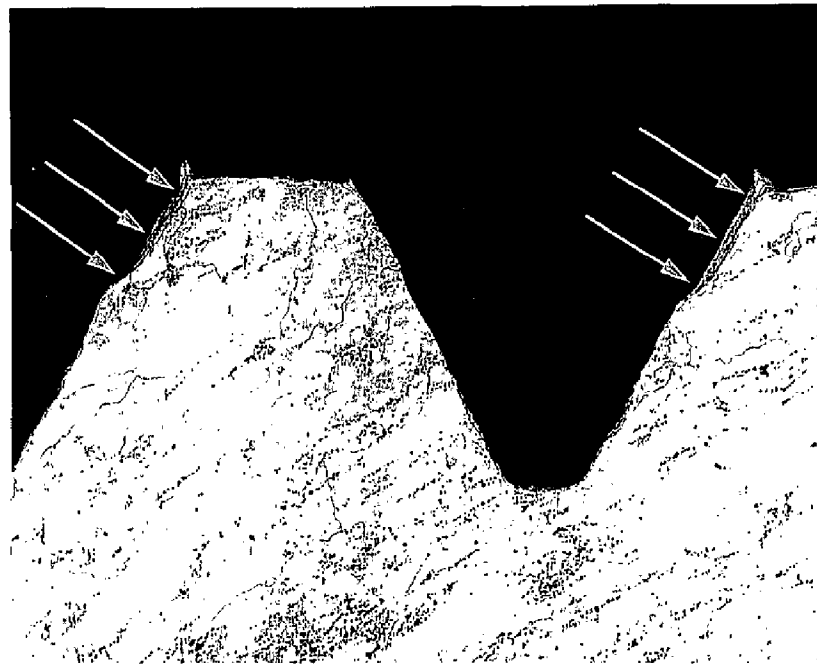
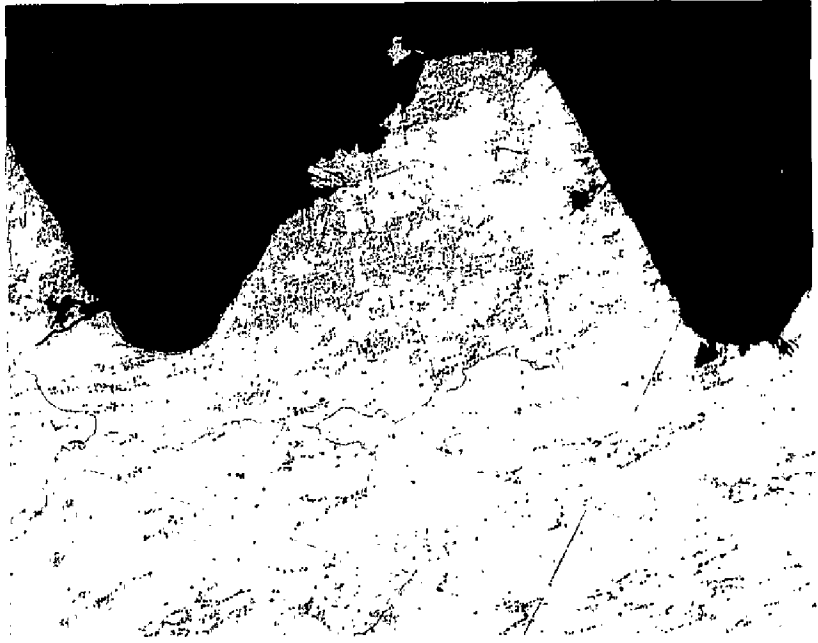


Figure 49.

Same section as Figure 48, but at end of threaded area exhibiting corrosion attack normal to thread surface and along grain boundaries. Note cold worked areas (arrows) in terminal threads that typically indicate mismatching of threads, 1% NaOH etchant, X50.

