

Supplementary materials for “Selective Extraction of Ni from Superalloy Scrap by Molten Mg-Zn”

1. Zn-Ni binary phase diagram

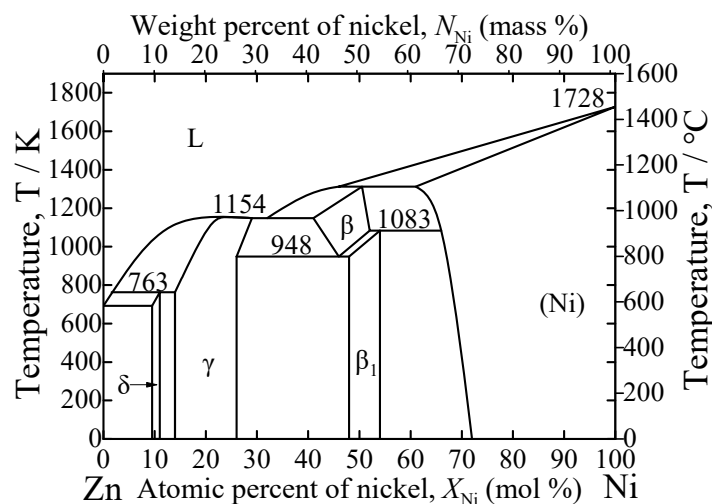


Figure S1. Zn-Ni binary phase diagram [1]. (This artwork is original and only data was used from the reference).

2. Mg-Ni binary phase diagram

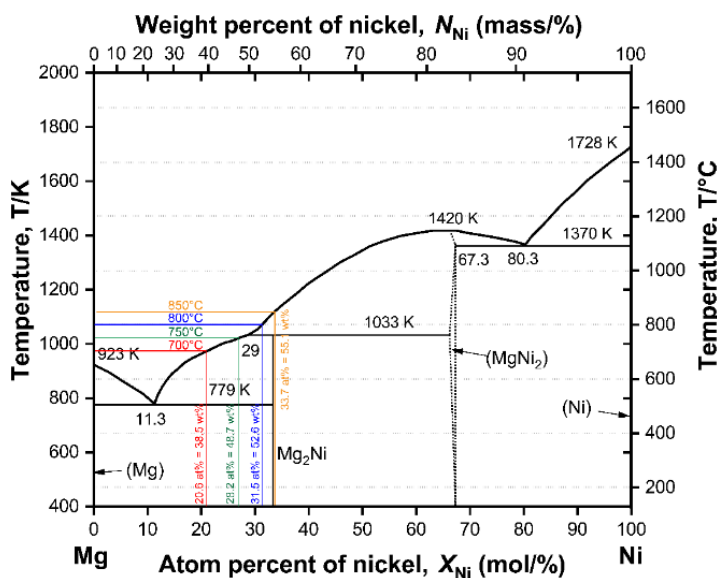


Figure S2. Mg-Ni binary phase diagram [2]. (This artwork is original and only data was used from the reference).

3. Mg-Zn binary phase diagram

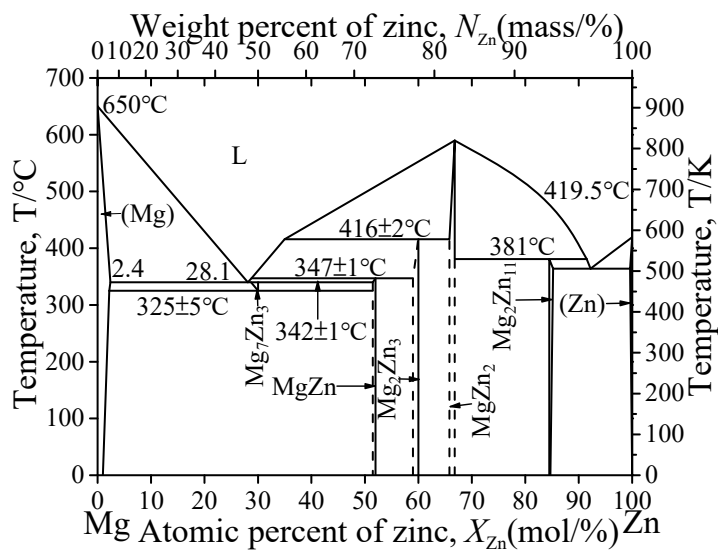


Figure S3. Mg-Zn binary phase diagram [3]. (This artwork is original and only data was used from the reference).

