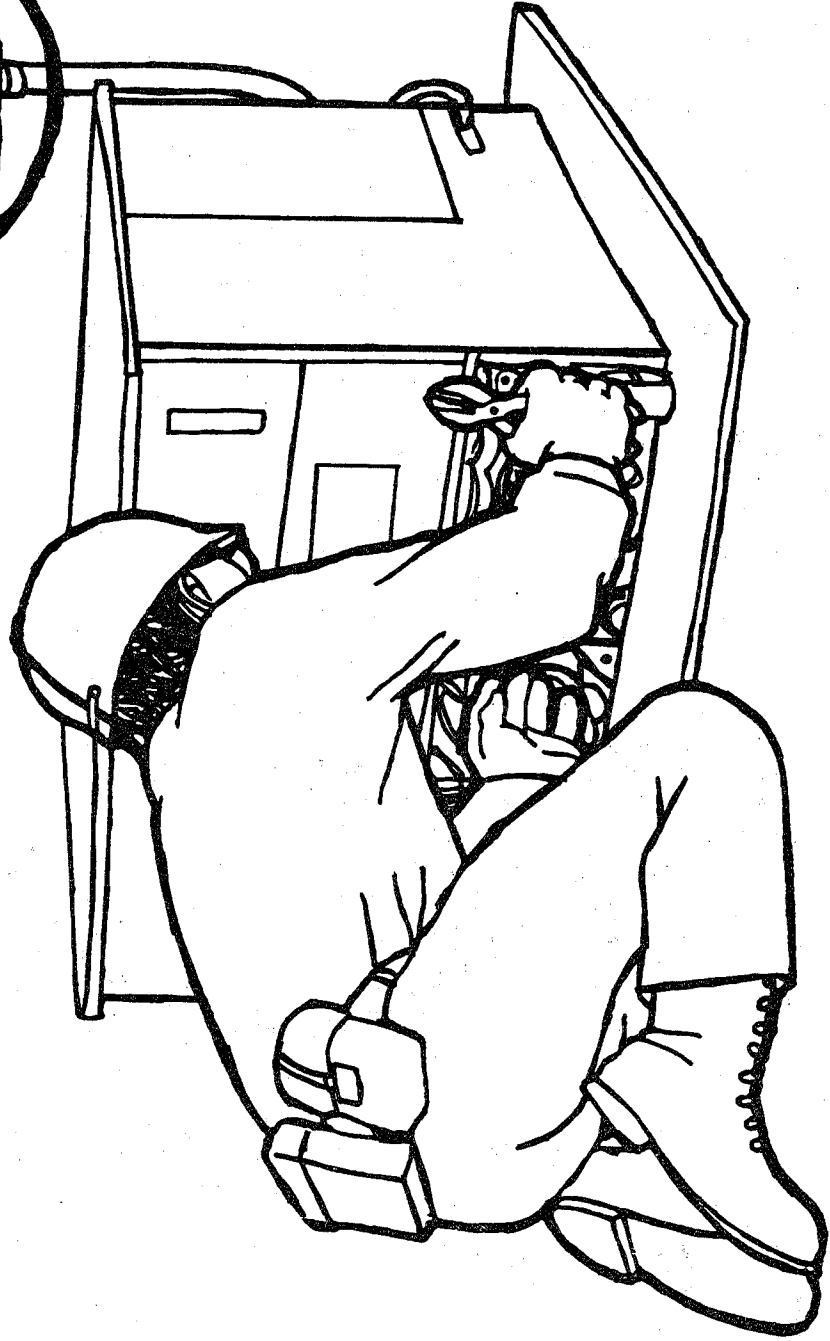
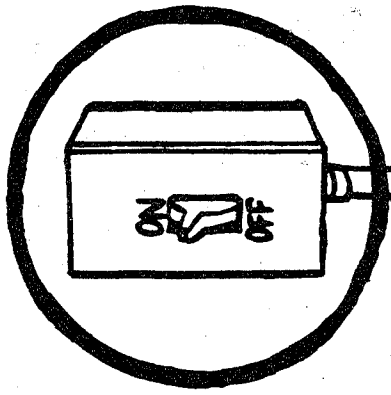

BULLETIN



**WORKING ON ENERGIZED
EQUIPMENT IS HAZARDOUS
TO YOUR HEALTH**





IN THIS ISSUE...

	PAGE
Topic -- "Welcome New Members".....	2
Study -- "Analysis of Injuries Involving Conveyors in Metal and Nonmetal Mines".....	3
Safety Topic -- "Mantrips".....	6
Graph -- "Number of Fatal Injuries in the U.S. Mining Industries, 1986, 1987 and 1988".....	8
Accident Summary -- "Machinery Accident".....	9
Accident Summary -- "Machinery Accident".....	10
Poster -- "Typical Mining of the Era Gone By".....	11
Safety Topic -- "Scan for Accident".....	12
Safety Topic -- "Exit Markings".....	14
Topic -- "What is Your Supervisory Batting Average".....	16
Poster -- "Roof Evaluation - Accident Prevention".....	17
Safety Topic -- "Caring For and Using Wire Rope Chains Safely".....	18
Safety Topic -- "How Did It Happen".....	19
Safety Topic -- "The Winner".....	19
Safety Topic -- "No Nagging Doubts".....	20
Safety Topic -- "Could This Be You".....	21
Safety Topic -- "Lock In Safety".....	21
Safety Topic -- "For Safety's Sake".....	22
Safety Topic -- "No Time For Dreaming".....	23
Safety Topic -- "Where Is It".....	23
Safety Topic -- "Changing Jobs".....	24
Safety Topic -- "Housekeeping".....	25
Safety Topic -- "The Last Word".....	26

THIS SAFETY BULLETIN CONTAINING SAFETY ARTICLES ON A VARIETY OF SUBJECTS, FATAL ACCIDENT ABSTRACTS, STUDIES, POSTERS AND OTHER SAFETY INFORMATION FOR PRESENTATION TO GROUPS OF MINE AND PLANT WORKERS IS PROVIDED FREE AS A BASIS FOR DISCUSSION AT ON-THE-JOB SAFETY MEETINGS.

