



Magnesium Elektron

SERVICE & INNOVATION IN MAGNESIUM

Manchester, UK - August 3rd 2009: Magnesium Elektron UK announced today the inclusion of their newest high performance casting alloy, Elektron 21, into the top table of the European Space Agency's ECSS-Q-ST-70-36C specification.

The European Cooperation for Space Standardisation's specification for Space Product Assurance, ECSS-Q-ST-70-36C, covers Material Selection for Controlling Stress Corrosion Cracking. This specification ranks materials as to their capacity to resist Stress Corrosion Cracking (SCC), with those materials listed in the top Table 5-1 being "Alloys with high resistance to stress-corrosion cracking". Elektron 21 is the only magnesium alloy in this table to combine elevated temperature strength, corrosion resistance and the consistent property benefits of zirconium grain refining with the lightweight benefits of magnesium, and, of course, resistance to stress-corrosion cracking.

Elektron 21's combination of good properties and low weight has already proven very attractive to a variety of other industries such as defence, motorsport and aerospace. Elektron 21 has been selected for several upgrade projects in these areas, as increasing performance requirements call for newer materials with greater strength but without weight penalties. Elektron 21 offers an approximate 30% weight saving over aluminium, and can operate at up to 200°C. At these elevated temperatures, Elektron 21 is both stronger and lighter than aluminium.

Elektron 21 can be sand or investment cast, and as this alloy takes advantage of zirconium grain refining to produce a consistent, equi-axed grain structure, cast billets of Elektron 21 can be used to machine parts from solid.



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Elektron 21 is also the first and only magnesium casting alloy to be included in the MMPDS handbook (formerly known as MIL-HNDBK-5) with full A and B basis design allowables. "A" and "B" basis allowables provides a higher level of confidence for the designer when specifying materials and ensures Elektron 21 is qualified for aerospace material selection under new FAA guidelines for structural applications.

Magnesium Elektron is a world leader in the production of high performance magnesium alloys and products. The company began production of magnesium in 1936 at its Manchester, UK plant and subsequently developed a wide range of magnesium alloy systems and products. Elektron 21 is the latest stage in this ongoing development. The company is part of the Luxfer Group, an international manufacturer of high performance engineering materials including magnesium alloys, zirconium products, aluminium tube and high pressure lightweight gas cylinders.

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