

Appendix B: Cellular structure and related CoF and PDe evolution during full pin-on-disc test on DEDED 316L, and time of CoF collapsing within DEDED 316L+WC hierarchical composite during wear test.

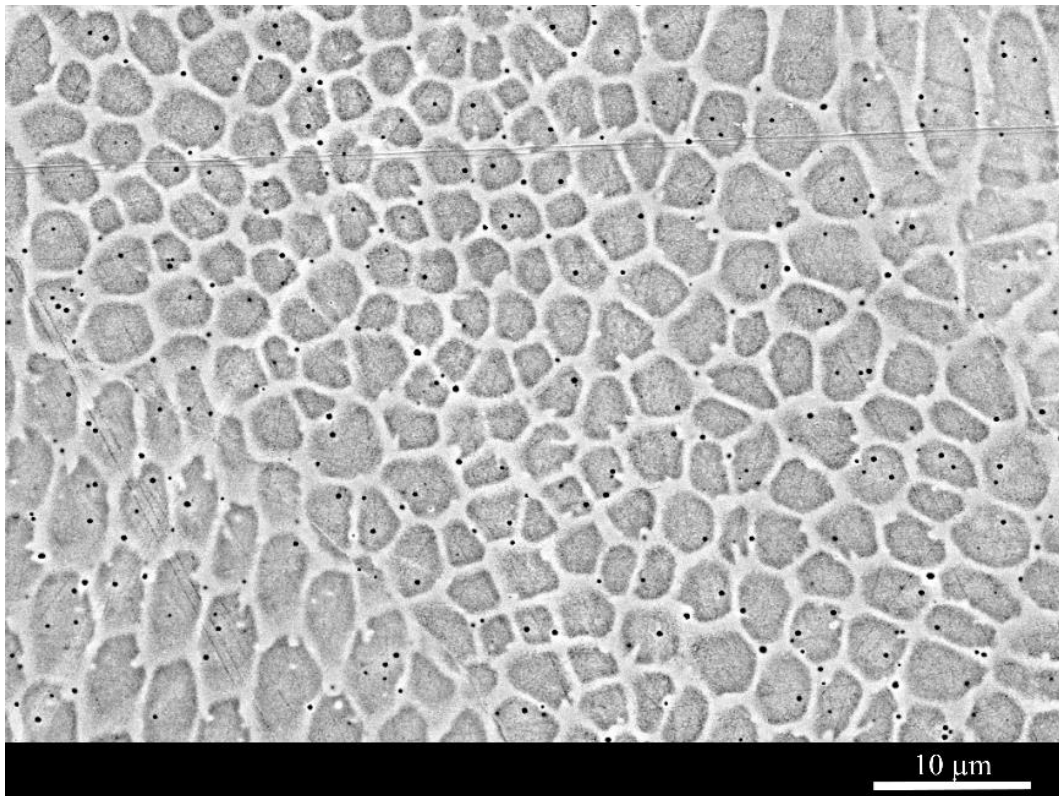


Figure A.1 : SEM micrograph (BSE mode) of the SS316L austenitic microstructure fabricated by directed energy deposition, etched in aqua regia. Cell boundaries appear bright due to segregations of Cr and Mo during solidification.

