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Effect of Surface Roughness on Oxidation: Changes in Scale Thickness, Composition, and Residual Stress SERIF URAN, Pittsburg State University, BOYD VEAL, Argonne National Laboratory, MARCOS GRIMSDITCH, JOHN PEARSON, Argonne National Laboratory, ANDREAS BERGER — The effect of surface roughness on the properties of the oxide scale formed on Fe–Cr–Al alloys during oxidation in air at high temperatures has been investigated. Large and systematic differences in scale thickness, in the composition of the oxides forming the scale, and in the residual stress levels are found.

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