

**Figure 1**: SEM and EDS of spray coated  $Y_2O_3$  on SS304 coupons at 500x magnification. Inset) 1<sup>st</sup> coat of  $Y_2O_3$  after thermal annealing in air at 600 °C (black border) has patches of exposed SS304. The 2<sup>nd</sup>  $Y_2O_3$  coat fills in patches (red border), and the attenuation of Cr, Fe, and Ni peaks appear on the EDS spectrum.