

Appendix I: ROOF BOLTER QUESTIONNAIRE

PRE_TEST

1. INTRODUCTION

Hello, my name is _____. I work for NIOSH and we are doing a research study to get information on what coal miners think about the lighting on roof bolting machines. The interview takes about 8 minutes. Your participation is completely voluntary. You don't need to answer any questions you don't want to. Your responses to interview questions will be treated in a confidential manner, unless otherwise compelled by law. We do not record the names of the people we interview. The information you provide will be analyzed and reported along with the information provided by miners at other mines. In any public release of survey results, no data will be disclosed that could be used to identify specific individuals. Only NIOSH staff who are involved in collecting or preparing the information for analysis will have access to your answers. Do you have any questions before I begin the interview?

2. BACKGROUND

To begin, I need to get some information about you and your experience in mining.

2.1 How many years have you worked as a coal miner?

- < 2
- 2 - 5
- 6 - 10
- 11 - 20
- > 20

2.2 How many years have you worked with a roof bolter?

- < 2
- 2 - 5
- 6 - 10
- 11 - 20
- > 20

2.2 What is the make and model of roof bolter that you currently use?

2.4 How old are you?

- < 30
- 30 - 39
- 40 - 49
- 50 and over

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2.5 What type of cap lamp do you use?

- incandescent
- LED with a corded battery pack
- cordless LED

2.6 How long have you had this cap lamp?

- < 3 months
- 1 to 3 years
- more than 3 years

3.0 ROOF BOLTER OPERATION

3.1 Overall, how would you rate glare when operating the roof bolter?

- 1 Unbearable
- 2 –
- 3 Disturbing
- 4 –
- 5 Just acceptable
- 6 –
- 7 Satisfactory
- 8 –
- 9 Just noticeable

3.2 Where and when is the glare the worst when operating the roof bolter?

3.3 Where and when do you need more illumination when operating the roof bolter?

3.4 Where and when do you need less illumination when operating the roof bolter?

3.5 Seeing floor hazards when operating the roof bolter is:

difficult					easy
1	2	3	4		5

3.6 Seeing roof hazards when operating the roof bolter is:

difficult					easy
1	2	3	4		5

3.7 Seeing rib hazards when operating the roof bolter is:

difficult					easy
1	2	3	4		5

3.8 Can the roof bolter lighting be improved?

3.9 Do you think the extra lighting provided to illuminate the roof is helpful when performing bolting operations? Why or why not?

3.10 Do you think the extra roof lighting would make your job safer? Why or why not?

SPECIFIC QUESTIONS REGARDING DESIGN OF CONTROLS:

3.9 Do you look at your controls when you operate them? Y or N

3.10 Do the controls or directions of the controls ever come back after maintenance in the wrong place or the wrong direction? Y or N

3.11 Are you more likely to inadvertently pick the wrong control or pick the right control but move it in the wrong direction during your bolting cycle? Wrong Control Wrong Direction

3.12. Which controls do you inadvertently operate when you do make a control selection error?

3.13 Which control do you inadvertently move in the wrong direction when you do make a directional error?

Thank you for your time. This concludes this portion of our questions. We look forward to talking to you after you experience some of the changes to the roof bolting machine. We appreciate your feedback as it helps us to recommend designs that may help make your jobs easier and safer.

POST-TEST

1. INTRODUCTION

Hello, my name is _____. I work for NIOSH and we are doing a research study to get information on what coal miners think about the lighting on roof bolters. The interview takes about 8 minutes. Your participation is completely voluntary. You don't need to answer any questions you don't want to. Your responses to interview questions will be treated in a confidential manner, unless otherwise compelled by law. We do not record the names of the people we interview. The information you provide will be analyzed and reported along with the information provided by miners at other mines. In any public release of survey results, no data will be disclosed that could be used to identify specific individuals. Only NIOSH staff who are involved in collecting or preparing the information for analysis will have access to your answers. Do you have any questions before I begin the interview?

3.0 ROOF BOLTER OPERATION

3.1 Overall, how would you rate glare when operating the roof bolter?

- 1 Unbearable
- 2 –
- 3 Disturbing
- 4 –
- 5 Just acceptable
- 6 –
- 7 Satisfactory
- 8 –
- 9 Just noticeable

3.2 Where and when is the glare the worst when operating the roof bolter?

3.3 Where and when do you need more illumination when operating the roof bolter?

3.4 Where and when do you need less illumination when operating the roof bolter?

3.5 Compared to before, seeing floor hazards when operating the roof bolter is:

more difficult					easier
1	2	3	4	5	

3.6 Compared to before, seeing roof hazards when operating the roof bolter is:

more difficult

easier

1

2

3

4

5

3.7 Compared to before, seeing rib hazards when operating the roof bolter is:

more difficult

easier

1

2

3

4

5

3.8 Compared to before, operating the roof bolter is:

more difficult

easier

1

2

3

4

5

3.9 Can the roof bolter lighting be improved?

3.10 Do you think the extra lighting provided to illuminate the roof is helpful when performing bolting operations? Why or why not?

3.11 Do you think the extra roof lighting would make your job safer? Why or why not?

3.12 Do you think the lighting provided on the activation of the swing is helpful when performing bolting operations? Why or why not?

3.13 Would this lighting on the swing be helpful during training for new roof bolters? Why or why not?

3.14 Having seen this type of lighting, what other areas of the roof bolting machine could benefit from this type of lighting/visual feedback system?

This concludes our questions. Thank you for your time and willingness to help us with this research study.