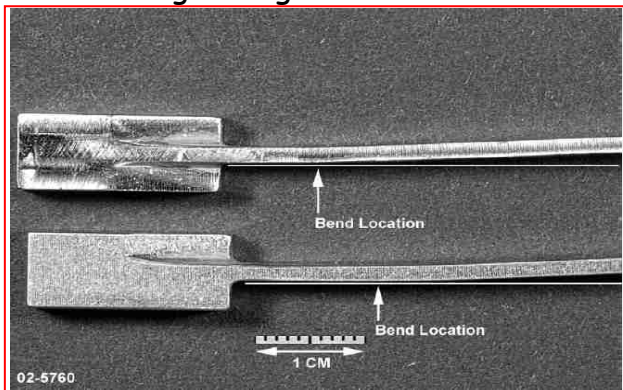


METALLURGICAL LABORATORY

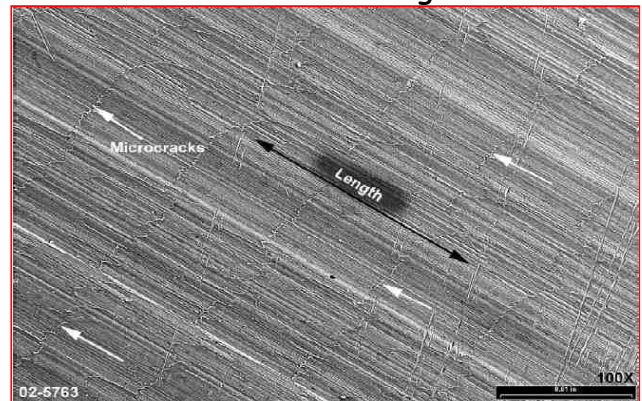
FAILURE ANALYSIS CASE STUDY

Description	Bomb rack link
Problem	PH 13-8 Mo (H950) Link failed during low temperature (-70 F) testing
Analysis	Damage accumulation due to bending of under-designed component propagated a brittle failure
Resolution & Recommendations	Increase link cross section by 50% to decrease the net-section stresses or replacing 13-8 Mo with a Ni-base Superalloy for superior cryogenic properties

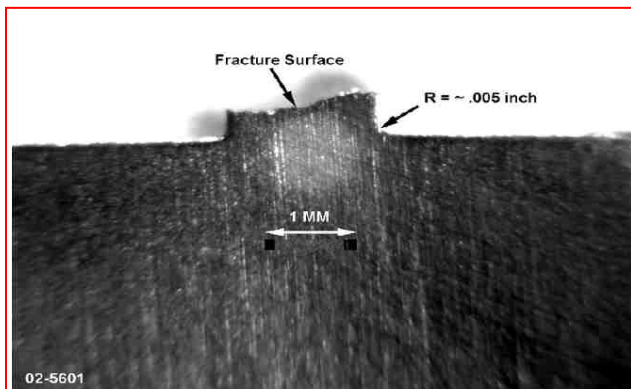
Link bending during -70 F Tests



Microcracks due to Bending



Fracture location



Brittle Cleavage Fracture