PLEASE USE THE POSTAGE-PAID ENCLOSED GREEN MEETING REPORT FORM AND RETURN TO THE HOLMES SAFETY ASSOCIATION.



<u>COMPANY</u>	<u>CHAPTER NO.</u>	<u>LOCATION</u>
Southern Clay Products	7633	Van Horn, TX
H & L Paving & Materials	7634	Williamsburg, VA
Three "D" Sales Co.	7635	Millard, KY
Buchanan Contractors	7636	Wise, VA
Ridgetop Mining Co., Inc.	7637	Kanawha Falls, WV
Carper Sand	7638	Grandview, WV
Galian Stone Products	7639	Elizabeth, IL
Hoover, Inc.	7640	Smyrna, TN
Uintah County Road Dept.	7641	Vernal, UT
Elms Equipment Rental, Inc.	7642	Brawley, CA
Keyesport Sand & Gravel	7643	Keyesport, IL
Munie Sand & Gravel	7644	Keyesport, IL
Kelly Energy Co., Inc.	7645	Pound, VA
Shana Coal Co.	7646	Drennen, WV
Met Transport, Inc.	7647	Cannelton, WV
Beck-Town Coal Co., Inc.	7648	Dante, VA
Big Carney Contractors	7649	Calburn, VA
R & R Hydraulics, Inc.	7650	Boomer, WV
Mahawk Research	7651	Phelps, KY
Cowaco	7652	Widen, WV
Box-Crow	7653	Midlothian, TX
Whatcom County Public Works	7654	Bellingham, WA
J. F. Allen Company	7655	Clarksburg, WV
Laran Coal Co., Inc.	7656	Pennington Gap, VA
White Pine Coal Co.	7657	Ashland, PA
Patrica Coal Co.	7658	Lumberport, WV
Mars No. 1 LaRosa Fuel Co., Inc.	7659	Wilsonburg, WV
Wesco Fuels, Inc.	7660	Wilsonburg, WV
R. W. Yeager Trucking Co., Inc.	7661	Clarksburg, WV
Radersburg Mining Company	7662	Toston, MT
Clay Lewis	7663	Huson, MT
Canada Coal Corp.	7664	Kimper, KY
D & E Coal Corp.	7665	Kimper, KY



H.S.A. SAFETY TOPIC

Analysis of Injuries Involving Conveyors in Metal and Nonmetal Mines



A B S T R A C T

A total of 370 conveyor accidents over a period of two years was studied for this report of which four were fatalities. Injuries from conveyors fit into four task categories: unloading material, cleaning up spillage, repair work and routine maintenance work. Most of the injuries occurred during routine maintenance work while belts were in motion. Many of these injuries could have been prevented by stopping the belts and greatly reduced by guarding and maintaining the proper guards on belts, idlers, pulleys and installing extended oil or grease connections. Compliance with regulations will go a long way in materially reducing conveyor accidents in metal and nonmetal mines.

I N T R O D U C T I O N

Conveyors are used extensively for transporting ore, overburden and other material in metal and nonmetal mines. An analysis was made of conveyor-type accidents from the data obtained from reports on file with MSHA-HSAC. The number of injuries reported was significant.

A N A L Y S I S

Table 1 indicates that injuries involving conveyors fit into four task categories: (1) unloading material, (2) cleaning up spillage, (3) repair work and (4) routine maintenance work. Unloading material and cleaning up spillage produced the fewest injuries, 18 percent. Next is repair work with 23 percent and highest is routine maintenance work with 59 percent.

TABLE 1. - Conveyor injuries by worker activity

Activity	Number of injuries	Percent
Unloading material (moving belt)	30	8
Cleaning up spillage (moving belt)	36	10
Repair work (stopped belt)	85	23
Routine maintenance work (moving belt)	219	59
TOTAL	370	100

Causes of injuries while unloading material

Unloading material (bagged bentonite, bagged clay, etc.) from moving conveyors accounted for 30 of the 370 injuries. Most of these injuries involved workers catching their fingers and hands between idlers and moving belts. These accidents could have been prevented by guarding idlers and moving belts.

Causes of injuries while cleaning up spillage

Cleaning spillage from under moving conveyor belts accounted for 36 of the 370 injuries. Many of these injuries involved cleaning bars being caught by the belt and forcing worker's hand against conveyor frame causing bruises and severe lacerations. Some of the workers were injured when their fingers, hands and arms were pulled between belt and idlers causing amputations and lacerations. These accidents could have been prevented by guarding nip angles between belts and their pulleys and by providing adequate clearances along the conveyor. 30 CFR Subpart M 56.14001 states: "Gears, sprockets, chains, couplings, shafts, sawblades, fan inlets and similar exposed moving machine parts which may be contacted by persons and which may cause injury to persons shall be guarded."

Causes of injuries while performing repair work

Repair of stopped conveyors accounted for 85 of the 370 injuries. Some typical examples are: (1) worker was replacing conveyor belt when the idler fell out of frame and hit toe (2) worker was changing idler on conveyor belt and caught left thumb between idler and conveyor frame and smashed thumb and (3) worker was making general repairs on belt when conveyor was accidentally started up and worker was thrown off belt and received bruises, cuts and lacerations.

Fourteen workers were injured (two fatally) when the conveyor they were repairing was accidentally started up. 30 CFR Subpart M 56.14029 requires that, "Repairs or maintenance shall not be performed on machinery until the power is off and the machinery is blocked against motion, except where machinery motion is necessary to make adjustments." Standards 30 CFR Subpart K 56 and 57.12016 require the lock out of electrical equipment before work is done.

Causes of injuries while performing routine maintenance work

Routine maintenance work (greasing, cleaning, etc.) accounted for 219 of the 370 injuries. Most of the injuries occurring during routine maintenance involved the workers catching their fingers, hands and arms in the moving belt, between the belt and idlers and between the pulley and belt. Many of these accidents could have been prevented by stopping the belts and greatly reduced by guarding and maintaining the proper guards on belts, idlers and pulleys, and installing extended oil or grease fittings. Effective belt cleaners and remote lubrication would provide for greater safety in conveyor haulage.