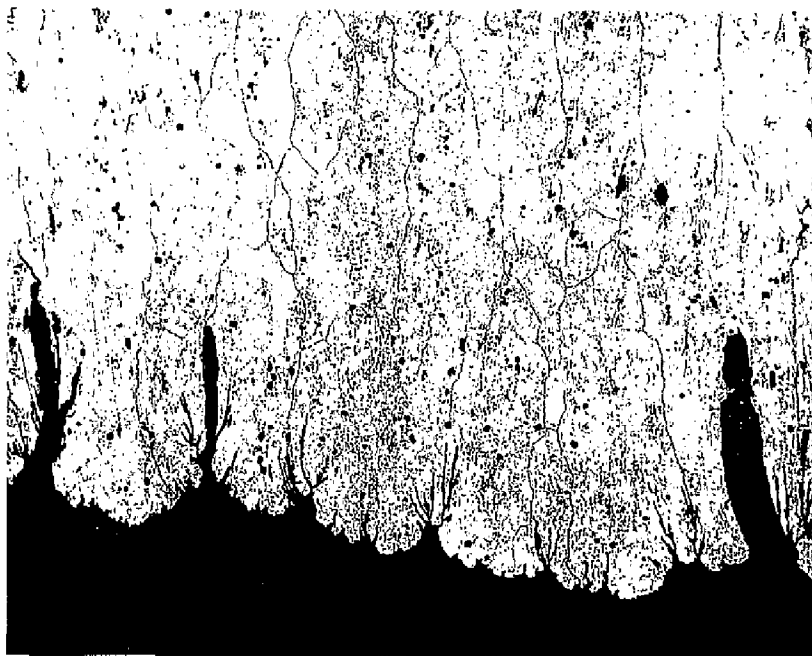
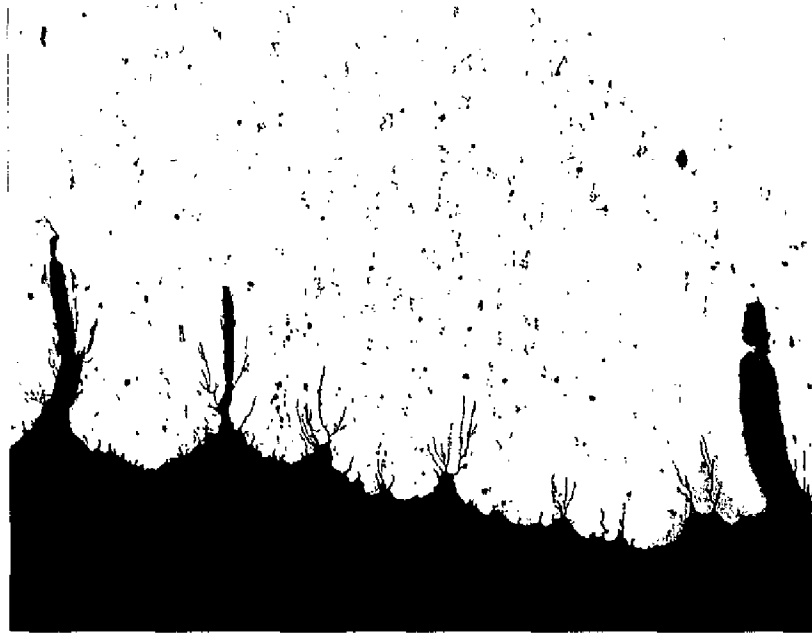


Figure 50.

Longitudinal section behind threads and intersecting with wrinkled interior surface below threads (see Figure 8) revealing cracks emanating from surface texture notches, high apparent inclusion content, and large recrystallized grains; top, as-polished; bottom, 1% NaOH etchant; X100.

