

Erratum: *Ab initio* study of the phase stability in paramagnetic duplex steel alloys
[Phys. Rev. B **79, 024108 (2009)]**

H. Pitkänen,* M. Alatalo, A. Puisto, M. Ropo, K. Kokko, M. P. J. Punkkinen, P. Olsson, B. Johansson,
S. Hertzman, and L. Vitos

(Received 19 March 2009; published 13 April 2009)

DOI: [10.1103/PhysRevB.79.149902](https://doi.org/10.1103/PhysRevB.79.149902) PACS number(s): 64.30.Ef, 71.15.Nc, 75.50.Bb, 81.05.Zx, 99.10.Cd

In the paper the Gibbs energy components are first discussed in the case of the $\text{Fe}_{0.84-n}\text{Cr}_{0.16}\text{Ni}_n$ quasi-binary system (Sec. III A) and then for the $\text{Fe}_{1-c-n}\text{Cr}_c\text{Ni}_n$ ternary alloys (Sec. III B). Since the above constant-Cr cross-section is not along the tie lines¹ of the ternary Fe-Cr-Ni phase diagram, our results from Sec. III A should not be connected at all to the ternary diagram reported, e.g., in Ref. 2. In particular, the last two sentences from the first paragraph and the second sentence from the last paragraph (Sec. III.) should be ignored. The discussion from Sec. III A remains strictly valid only for a hypothetical binary system.

Since the conclusions from the paper are based on the results presented in Sec. III B, they are not affected by the above erroneous interpretation of the results obtained for the quasi-binary system.

The authors are grateful to Bo Sundman and John Ågren for pointing out this flaw in the paper.

*heikki.pitkanen@lut.fi

¹M. Hillert, Phase Equilibria, Phase Diagrams and Phase Transformations (Cambridge University Press, Cambridge 2008).

²S. Hertzman and Bo Sundman, Scand. J. Metall. **14**, 95 (1985).