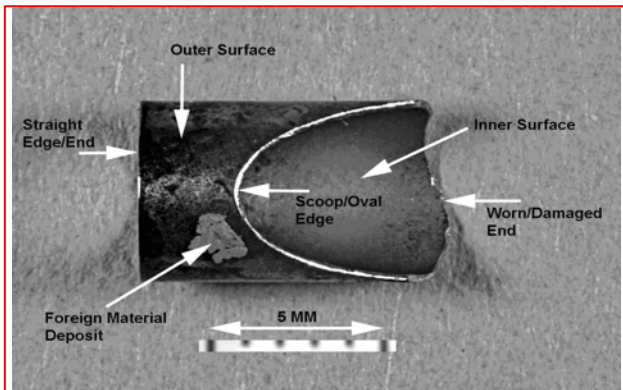


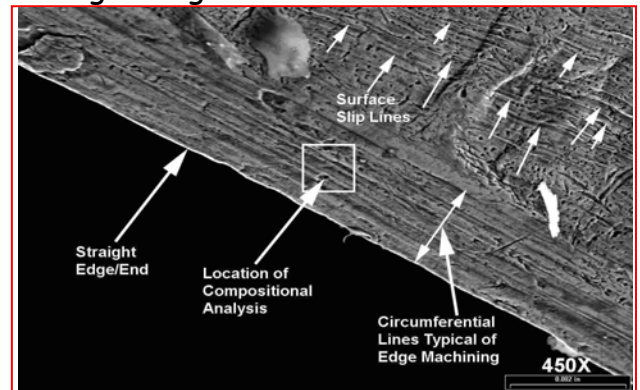
METALLURGICAL LABORATORY FAILURE ANALYSIS CASE STUDY

Description	Arthroscopic Shaver failure
Problem	Shaver failed during surgery. Fractured piece was removed from the shoulder by follow-on surgery and analyzed.
Analysis	Failure was caused by defective brazing that had bonded the outer surface of the failed shaver tip to the inner surface of the arthroscopic tool body.
Resolution & Recommendations	Develop a brazing process validation plan and use NDI technique to ensure the presence of sufficient braze volume.

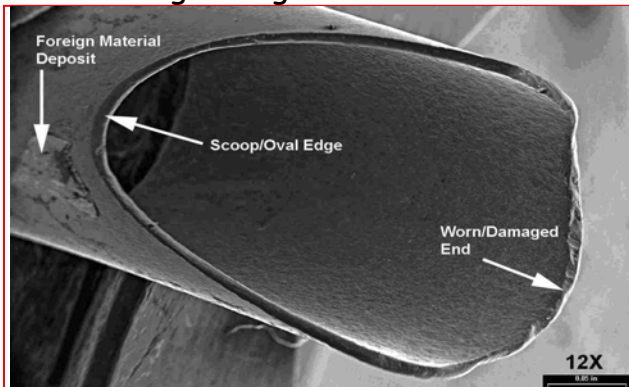
Overview of Fractured Piece



Straight Edge- Not A Fracture Site



Oval/Damaged Edges- Not Fracture Sites



Braze On Outer Surface- Failure Site

