

# Supplementary Materials: High-Resolution Microstructure Characterization of Additively Manufactured X5CrNiCuNb17-4 Maraging Steel during Ex and In Situ Thermal Treatment

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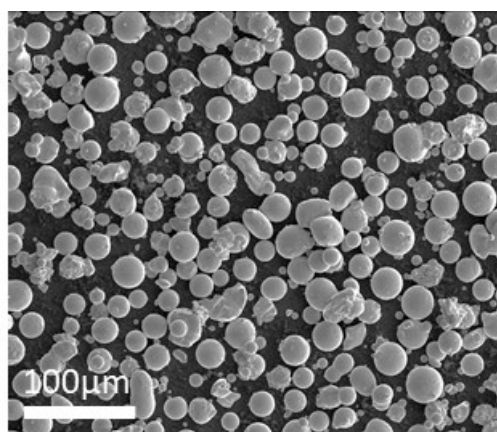
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**Figure S1.** Overview SEM image of the as-received powder.

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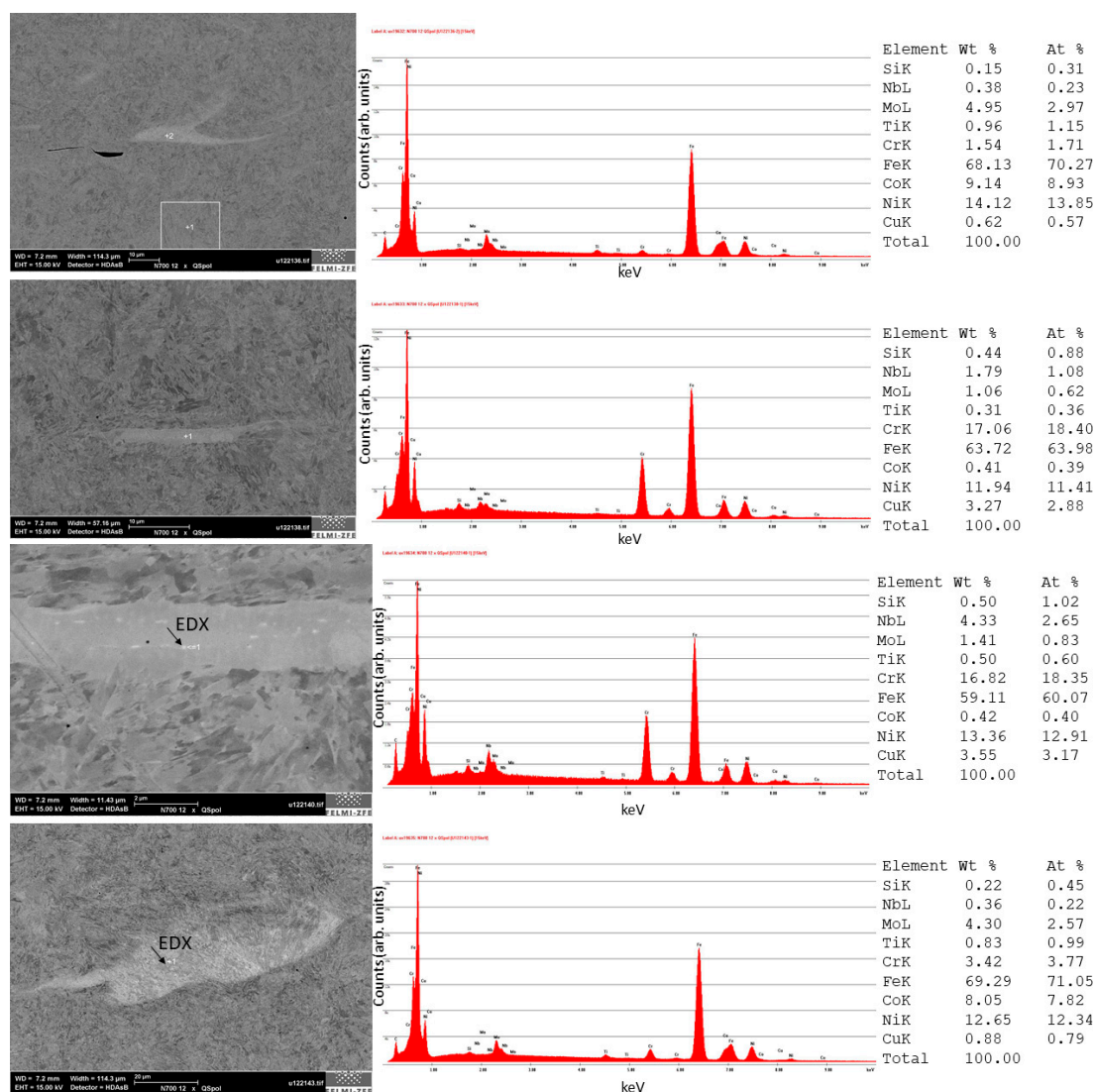
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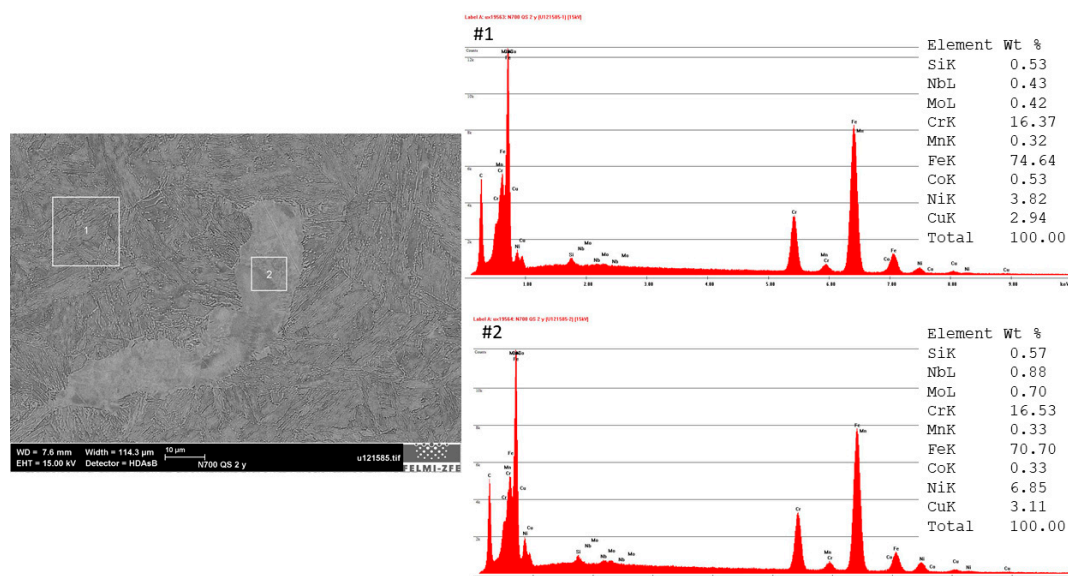
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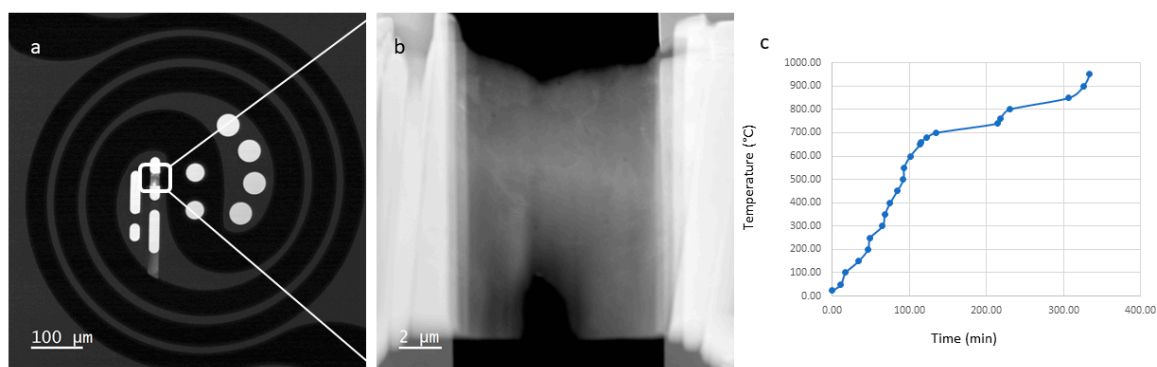