30 CFR Subpart M 56 and 57.14033 state, "Pulleys of conveyors shall not be cleaned manually while the conveyor is in motion. 30 CFR Subpart M 56 and 57.14035 states, "Machinery shall not be lubricated while in motion where a hazard exists, unless equipped with extended fittings or cups."

Forty of the 219 routine maintenance injuries occurred when workers were struck by a rock falling from a moving conveyor. Head, back, arms and feet were involved in the majority of these accidents. Proper loading (improved design of loading points and correct belt angle) can help reduce rock spillage, thereby reducing accidents from falling rock. 30 CFR Subpart M 56 and 57.14011 state, "Guards or shields should be provided in areas where flying or falling materials present a hazard."

Two fatalities were caused directly by moving belts. The workers were applying belt dressing when they were caught in the pinch point of the conveyor belt head pulley and received massive internal injuries. 30 CFR Subpart M 56 and 57.14034 state, "Belt dressing shall not be applied manually while belts are in motion unless an aerosol-type dressing is used."

C O N C L U S I O N S

Analysis of conveyor-type accidents indicates that workers often are not complying with MSHA regulations, such as stopping belts before performing routine maintenance work (greasing, cleaning, etc.). The worker often catches fingers, hands and arms in the moving belt, between the belt and idlers and between the pulley and belt. These accidents could have been greatly reduced by guarding and maintaining the proper guards on belts, idlers and pulleys, installing extended oil or grease fittings and providing safe access. Effective belt cleaners and remote lubrication would provide for greater safety in conveyor haulage. There is a great need for supervisors to enforce safe working practices. These actions should go a long way in materially reducing conveyor accidents in metal and nonmetal mines in the United States.

Mantrips



All persons employed in underground mines must be transported from the surface to their assigned work sites and back again. This is accomplished by several methods such as rail trips, belts, hoist and rubber tired equipment. All transportation equipment must be maintained in top mechanical condition. This potential for mass injuries or fatalities is great due to the number of people transported in a loaded mantrip.

Operator's Responsibilities

Operators of mantrips should always keep them under control and check to make sure they are in safe operating condition. They should also make sure all passengers are seated before moving the mantrip.

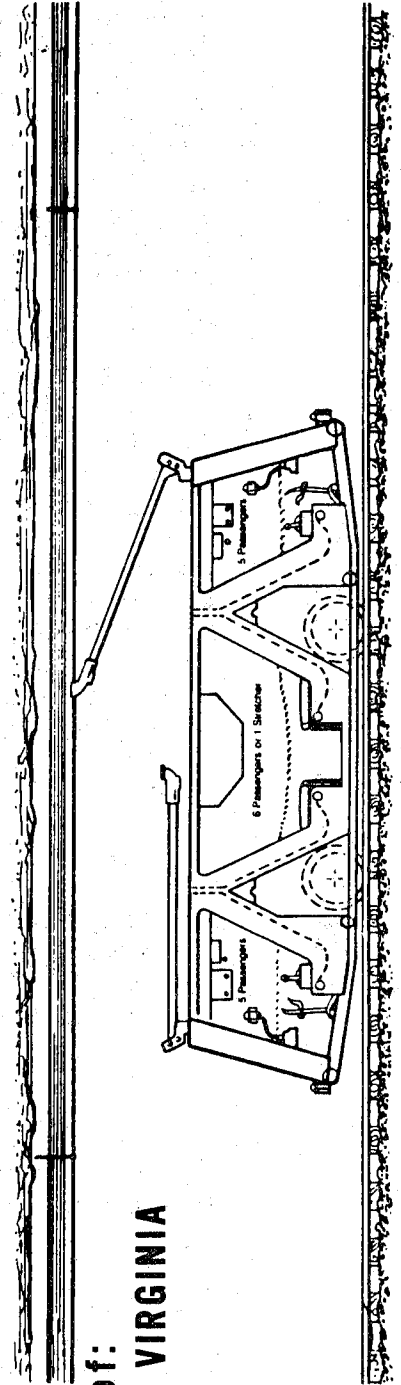
Courtesy of:
STATE OF VIRGINIA

Persons Should Not Be Transported

- Outside the cabs and bed of mobile equipment.
- In or on dippers or forks of mobile equipment.
- In beds of trucks unless special provisions are made for their safety.

Rules Regarding Mantrips

- All roadways and track shall be maintained in a manner to ensure safe operations.
- No one shall be permitted to ride a power driven belt unless the belt is specifically designed for the transportation of people.
- Vehicles used to transport persons to and from work areas shall not be overcrowded.
- Operating speeds shall be consistent with conditions of roadways, clearance, visibility, traffic and type of equipment used.
- Maintain adequate clearance for all mantrips.



Mantrips--Cont.