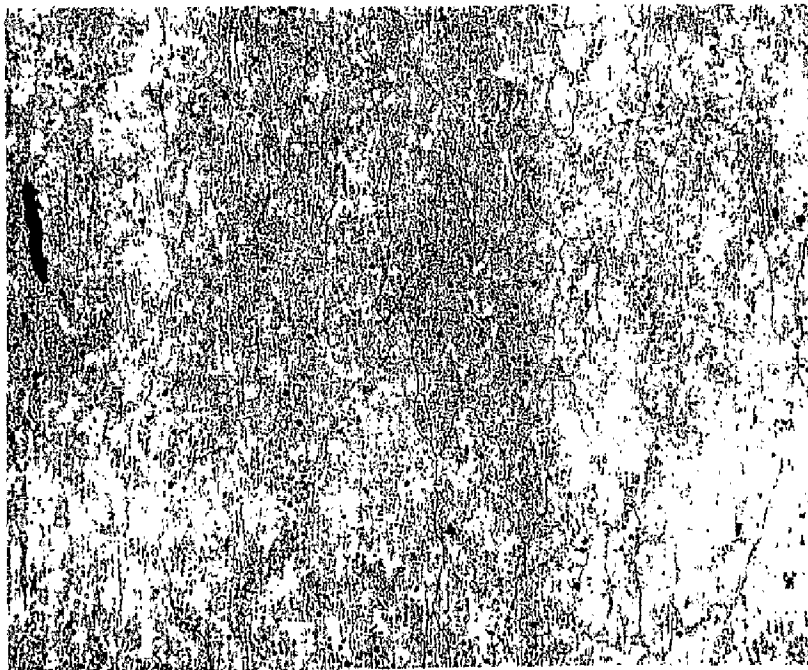
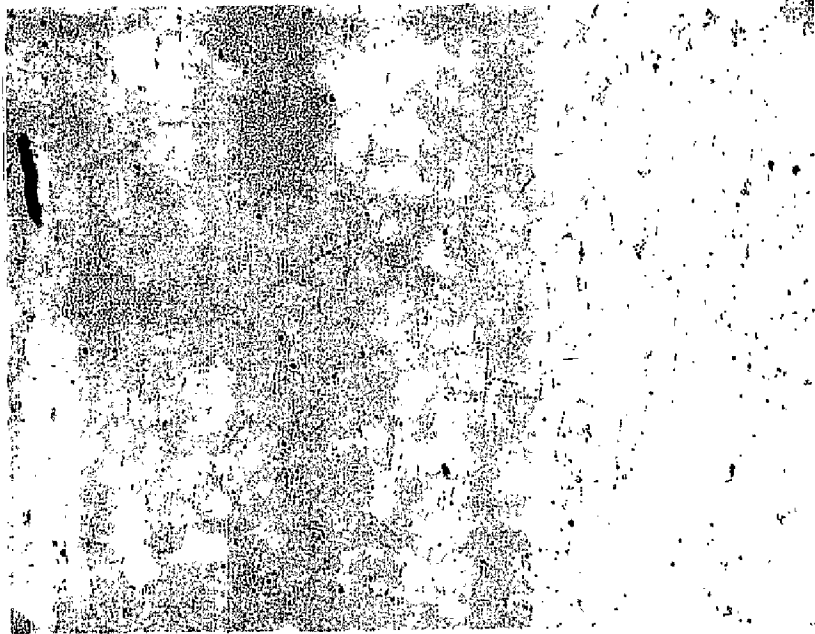


Figure 51.

Same plane as Figure 50, but at level of bottom thread revealing a slight increase in micro-constituent alignment; top, as-polished; bottom, 1% NaOH etchant; X100.

