This manuscript summarizes a new rock resistivity test system to undertake the relationship between rock mechanical properties and resistivity under deep underground environmental conditions. The work is interesting and can be considered for publication after going through a major review. The authors need to address the following comments:

1. On resistivity measurement and multi-field coupling test method, it is reasonable to cite three papers that are published in the International Journal of Mining Science and Technology (Spatiotemporal evolution of thermo-hydro-mechanical-chemical processes in cemented paste backfill under interfacial loading, Resistivity response of coal under hydraulic fracturing with different injection rates: A laboratory study, Creep properties and resistivity-ultrasonic-AE responses of cemented gangue backfill column under high-stress area).

2. Fig. 2. The design of triaxial pressure cell is conventional, please highlight innovation.

3. Paragraph 50, can 80 °C reach the deep underground environmental temperature?

4. Paragraph 60, what is the maximum time to maintain stability, should be shown in the manuscript.

5. Paragraph 70, the picture of the test system should be shown here.

6. Paragraph 125, the temperature fluctuation of 0.5 °C has a great influence on the rock mechanics experiment.

7. Paragraph 130, what is the temperature and pressure range of the strain gauge? How to install the flexible protective film and lead out the wire when pasting the strain gauge? How to measure and calculate the radial deformation?

8. Paragraph 170. How does water evaporation occur in a closed triaxial pressure cell?

9. Section 5.2, there is only two sample in the triaxial test. Is the test result convincing?

10. Conclusions: Please highlight the outcomes of the research.

11. The manuscript needs language editorial.