Safety Tips

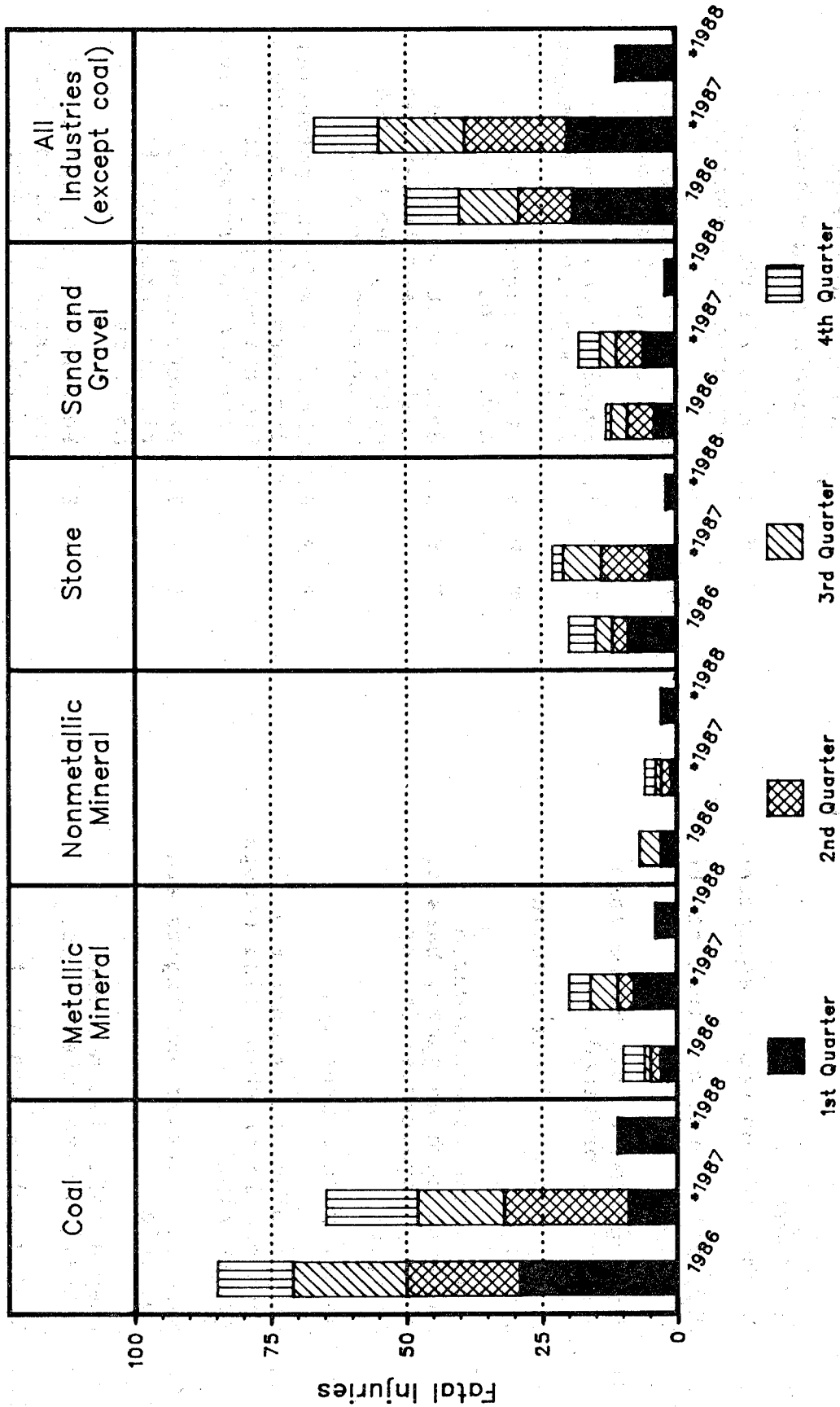
1. Do not ride on top of equipment.
2. Stay within the confines of the mantrip.
3. Ride equipment only where safe seating is provided.
4. Do not get on or off a moving mantrip.
5. Do not ride with unsecured objects, such as jacks, bars or fire extinguishers, in any mantrip.
6. Do not push a mantrip.
7. Always block and secure the push-out lever when using scoops as mantrips.
8. Make sure brakes and lights are operable.
9. Keep a safe distance when traveling with other trips.
10. Haul supplies separate from a mantrip.
11. Operate mantrips at safe speeds.
12. Prohibit horseplay while traveling in a mantrip.

Mantrips Safety Check

(Circle Correct Answer)

- | | | | |
|---|---|-----|---|
| T | F | 1. | It is alright to ride anywhere in a mantrip. |
| T | F | 2. | Mine conditions determine the speed of any mantrip. |
| T | F | 3. | Supplies can be hauled in a mantrip with personnel. |
| T | F | 4. | It is alright to push a mantrip. |
| T | F | 5. | Belts must be equipped with all safety devices before they can be used to transport people. |
| T | F | 6. | There is a great potential for mass tragedy because of the number of people involved in transportation. |
| T | F | 7. | Preoperational checks are not important for mantrips. |
| T | F | 8. | Persons can be transported in buckets or on the forks of mobile equipment. |
| T | F | 9. | All roadways should be maintained in a manner to ensure safe operation of mantrips. |
| T | F | 10. | Mantrips can haul as many people as can be loaded. |

Chart 1. Number of Fatal Injuries in the U.S. Mining Industries
1986, 1987 and 1988 through 1st Quarter



*Preliminary See limitations of data

ABSTRACT FROM FATAL ACCIDENT

*This fatality could be discussed at your regular on-the-job safety meeting.



MACHINERY ACCIDENT

GENERAL INFORMATION: An electrician was fatally injured when he was pulled into a conveyor belt tail pulley. The victim had 23 years of mining experience.

The mine was an underground copper mining operation. Copper ore was mined using the room-and-pillar method. Mined ore was hauled from the working headings using scoop trams and shuttle cars and the ore was crushed in Stamler crushers located in the units. Crushed ore was belt-conveyed to the surface mill.

DESCRIPTION OF ACCIDENT: The victim reported for work and performed his regular assigned duties until the foreman noticed that a conveyor belt was not running. Thinking that the problem was electrical, two electricians were called and advised to check it out. An attempt was made to restart the conveyor belt but it would only kick back. The foreman then proceeded to check the drive motor and the head pulley where he could find no problems. He then instructed the electricians to remain at the drive motor while he checked the tail pulley. When he arrived at the tail pulley section, he observed a piece of mined rock approximately 20 to 30 inches in circumference, lodged between the self-cleaning tail pulley and the return conveyor belt. It was presumed that the rock had fallen from the loaded conveyor belt onto the return conveyor and carried into the tail pulley. The foreman then proceeded to call the two electricians who in turn locked out the system and released the take-up pulleys. The electricians then proceeded to the tail pulley area. The foreman attempted to free the lodged rock with a bar but was unsuccessful. He then called for the belt repairmen to come to the tail pulley area with a come-a-long unit. It was at this point that the victim took a sledge hammer, crawled onto the return conveyor and proceeded to hammer at lodged rock. After he hit the rock a few times with the hammer, it broke in two and after a few more hits, the hammer dislodged the rock causing the taut conveyor belt to be released. Witnesses stated that the return portion of the belt reacted with a bouncing action when released.

