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## Liquid phase-enhanced molybdenum homogenization during sintering of PM steels

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Molybdenum is an attractive alloy element also in sintered steels. For optimum compactibility, admixing Mo as elemental powder would be desirable; however, homogenization during sintering requires high temperatures, which results in cost penalties. In the present study it is shown that the sintering temperatures required for Mo distribution can be significantly lowered if low-melting masteralloy powders are combined with Mo, the transient liquid phase generated from the masteralloy during sintering acting as solvent and transport medium for Mo. Furthermore, the elements introduced through the masteralloy improve the mechanical properties, in particular the sinter hardening capability, when combined with Mo.

### Speaker Country

Österreich

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