PERFORMANCE OF CHOCK SHIELD SUPPORT IN LONGWALL SYSTEM

BY -

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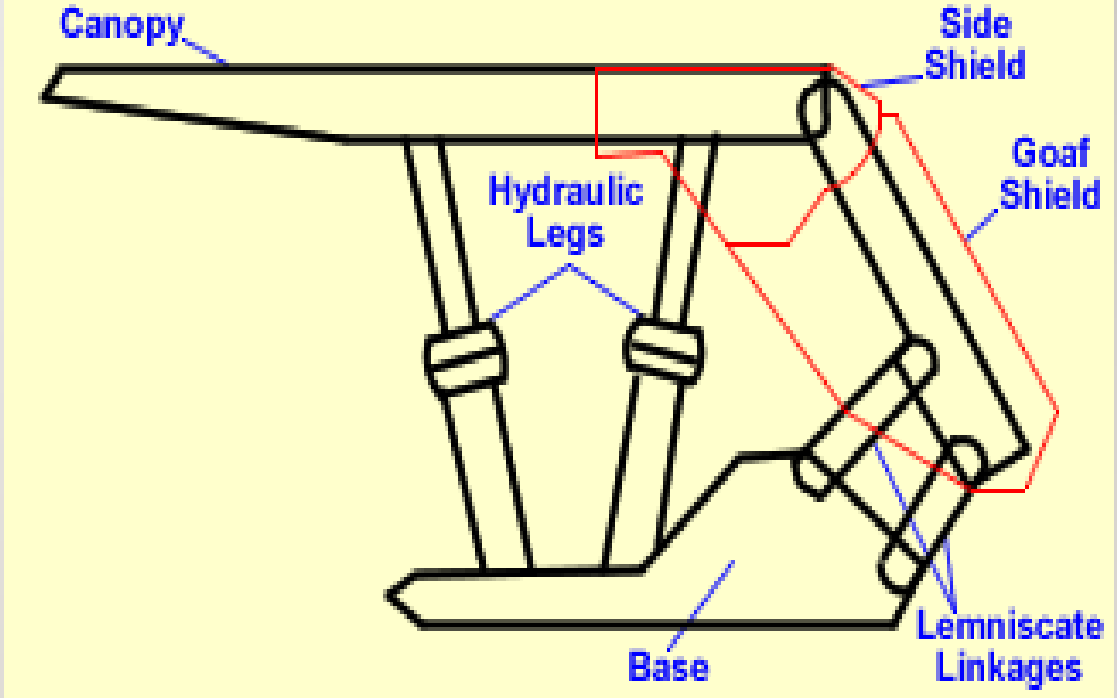
INTRODUCTION

- LONGWALL MINING IS THE EFFICIENT AND HIGH PRODUCTION MINING METHOD
- SUCCESS OF LONGWALL SYSTEM DEPENDS ON POWER SUPPORT SYSTEMS
- MORE THAN 50% OF THE EQUIPMENT COST REQUIRED FOR LONGWALL IS MET BY POWER SUPPORT SYSTEMS
- CHOCK SHIELD IS THE MOST MODERN SYSTEM OF PROVIDING SUPPORT
- THE USAGE OF CHOCK SHIELD INCREASES THE SUPPORT AS WELL AS PRODUCTION CAPACITY.

CONSTRUCTIONAL FEATURES

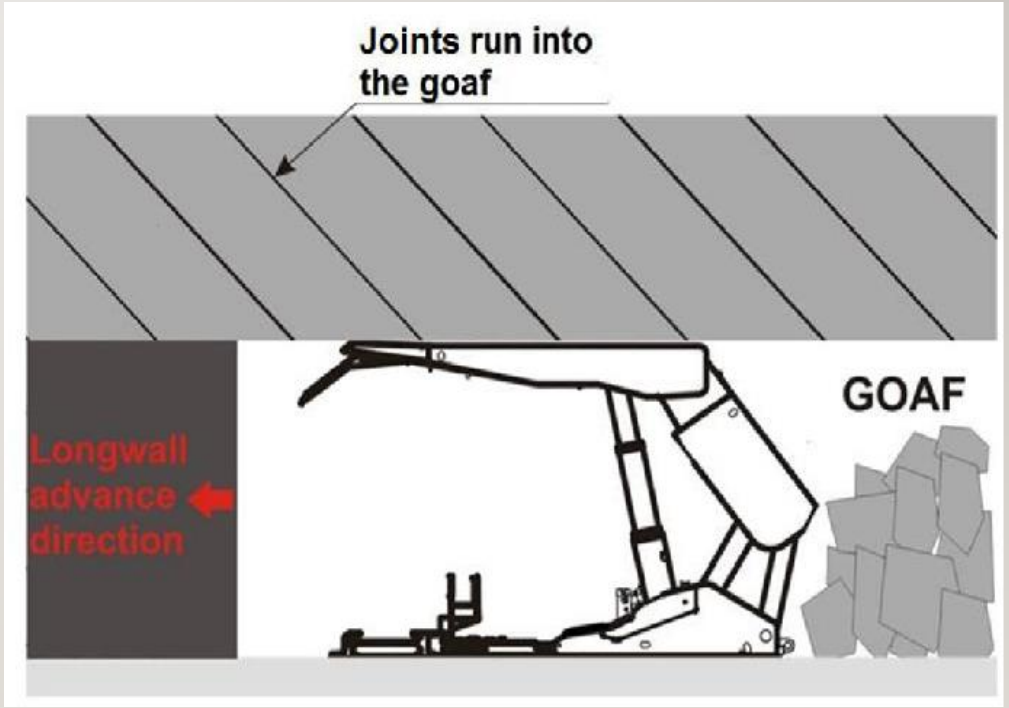
COMPONENTS OF CHOCK SHIELD SUPPORT –

- HYDARULIC LEGS
- CANOPY
- SHIELD
- BASE



SIGNIFICANCE OF CHOCK SHIELD SUPPORT

- PROVIDES SUPPORT TO STRATA
- PUSHES FACE CHAIN CONVEYOR
- PROVIDES SAFE ENVIRONMENT FOR MINING ACTIVITIES
- SUITABLE FOR MEDIUM TO HARD ROOF



FACTORS INFLUENCING LOAD

- Setting load density
- Height of caving block
- Yield characteristics
- Presence of fractured zones near the face

ADVANTAGES

- KINEMATICALLY STABLE
- ANGLE OF INCLINATION OF LEGS CAN VARY WITH MINIMUM HEIGHT
- HIGH SUPPORTING EFFICIENCY
- IT PROMOTED THE APPLICATION OF LONGWALL MINING IN DIFFICULT TO CONTROL CAVING SYSTEM
- COMBINED ADVANTAGES OF BOTH CHOCK AND SHIELD
- USED FOR BOTH THICK AND THIN COAL SEAMS

CONCLUSION

The chock shield support is the most modern support system and it increases the production of coal in underground coal mines. It also increases the safety by providing a support with a lengthier canopy. Overall its usage should be increased to increase the safety and production of coal.

REFERENCES

TEXT REFERENCES-

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Excess date – 10/04/2023

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IMAGE REFERENCES-

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THANK YOU