The victim became wedged between the tail pulley, conveyor belt and a "H" beam that extended across and approximately 8 inches below the tail pulley. The conveyor belt was cut and the tail pulley elevated approximately 2 inches, permitting the victim to be released.

CAUSE OF ACCIDENT: The direct cause of the accident was the failure to secure or block the conveyor belt against movement. Contributing causes were the victim placing himself in an unsafe location and failure to recognize the hazard that the belt was still under a great deal of tension.

ABSTRACT FROM FATAL ACCIDENT

*This fatality could be discussed at your regular on-the-job safety meeting.



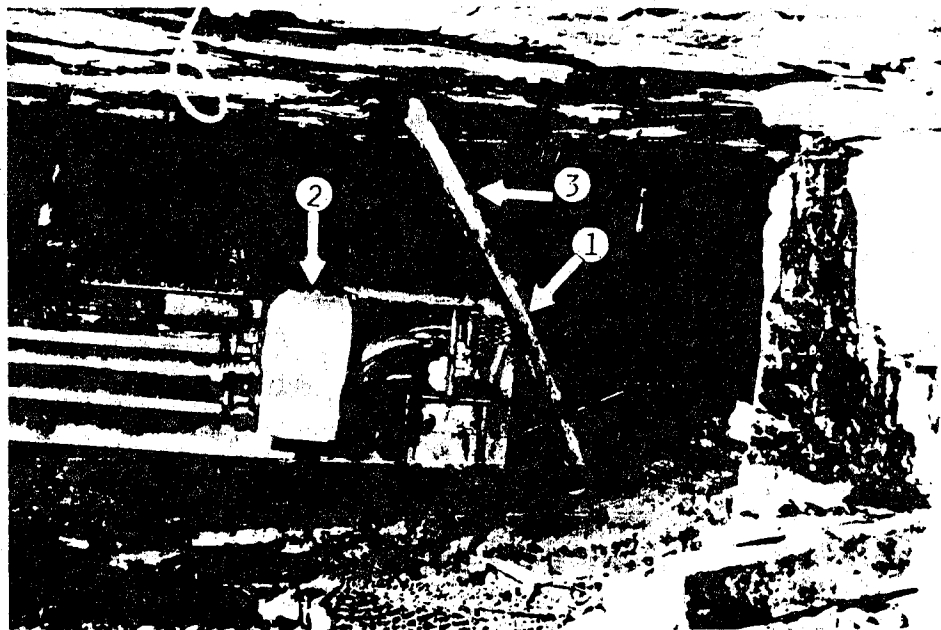
MACHINERY ACCIDENT

GENERAL INFORMATION: A machinery accident occurred resulting in the death of a shuttle-car operator. He had three years experience as a shuttle-car operator and a total of five years mining experience. According to the section foreman, the equipment had been moved to this section and this was the first production shift since relocating of the equipment. He stated that the crew was assigned to install timbers, establish the water on the section and routine maintenance work in order that production could be started. He said that production was started about 10 a.m. and continued until 2:30 p.m. when he was notified that the anchor jack for the conveyor belt tailpiece had become dislodged causing the belt to stop. He stated that crew members gathered in the area to assist in replacing the dislodged jack and it was decided that the feeder would have to be moved back to gain access to the belt tailpiece. The foreman stated that the victim energized the feeder and began tramping it backwards. The victim was positioned alongside the feeder and the installed right anchor jack when the feeder swerved to the right pinning him between the controls of the feeder and the anchor jack. The victim called out that he was caught and slumped over the controls losing consciousness.

CONCLUSION: The accident and resultant fatality occurred because of the failure to recognize and be alert to the inherent dangers associated with moving machinery.

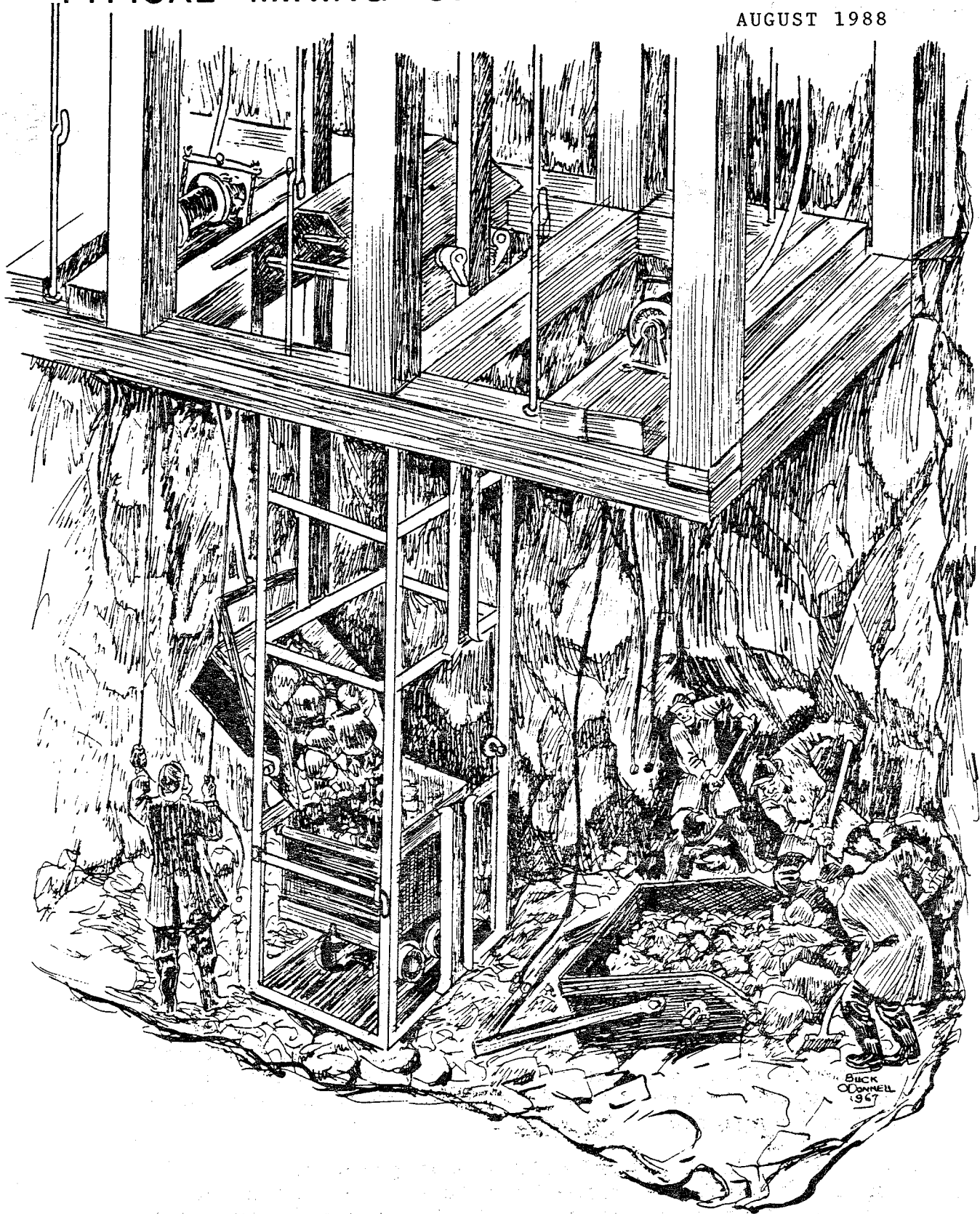
LEGEND:

