Supplemental information

An additively manufactured Fe-3Si stator for a high-performance electrical motor

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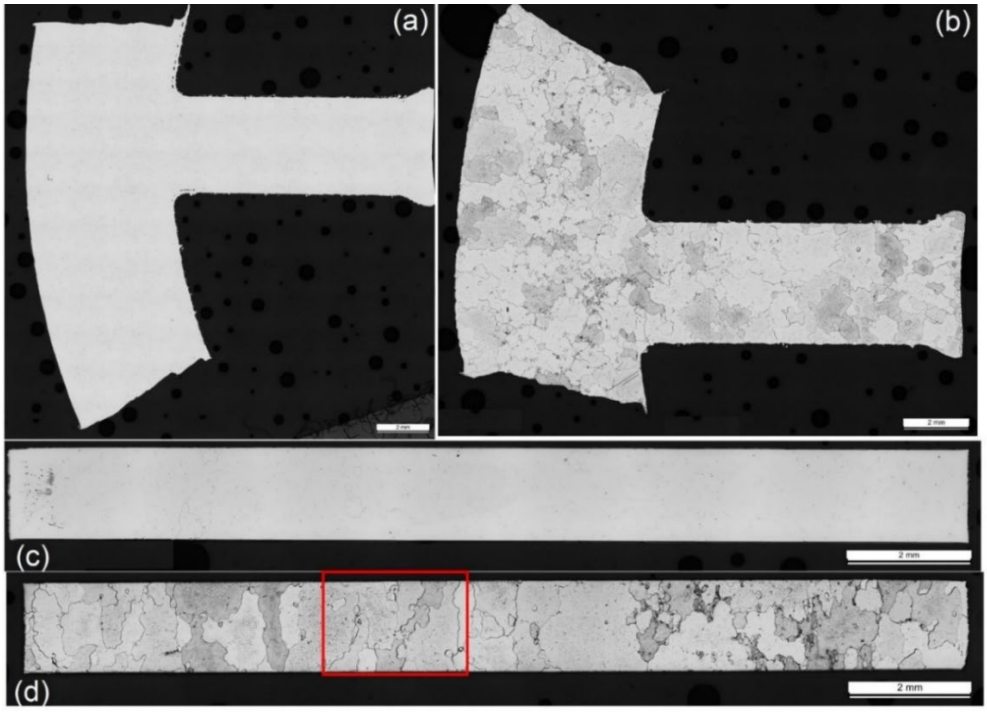

Figure S1. (a) As-polished flat surface (scan direction) of Fe-3Si laminates, (b) Nital 4% solution-etched flat scan direction, (c) as-polished lateral view (build direction), and (d) nital 4% solution-etched build direction microstructures.

Table S1. Nominal process parameters used to print Fe-3Si stator and induction rings for magnetic property measurements (Ref.: A. Plotkowski *et al.*, "Influence of scan pattern and geometry on the microstructure and soft-magnetic performance of additively manufactured Fe-Si," *Addit. Manuf.*, vol. 29, p. 100781, Oct. 2019, doi: 10.1016/j.addma.2019.100781).

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Parameters	Values
Power (W)	200
Hatch spacing (μm)	100
Point spacing (μm)	75
Exposure time (μs)	110
Layer thickness (μm)	50

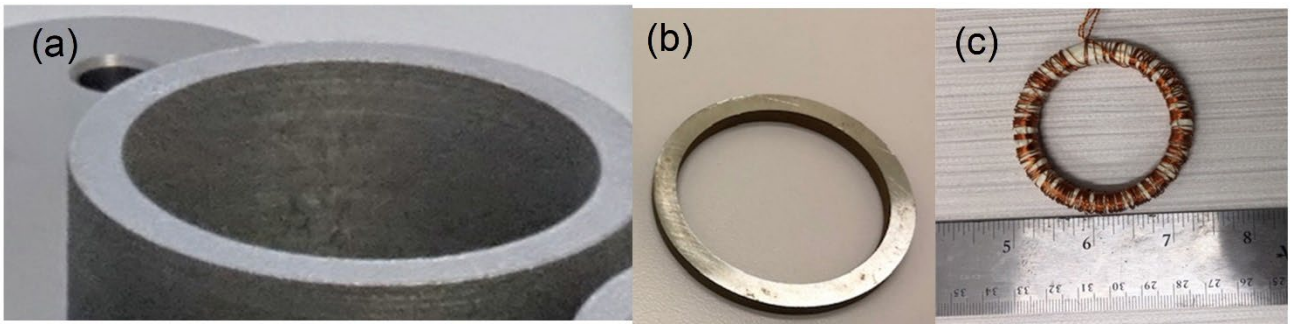

Figure S2. (a) As-printed cylinder for cutting into laminates for low magnetic field and AC properties studies, (b) machined to thin induction ring for DC and AC magnetic property measurements, (c) ring-wound with Litz wire for induction study.