

Pulsed-DC powder-pack boriding: Growth kinetics of boride layers on AISI 316 L steel and Inconel 718 alloy

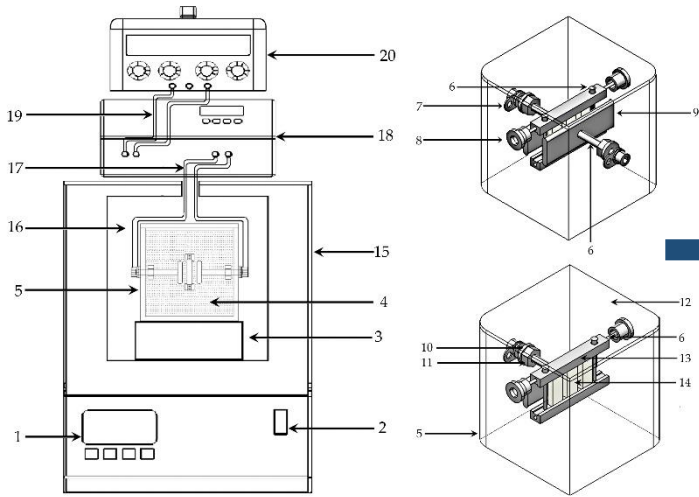


Fig. 1. Schematic representation of the Pulsed-DC powder-pack boriding (PDCPB) treatment.

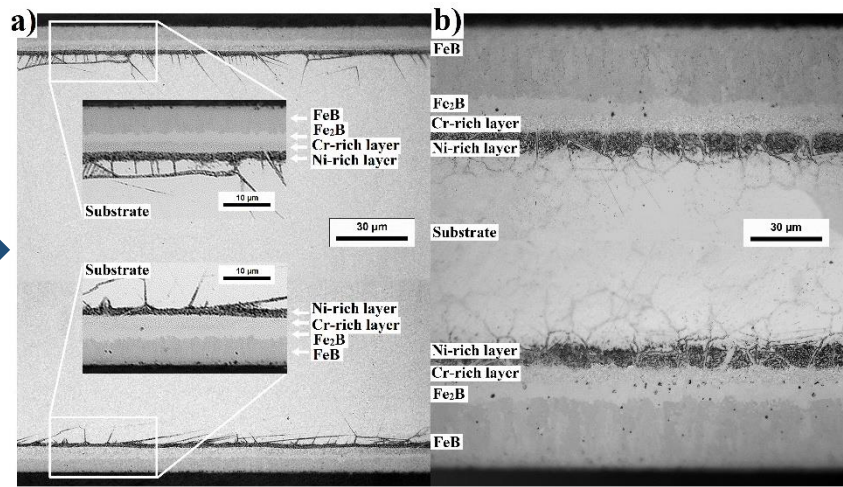


Fig. 2. Cross sectional view of borided AISI 316 L steel obtained by PDCPB treatment with: a) 0.5 h of exposure at 1123 K and b) 2 h of exposure at 1223 K.

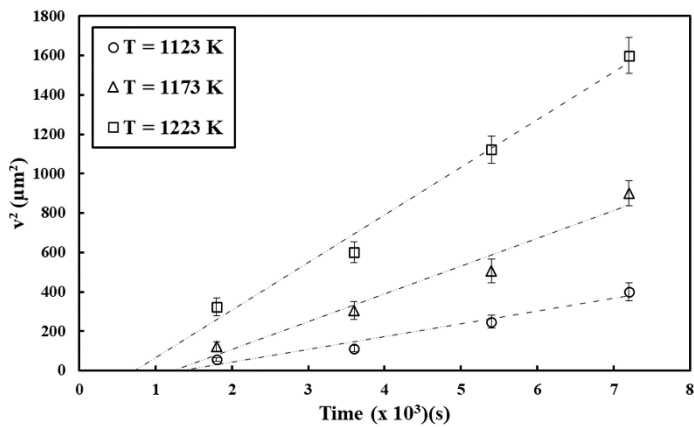


Fig. 4. Growth evolution of boride layers as a function of the exposure time for borided AISI 316 L steel.