1. Victim was removed from this location following accident.
2. Conveyor belt feeder.
3. Steel section of rail used as an anchor jack.



TYPICAL MINING OF THE ERA GONE BY

AUGUST 1988



THE MUCKING PAN

This was the first improvement in shaft mucking over hand mucking into the sinking bucket. A tigger hoist, remotely controlled by a miner, was mounted in each end compartment of the shaft. Miners scooped muck into the pan which was then hoisted and hooked to the long tom cage before dumping into the mine car. The sketch shows both loading and dumping operations.



Scan for Accidents

DO YOU KNOW WHAT THE MEDICAL PROFESSION CALLS THE NEW FAMILY OF COMPUTER-BASED MIRACLE MACHINES?

In the last few years, a new generation of machines has been developed that uses a technique called diagnostic imaging. These machines now help doctors literally see inside the human body before they prescribe drugs, surgery, radiation, or other treatments.

Imaging machines with the nicknames such as **MRI**, **CT** (or **CAT** scan), **MEG**, and **SONO** are just a few of the revolutionary devices that have been developed to show doctors what is happening inside the human body. Some medical experts believe the field of diagnostic imaging represents the most important technical advance in medicine since the discovery of x-rays in 1895.

These new devices may be used to help a surgeon perform intricate heart surgery that was once impossible, or diagnostic imaging can show the precise location of a tumor, a blockage in an artery, or even the position of an unborn child.

Illness and disease are unexpected and unwanted conditions that interfere with our health and often damage our quality of life. Imaging devices are giving today's medical teams a way to turn the body inside out so they can more accurately diagnose an illness without putting the patient at risk.

Accidents are also unexpected and undesirable incidents that interfere with our work and our well being. Fortunately, we also have tools to help us prevent accidents. While we can't use **CAT** scans or sonar devices to spot hazards, we can use safety inspections, job safety analysis, safety observations, audits and other accident prevention techniques to help us prepare for the unexpected.

And, each of us has the world's most powerful computer--the human brain--to help us diagnose a job, before we "begin the operation." The brain is our best defense against the unexpected and unwanted incidents that we call accidents.

Many companies use formal procedures to analyze each job and anticipate possible safety hazards. Those who perform the job, look into each single step so they get a clear picture of anything that could go wrong. Then they write down--and get approval for--the safe job procedure that will avoid hazards. You can do this on your job.

Just as doctors now use imaging devices before they operate, we all need to look at each job **BEFORE** we start so we can prevent those unexpected incidents that could cause damage to equipment or hurt someone. Finding and removing hidden hazards is our best protection against the unexpected incidents that so often lead to tragedy.

Prevention is the best way to deal with either illness or injuries. Developing a sharp mental image of the safe way to perform each job is the way to eliminate the risk that hides in unexpected incidents. Accidents often mean pain or sorrow. Use your own mental imaging to prevent accidents.

Courtesy of: PMA Corporation
Div. L.G. Harkins & Co., Inc.
Pittsburgh, PA



Safety BULLETIN put to good use

SIR:

JUST A NOTE FROM THE MINE INSPECTORS HERE IN VIRGINIA DIVISION. ALL OF US HAVE SPENT SEVERAL YEARS IN PRODUCTION AND AFTER HAVING BEEN MINE INSPECTORS FOR SOME TIME HAVE YET TO FIND A BETTER, MORE INFORMATIVE, SIMPLE AND TO THE POINT NEWS BULLETIN THAN THE HOLMES' ONE. WE USE IT EXTENSIVELY. IT IS OBVIOUS YOUR PEOPLE HAVE COAL MINING EXPERIENCE OR IN CLOSE CONTACT WITH THOSE WHO DO HAVE EXPERIENCE. KEEP UP THE GOOD WORK.

