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Greenland et al.(10) **Pub. No.: US 2022/0386439 A1**(43) **Pub. Date: Dec. 1, 2022**(54) **MONOLITHIC X-RAY SOURCE HOUSING**(71) Applicant: **Moxtek, Inc.**, Orem, UT (US)(72) Inventors: **Kasey Otho Greenland**, South Jordan, UT (US); **Dan Paas**, Spanish Fork, UT (US)(21) Appl. No.: **17/734,367**(22) Filed: **May 2, 2022****Related U.S. Application Data**

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(57)

ABSTRACT

A monolithic housing for an x-ray source can wrap at least partially around a power supply and an x-ray tube. The monolithic housing can include Al, Ca, Cu, Fe, Mg, Mn, Ni, Si, Sr, Zn, or combinations thereof. Mg can be a major component of the monolithic housing. The monolithic housing can be formed by injection molding. The monolithic housing can provide one or more of the following advantages: (a) light weight (for easier transport), (b) high electrical conductivity (to protect the user from electrical shock), (c) high thermal conductivity (to remove heat generated during use), (d) corrosion resistance, (e) high strength, and (f) high electromagnetic interference shielding (to shield power supply components from external noise, to shield other electronic components from power supply noise, or both).

