

Roof Bolter Operator

Postural Analyses of Coal Mining in Low Working Heights:  
Effect of Working Height and Job Type

- 1. Subject Code \_\_\_\_\_
- 2. Date \_\_\_\_\_
- 3. Time \_\_\_\_\_
- 4. Height (feet +inches) \_\_\_\_\_ (meters) \_\_\_\_\_
- 5. Weight (lbs) \_\_\_\_\_ (kilograms) \_\_\_\_\_  
Body Mass Index (kg/m<sup>2</sup>) \_\_\_\_\_
- 6. Age (years) \_\_\_\_\_
- 7. Time in job (years) \_\_\_\_\_
- 8. Time in low height mines (years) \_\_\_\_\_
- 9. Type of knee pad used \_\_\_\_\_
- 10. Side of Bolter \_\_\_\_\_
- 11. Side SCSR is worn on \_\_\_\_\_
- 12. Side cap lamp battery is worn on \_\_\_\_\_
- 13. Weight of mining belt (lbs) \_\_\_\_\_ (kilograms) \_\_\_\_\_

Items worn on mining belt: \_\_\_\_\_  
\_\_\_\_\_

Least physically demanding task that you perform on a daily basis: \_\_\_\_\_  
\_\_\_\_\_

Most physically demanding task that you perform on a daily basis: \_\_\_\_\_  
\_\_\_\_\_

Comments on knee pads used. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How often do you clean your knee pads?  
\_\_\_\_\_

How do you clean them? \_\_\_\_\_

Subjects will be asked the following questions by a NIOSH representative. This data will be used to determine whether or not an injury to the knee may have influenced the postures utilized by the subject.

**Check all that apply:**

\_\_\_ Diagnosed knee injury:\_\_\_\_\_

\_\_\_ Pain/Redness/Swelling in front of knee

\_\_\_ Infection/ Hardening at the front of knee

\_\_\_ Popping feeling in knee






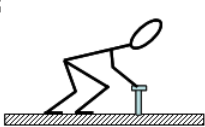
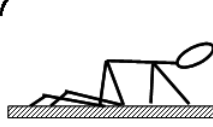

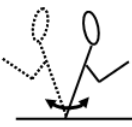



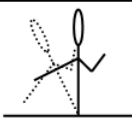
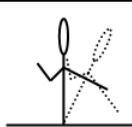
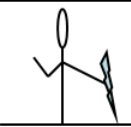
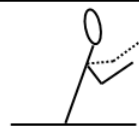
\_\_\_ Pain inside the knee

\_\_\_ Catching/Locking of knee

\_\_\_ Instability/Feeling like knee is going to give away

\_\_\_ Knee stiffness after waking up

\_\_\_ General knee weakness

1  Kneeling near full flexion	2  Kneeling near 90° flexion	3  Kneeling on one knee	4  Squatting
5  2 point crawling	6  3 point walking – with object	7  4 point crawling	8  Duck Walking
9  Any above posture with $\geq 45^\circ$ twisting at waist	10  Any above posture with forceful PUSH/PULL exertion of arm	11  Any above posture with forceful SWINGING exertion of arm	12  Any above posture with forceful exertion of leg
13  Any above posture with leaning to left	14  Any above posture with leaning to right	15  Any above posture with an object other than a control in either hand	16  Reaching

Which two postures from the above chart (1-16) do you use most often?

- a) \_\_\_\_\_  
b) \_\_\_\_\_

Of these (a, b), what percentage of your day is spent in each posture?

- a) \_\_\_\_\_ %  
b) \_\_\_\_\_ %

Which posture causes the most discomfort? \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_

Which posture causes the least discomfort? \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_

Did the subject indicate that they used an obscure posture (posture not on list)?

If so, please describe. \_\_\_\_\_  
\_\_\_\_\_

**Frequent/ Obscure Posture**

1. Describe any frequent or obscure posture. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Questions for operator:

1. Why did you choose that posture? \_\_\_\_\_  
\_\_\_\_\_

2. Did your equipment play a role in your positioning? \_\_\_\_\_  
If yes, what aspects of your equipment played a role? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Do you feel fatigued or do you have any bodily discomfort? \_\_\_\_\_  
If yes, please describe this fatigue/discomfort \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Did this play a role in your positioning? If so, how? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_