DANNY DEEL, MINE INSPECTOR
V.P. 3
ISLAND CREEK COAL
OAKWOOD, VA



H.S.A. SAFETY TOPIC

EXIT MARKINGS

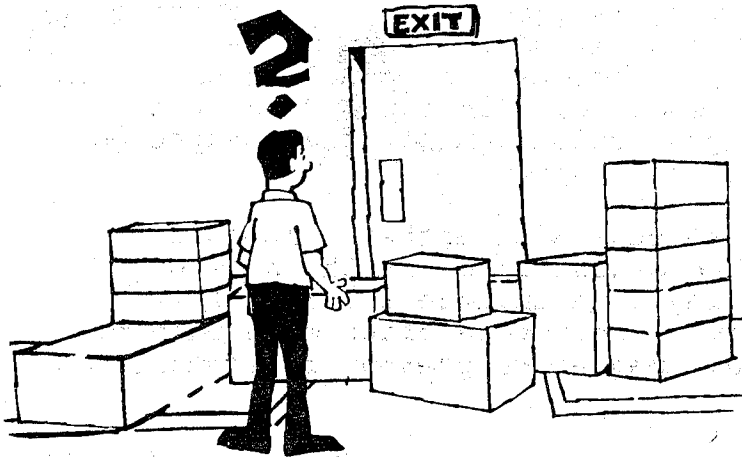


General Requirements

The exit route must lead to a public way.

Areas around exit doors and passageways leading to and from the exit must be kept free of obstructions.

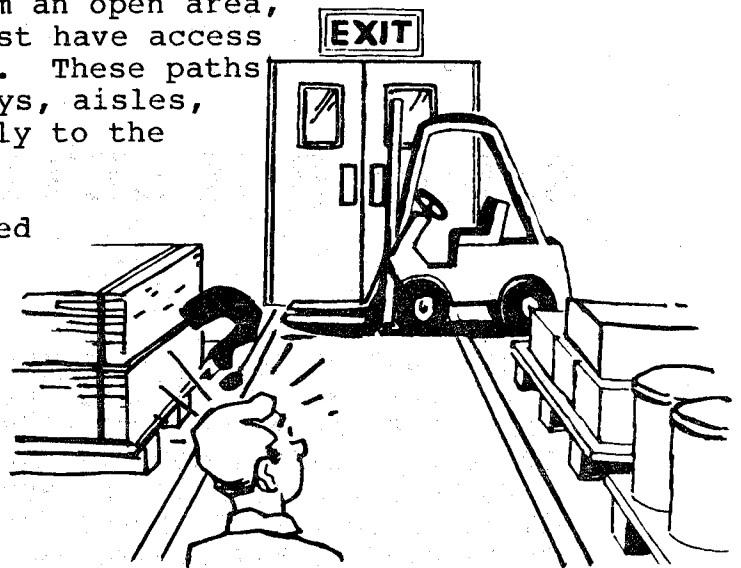
Exit access must be arranged so that it is unnecessary to travel through any highly hazardous area in order to reach the nearest exit (unless the path of travel is effectively shielded by suitable partitions or other barriers).



A door from a room to an exit or to a way of exit access must be of the side-hinged, swinging type. It must swing out in the direction of travel if 50 or more persons occupy the room or if it is an exit from a highly hazardous area.

Exits must be readily accessible at all times. Where exits are not immediately accessible from an open area, every occupant of that area must have access to two exits by separate paths. These paths must be through safe passageways, aisles, or corridors which lead directly to the exits.

No lock or fastening may be used which prevents escape from inside the building.

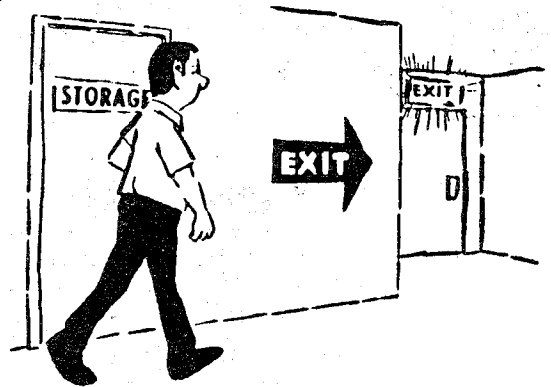


Exit Markings

Every exit must have the word **"EXIT"** in plain, legible letters not less than 6 inches high with the strokes of the letters not less than 3/4 inch wide.

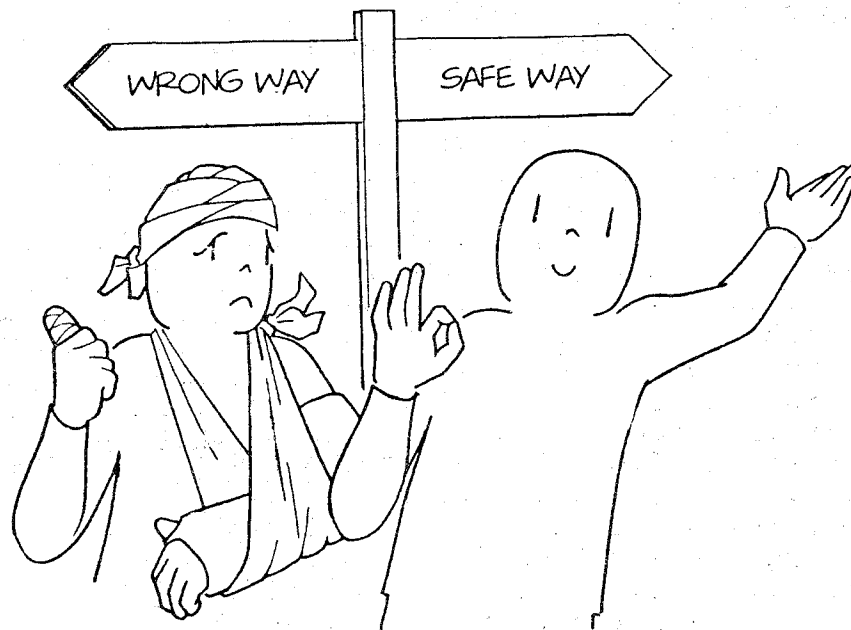
The visibility of the sign must not be impaired by decoration, furnishing, or other signs.

Doors, passageways, or stairways which are neither exits nor ways to an exit, but may be mistaken for an exit, must be clearly marked **"NOT AN EXIT"** or have a sign indicating their actual use, e.g., **"STORAGE ROOM"** or **"TO BASEMENT"**.



In areas where the direction to the nearest exit may not be apparent, an exit sign with a directional arrow must be used.

Exit signs must be illuminated by a reliable light source if the building is occupied at night, or if normal lighting levels are reduced at times during working hours.



