Response to Reviewer 2 Comments

**Point 1:** The figures 10-23 seems to be similar while the monitoring lines are different.

**Response 1:** For the comments put forward, Figures 10-23 in section 5.1 is adjusted, and pictures with similar stress distribution laws are deleted. The key parameters of stress distribution law are listed in tables, and the analysis of simulation results is simplified and refined. Please refer to section 5.1 of the revised version for details.

**Point 2:** The quality of figures is not in professional level (e.g. Figure.8, newly added in the revision).

**Response 2:** According to the reviewing opinions, Figure 8 has been modified, as detailed in Figure 8 of section 4.3 of the revised version.

**Point 3:** The paper has several errors in engineering practice: incorrect SI unit expression, detailed statement on monitoring system (devices, number, and location) is missed.

**Response 3:** According to the reviewing opinions, specific international units are added to the dimension markings in Figure 7 of section 4.3 and Figure 9 of section 5.1 of the revised version. The devices of monitoring system are introduced in detail, and the schematic diagram of monitoring system is added correspondingly (as shown in Figure 15 of section 6.1.1). The number and location of monitoring system are described in detail in section 6.1.2 of the revised version, and the location of the monitoring device is shown in Figure 16.

**Point 4:** The comparison of numerical results and monitoring measurement is not given for model validation.

**Response 4:** According to the comments put forward, the field mine pressure monitoring results are compared with the numerical simulation results, and the results of numerical analysis are verified. Please refer to section 6.2.3 of the revised version for details.