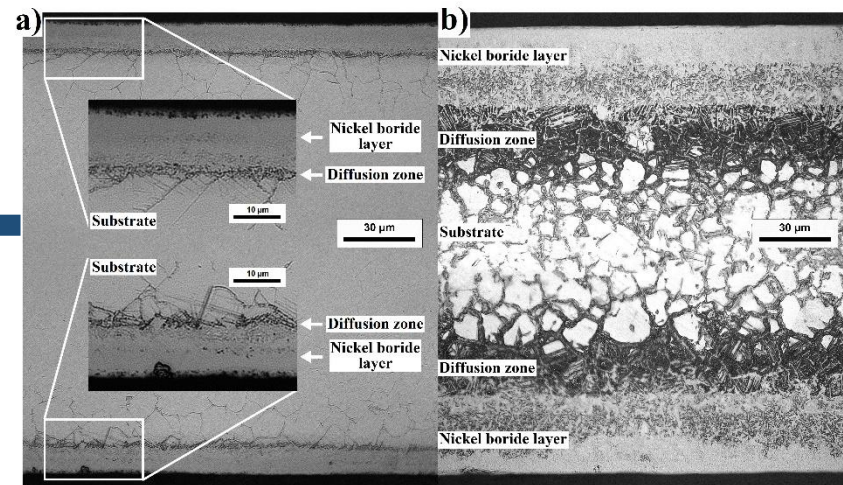


Fig. 3. Cross sectional view of borided Inconel 718 alloy obtained by PDCPB treatment with: a) 1 h of exposure at 1123 K and b) 2.5 h of exposure at 1223 K.

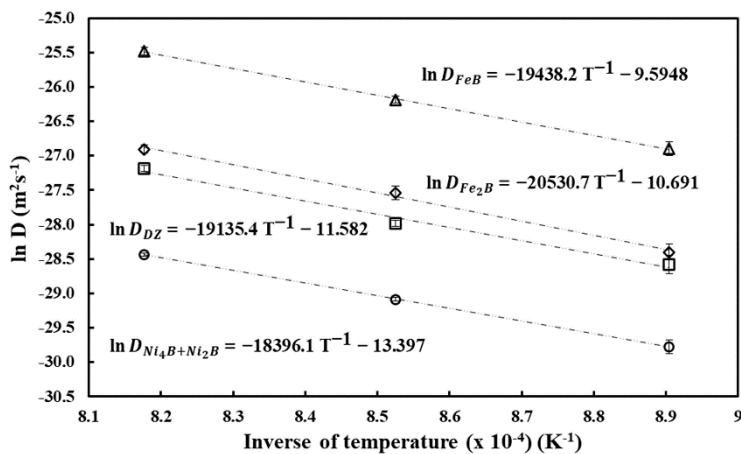


Fig. 5. Boron diffusion coefficients as a function of boriding temperatures.

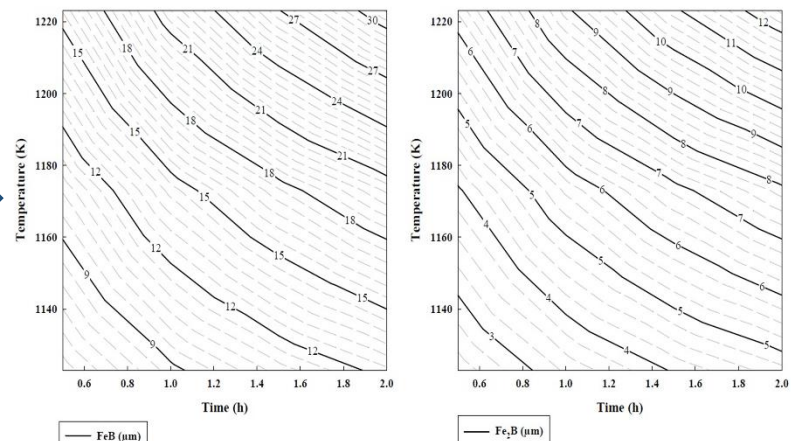


Fig. 6. Results of the layer thickness as a function of the temperature and exposure time for the borided AISI 316 L steel