

Corrigendum

Corrigendum to “Mechanical behavior and microstructure evolution during deformation of AA7075-T651” [J. Mater. Sci. Eng. A 822 (2021) 141615]

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The authors regret having erroneous results of the true stress-strain levels in the original manuscript obtained directly from the Gleeble machine. After careful verification, the correct values of the true stress and true strain are obtained by manual calculations using the raw data of force and displacements from the compression tests. These calculations manifested an increase in the magnitude of true stress with simultaneous decrease in the magnitude of true strain along with a more reasonable elastic part for the flow stress curves, as compared to what were reported earlier in the original manuscript. Accordingly, Fig. 2 of the original manuscript is updated and presented here. Furthermore, keeping the updated strain levels in mind, the readers are requested to ignore the sentence in Section 2.2: “Mechanical characterization” of the original manuscript, which stated that the specimens were compressed up to a true strain of ~ 0.6 with the selected strain rates.

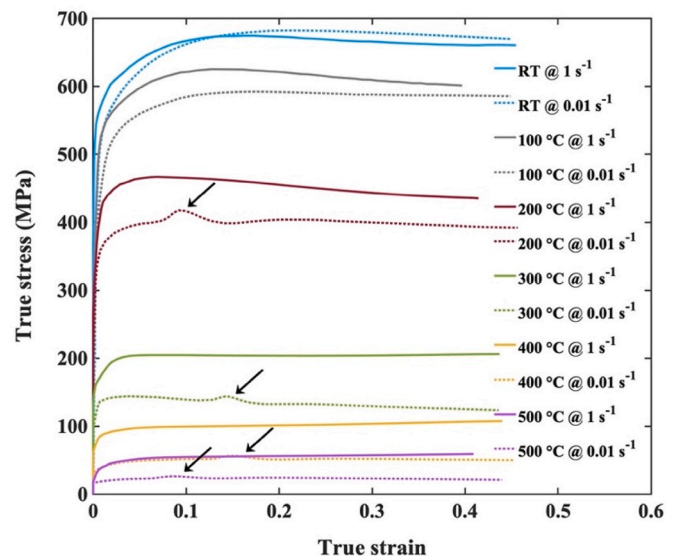


Fig. 2. True stress-strain curves of AA7075-T651 at different temperatures and strain rates. Black arrows indicate humps in the flow stress level.

Since the true stress-strain levels were modified, it prompted the authors to update Fig. 3 and 4 of the original manuscript, which discussed about the degree of softening and the variation of flow stress with temperature, respectively. It should be noted that the change in the stress-strain levels resulted in an alteration of just the values presented in these figures earlier, and it did not change any underlying trend whatsoever concluded in the original manuscript.

Fig. 3, which earlier displayed the magnitude of slope of the individual flow stress curves at a true strain of 0.4 for all the test temperatures, is updated and presented here, now showing the slope of the

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individual flow stress curves at a true strain of 0.3 for the testing temperatures. Accordingly, the readers are requested to perceive that, at a given temperature, lower the value of the slope, greater is the extent of softening. Thus, the trend outlined in bullet points (ii) and (iii) of Section 3.1. “Flow stress behavior” of the original manuscript remain unchanged.

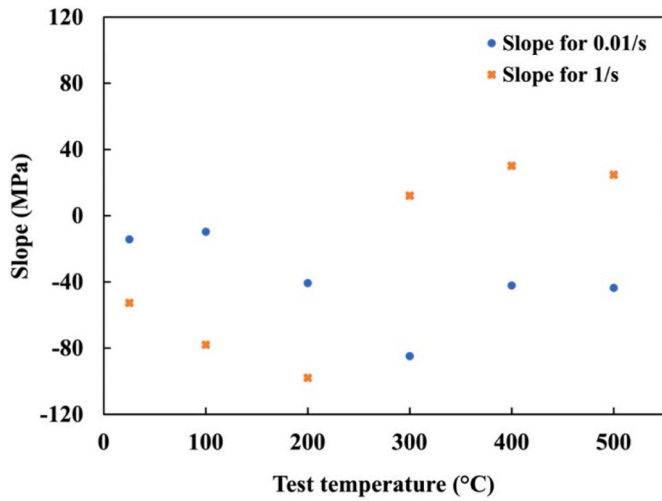


Fig. 3. Slope of the flow stress curves at true strain of 0.3. Similarly, Fig. 4 is now updated and displays the variation of flow

stress as a function of test temperatures at a true strain of 0.3, instead of the ones previously reported at a strain of 0.4. This update does not change the trend outlined in bullet points (iv) and (v) of Section 3.1. “Flow stress behavior” of the original manuscript either.

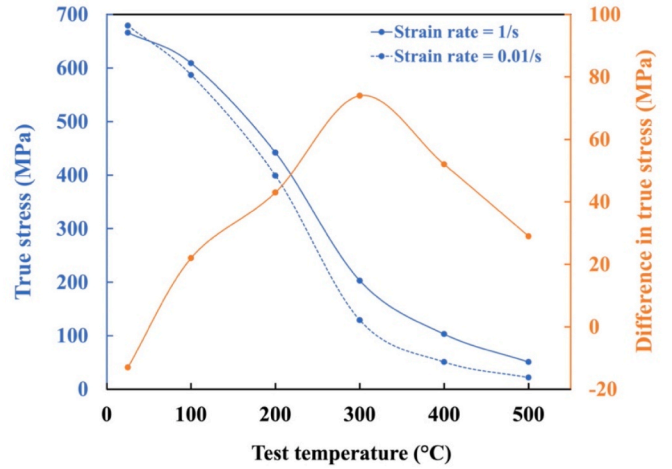


Fig. 4. Variation of flow stress as a function of test temperature at a true strain of 0.3. The authors would like to apologise for any inconvenience caused.