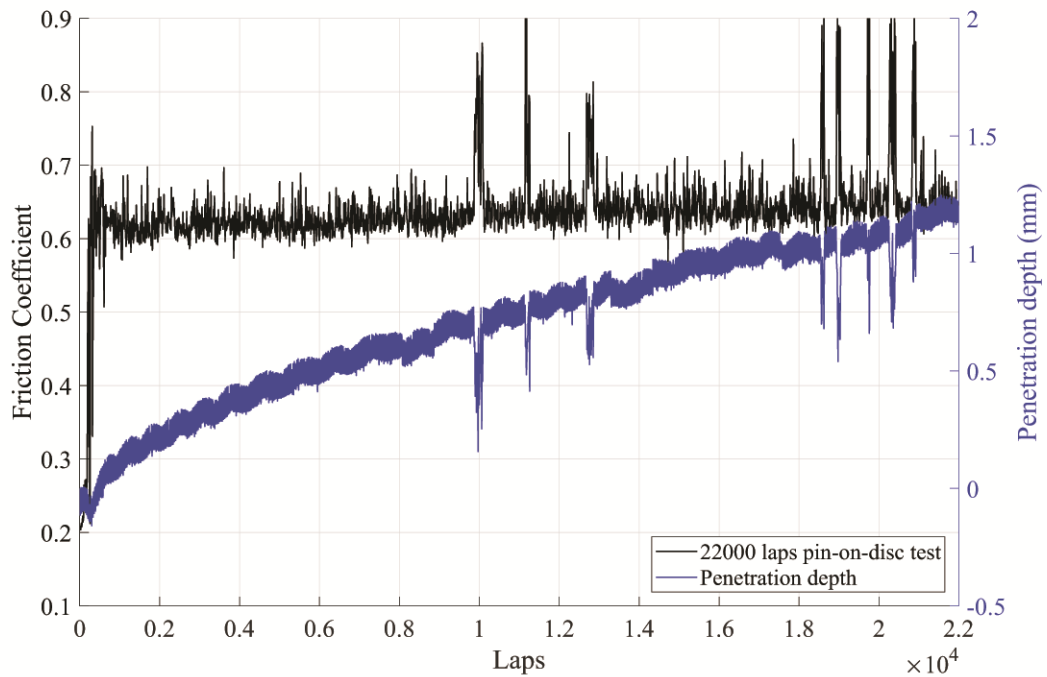


Figure A.2 : Measured friction coefficient (CoF) and penetration depth (PDe) during pin-on disc test at 22000 laps of the reference 316L. PDe exhibits a continuous rise during all the test length.

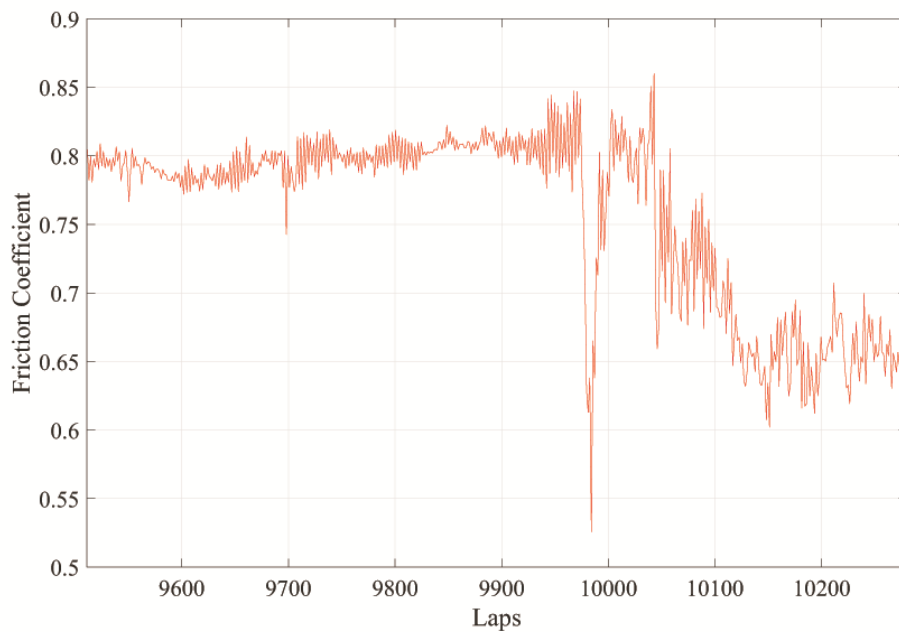


Figure A.3 : Final frame of the additional video showing the variation of the friction coefficient (CoF) and the relative modification of the acoustic emissions during the transition between the continuous increase and the CoF drops on the DED 316L+WC hierarchical composite.