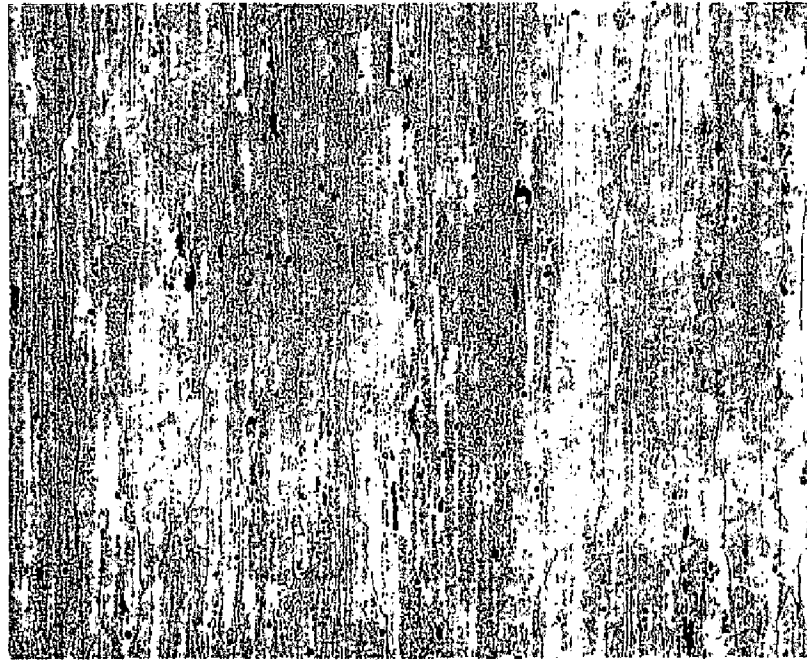
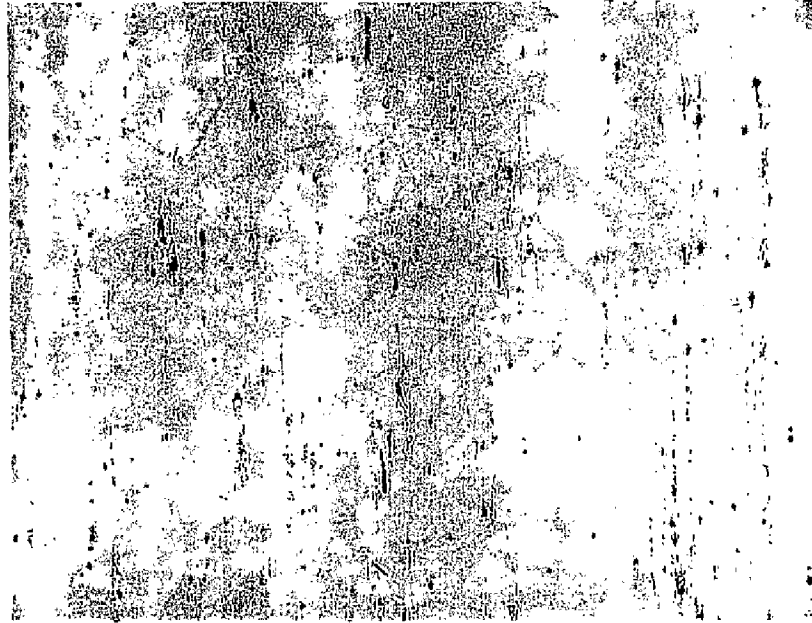


Figure 52. Same plane as Figure 50, but at level of top thread revealing a highly aligned microstructure and a very large elongated grain structure; top, as-polished; bottom, 1% NaOH etchant, X100.



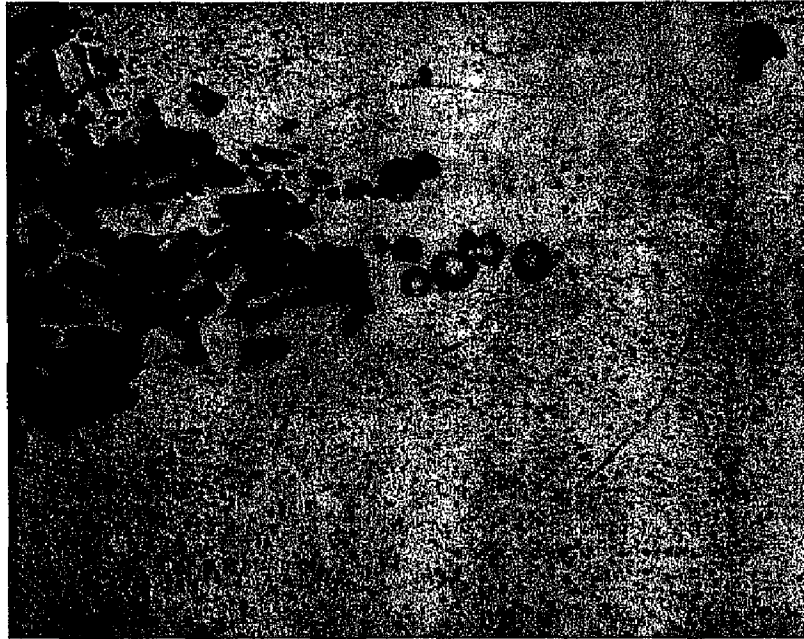


Figure 53. Stacking of microconstituents and unidentified inclusions observed in the radial section approximately 1/8 inch distant from heavy wall fracture surface common to fracture pieces (1I) and (4), 1% NaOH etchant, X1000.