Title (en)

CAST ALUMINIUM ALLOYS

Publication

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Application

EP 89902718 A 19890210

Priority

- AU 8900054 W 19890210
- AU PI668188 A 19880210

Abstract (en)

[origin: WO8907662A1] A cast hypereutectic Al-Si alloy with from 12-15 % Si, having excellent wear resistance and machinability, improved fatigue strength and good levels of ambient and elevated temperature properties is provided, as well as a method of producing such alloy. The alloy and a melt used in the method contains Sr in excess of 0.10 % and Ti in excess of 0.005 %, the alloy further comprising: Cu 1.5 to 5.5 %, Ni 1.0 to 3.00 %, Mg 0.1 to 1.0 %, Fe 0.1 to 1.0 %, Mn 0.1 to 0.8 %, Zr 0.01 to 0.1 %, Zn 0 to 3.0 %, Sn 0 to 0.2 %, Pb 0 to 0.2 %, Cr 0 to 0.1 %, Na 0 to 0.01 %, B (elemental) 0.05 % maximum, Ca 0.003 % maximum, P 0.003 % maximum. Others 0.05 % maximum each, the balance, apart from incidental impurities, being Al. The level of Sr in excess of 0.10 % and Ti in excess of 0.005 % is such that the alloy has a microstructure in which any primary Si formed is substantially uniformly dispersed and is substantially free of segregation, and in which substantially uniformly dispersed Sr intermetallic particles are present but are substantially free of such particles in the form of platelets, with the microstructure predominantly comprising a eutectic matrix.

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CPC (source: EP)

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Citation (search report)

- [A] FR 2588017 A1 19870403 - UBE INDUSTRIES [JP]
- [A] DE 1932537 A1 19700205 - COMALCO ALU
- See references of WO 8907662A1

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