Höganäs

Astaloy™ LH and Distaloy® LH

Cost effective sinterhardening solutions for high strength structural parts

The composition of Astaloy LH and Distaloy LH is designed to optimize cost and performance in sinterhardening applications. The result is a cost-effective lean alloy system compared to other sinterhardening materials such as FLC2-4808 and FLC-4608. Astaloy LH and Distaloy LH are also suitable for replacing heat-treated applications that require hardness levels HRC 30 - 40.

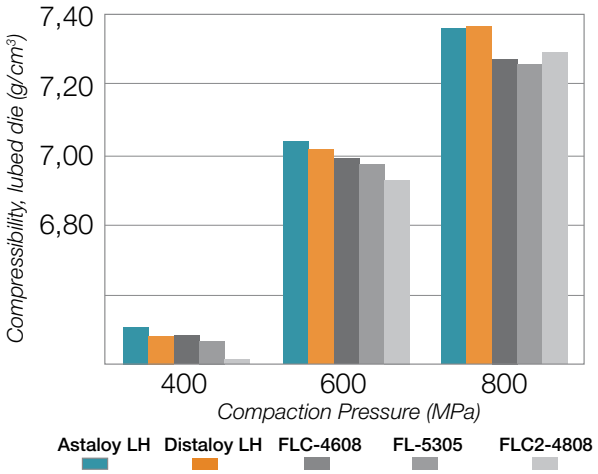
Feature	Benefit
Lean alloying system	- Hardenability at lower cost
High compressibility	- Higher green densities at same compaction pressure - Lower cost due to fewer damaged green parts
Stable dimensional change	Reduced total cost through: - Less sintered scrap - Potential to eliminate secondary finishing operations - Reduced final inspection Tight tolerances can be achieved
Robust sintering	- Flexibility to sinter in any sintering atmosphere

Astaloy LH and Distaloy LH

Grade %	Ni	Mo	Mn	Cu
Astaloy LH	0.9	0.9	0.2	–
Distaloy LH	0.9	0.9	0.2	2

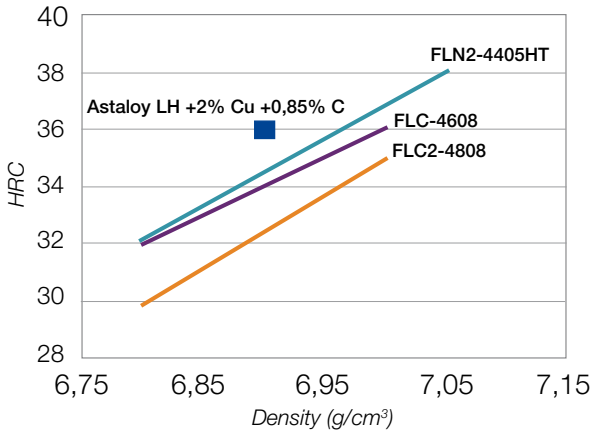
High compressibility and green strength

Astaloy LH and Distaloy LH have very high compressibility, superior to FLC2-4808, FLC-4608 and FL-5305. This enables higher densities at lower compaction pressures. The high green strength makes compacts more resistant to cracking and damage during compaction and handling.



Stable dimensional change

Good consistency for dimensional change is achieved when using Astaloy LH + 2% admixed copper. Distaloy LH is the natural choice for applications with even higher demands on dimensional stability due to the diffusion bonding of copper. This enables production of parts with tight dimensional tolerances, and the opportunity to reduce total cost by eliminating sizing or machining operations.



Robust sintering

There are no special considerations regarding sintering atmosphere since both solutions enable robust sintering in conventional nitrogen/hydrogen and ENDO-gas P/M production atmospheres.

As sinterhardened properties

Astaloy LH / Distaloy LH show very good hardenability. The cooling rate has a highly significant effect on sinterhardened properties. Cooling rates well above 1°C/s are needed to achieve good hardening results.