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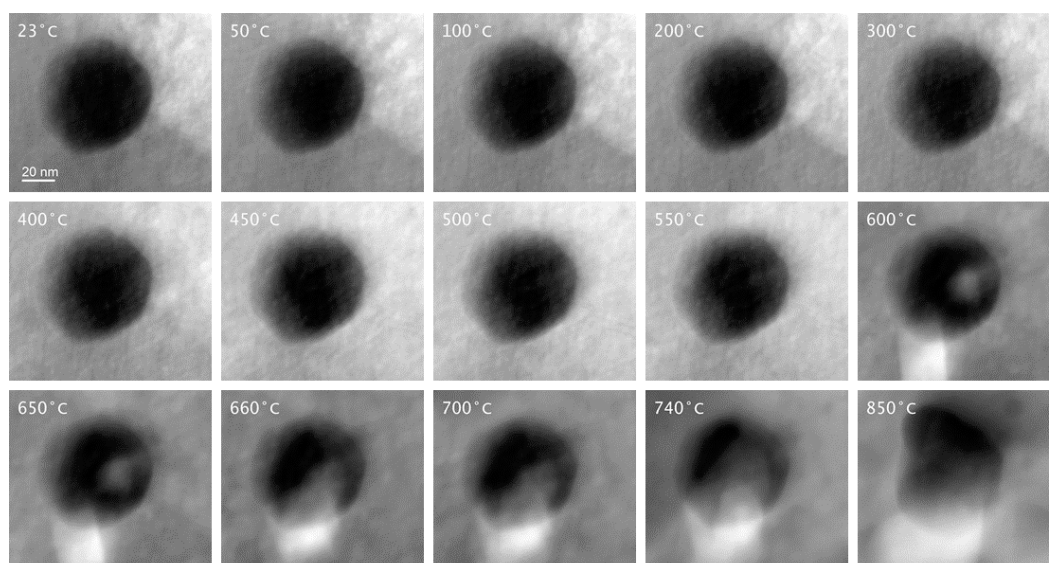
**Figure S2.** SEM images and EDX analysis of segregations at the melt pool interfaces and from a NbC particle found inside such a segregation for the as-built sample.



**Figure S3.** SEM images and EDX analysis of the matrix and segregations for the thermally treated sample.



**Figure S4.** (a) heating chip with the FIB Lamella; (b) FIB lamella with thick edges; (c) heating ramp for *in situ* STEM.



**Figure S5.** High resolution HAADF images of an oxide nanoparticle during *in situ* heating in STEM.