







figure.

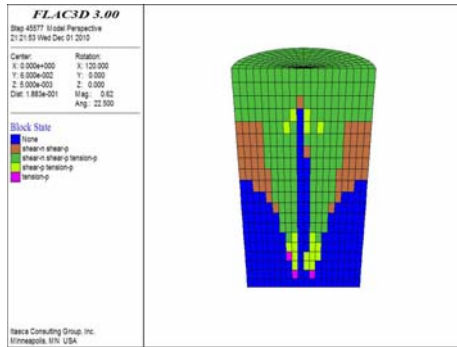


Fig.6. Plastic zone extension



Fig.7. Rock specimen creep damage

#### D. The Teaching Effect

Through the above demonstration, can be very intuitive to show rock deformation under constant loads with real time the development process as well as different time rock rupture process, help students better understand the creep properties of the rock and achieve experimental teaching goal. Numerical simulation technology combined with rock mechanics teaching can greatly stimulate students' learning interesting, to deepen the students correct understanding and mastery of rock mechanics problems, improve the students theoretical level and practical skills.

#### Conclusion

Aim to solve the rock mechanics teaching problems of the lagging behind of experimental, experimental teaching financially and the difficulty to combining theory with practice. In this paper we introduced FLAC3D numerical simulation technology and applied it into the rock mechanics teaching, and put the author's own derivate creep constitutive model into the simulated demonstration, meanwhile, the demonstration results were compared with indoor test curves and pictures, which expand the horizons of students, to stimulate students' interest in learning rock mechanics courses, make students to truly feel the charm of rock mechanics and achieved good teaching effect. Research achievement of this paper can provide teaching reference for rock mechanics and other course.

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