4. Vapor pressures of selected metals as a function of reciprocal temperature.

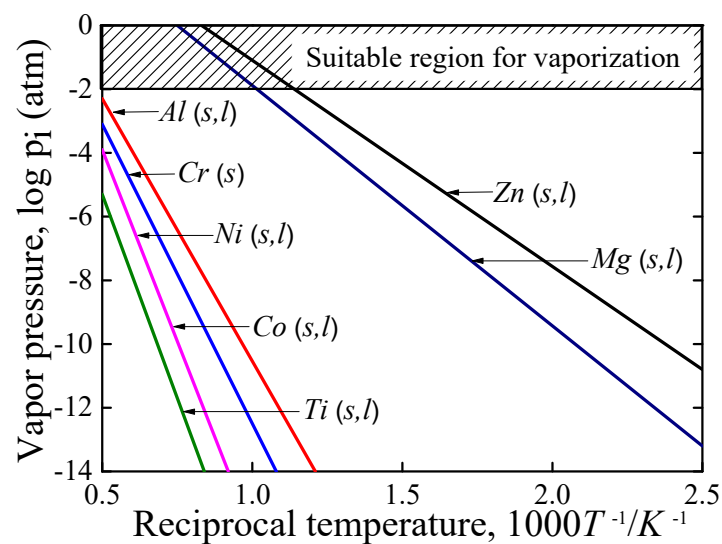


Figure S4. Vapor pressures of selected metals as a function of reciprocal temperature [4]. (This artwork is original and only data was used from the reference)

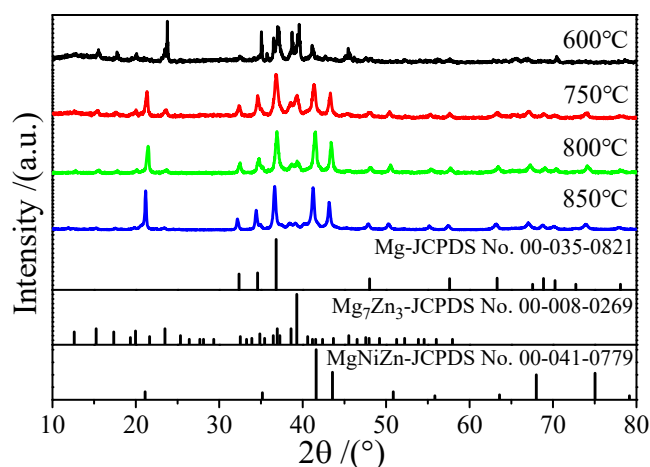


Figure S5. XRD patterns for Mg-Zn alloy of the samples under different heating temperature.

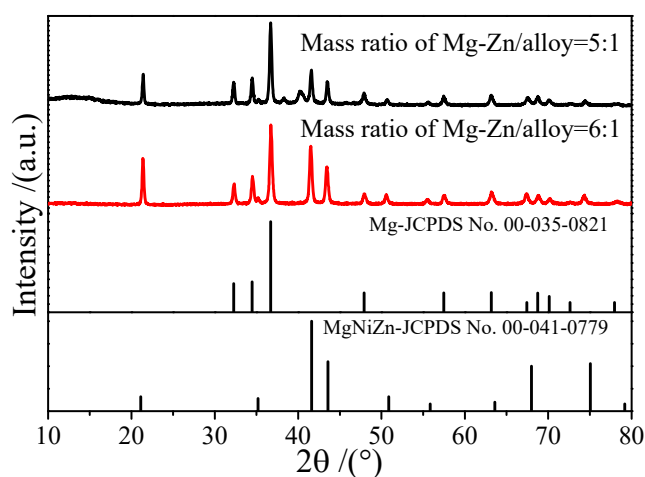


Figure S6. XRD patterns for Mg-Zn alloy of the samples under different mass ratio of Mg-Zn to superalloy.

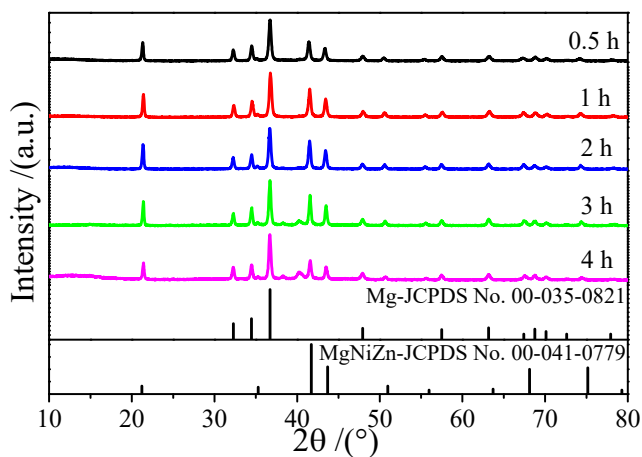


Figure S7. XRD patterns for Mg-Zn alloy of the samples under different heating time.

References

1. Su, X.P.; Tang, N.Y.; Toguri, J.M. Thermodynamic assessment of the Ni-Zn system. *J. Phase Equilib.* **2002**, *23*, 140-148.
2. Nayeb-Hashemi, A.A.; Clark, J.B. The Mg-Ni (Magnesium-Nickel) system. *Bulletin of Alloy Phase Diagrams* **1985**, *6*, 238-244.

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3. Bhan, S.; Jain, K.C.; Lal, A. The Mg-Ni-Zn System (Magnesium-Nickel-Zinc). *J. Phase Equilib.* **1997**, *18*, 305.
 4. Dai, Y.N.; Yang, B. *Vacuum Metallurgy of Nonferrous Metal Materials*; Metallurgical Industry Press: Beijing, China, 2009.