What Is Your Supervisory Batting Average?



Answer affirmatively in the "HIT" column and negatively in the "OUT" column. When you are finished, add up the number of hits and divide into the number of times at bat to get your supervisory batting average.

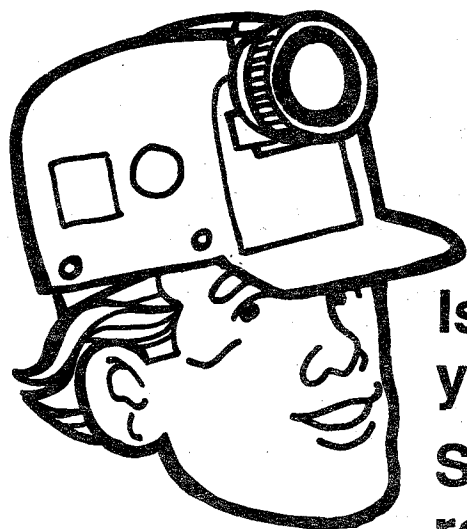


	AT BAT	HIT	OUT
1.	Do you plan your work so that it is always completed on time?.....	_____	_____
2.	Do you thoroughly understand the work of each person under you?.....	_____	_____
3.	Do you make it easy for employees to talk with you?.....	_____	_____
4.	Do you personally see to it that people in your department work under good conditions?.....	_____	_____
5.	Are you sympathetic with worker's problems?.....	_____	_____
6.	Do you always give clear and understandable instructions?.....	_____	_____
7.	Do you compliment employees when they do a job well?.....	_____	_____
8.	Are you considered even tempered?.....	_____	_____
9.	Do you make every effort to keep grievances from arising?.....	_____	_____
10.	Do you have a good worker trained to be a backup person to yourself?.....	_____	_____
11.	Do you always reprimand in private?.....	_____	_____
12.	Do you encourage suggestions and ideas from your people?.....	_____	_____
13.	Do you avoid passing the buck on mistakes?.....	_____	_____
14.	Do you always give credit where credit is due?.....	_____	_____
15.	Do you always set a good example yourself?.....	_____	_____
16.	Can you take constructive criticism?....	_____	_____
17.	Do you keep your promises?.....	_____	_____
18.	Do you avoid jumping to conclusions?....	_____	_____
19.	Do you avoid sarcasm?.....	_____	_____
20.	Do you make an effort to remember names and faces?.....	_____	_____
21.	If someone disagrees with you, can you usually argue the point without getting irritated?.....	_____	_____
22.	Do you make special efforts to fully indoctrinate new employees?.....	_____	_____
23.	Do you avoid a "superior" attitude?.....	_____	_____
24.	Do you avoid favoritism?.....	_____	_____
25.	Do you help employees work toward advancement?.....	_____	_____
26.	Are you impartial in making assignments?.....	_____	_____
27.	Can you accept change without getting upset?.....	_____	_____
28.	Do you have confidence in yourself?.....	_____	_____

AUGUST 1988

Roof Evaluation — Accident Prevention

R.E.A.P. — a program developed to promote health and safety awareness in mining



Is a shortcut worth your life?

Stay under supported roof!



MINERS: We'd like your help in creating safety slogans for these posters. If your slogan is used you will be given credit and your name, mine, and state will be printed on the poster. Please send your suggestions to: MSHA, Office of Information, Rm. 609, 4015 Wilson Boulevard, Arlington, VA 22203

Caring For and Using Wire Rope Chains Safely



Wire rope, like any other tool, can have serious effects on your safety if the attention you give it is an "I don't care attitude". This is especially true if you're going to use it to lift loads or to handle material.

Wire rope consists of wire strands and a core which may be fiber rope or metal. The size, construction and condition of the rope will determine its breaking strength. There are tables for this and if you are doing any material handling, your rigging will have to meet certain standards. You also need to know the safety factors required. Let's take an example, depending on the speed a personnel hoist must have a safety factor of five or more. When you are using slings, always keep the legs as nearly vertical as possible. This will give greater supporting strength to the sling. Just remember, the greater the angle of the legs with the vertical, the greater the chance for the sling to fail and break.

Wire rope should be well greased with lube grease to prevent rusting. This applies especially to cable used for hoisting loads. Excessive wear, depreciation and strain is indicated by a reduction in diameter and by breakage of the individual wires forming the strands. Cable that is badly worn, kinked or deteriorated should not be used. Take care to see that wire ropes aren't bent over or around sharp edges or a sheave with too small a diameter. This would cause rapid wear with a greatly increased likelihood of failure.

When wire rope clips are used, regulation states the "U" bolt must be on the dead end of the cable and must not be spaced too close together. Frequent inspection of these clips must be made to determine whether or not they are slipping. All slings and rigging must be inspected before use. Regardless of whether they are made of nylon, fiber rope, cable or chain, don't forget to inspect the hooks also.

If a chain has been stretched, put under a severe strain or bent around sharp corners, you should discontinue using it and replace it. Chain failures usually occur from:

- *Elongated or stretching of links
- *Failure of welds
- *Repeated severe bending or deformation of links
- *Repetition of severe strains
- *Welding splatter of chains
- *Repeated dragging of chains on hard surfaces

The use of chains as with wire ropes requires you to know the factor of safety. You should avoid wrapping them around sharp corners without protection and keep them oiled to prevent rust. When you're not using them, hang them in a dry place, not left in a pile on the floor.

Keep the legs of a chain nearly vertical and avoid twists in the chain. Don't jerk a chain that is carrying a heavy load and **ALWAYS** use tag lines on any suspended load.



H.S.A. SAFETY TOPIC



HOW DID IT HAPPEN?

It's no fun to read descriptions of accidents, but it makes frighteningly clear how ignoring safety precautions can lead to serious injury or even death. Consider the following case histories:

ACCIDENT

A fabric operator, feeding fabric into a shredding machine, caught his right hand in the feeder roll. His index, middle, ring and little fingers of his right hand were amputated.

HOW DID IT HAPPEN?

The shredding machine had no guard.

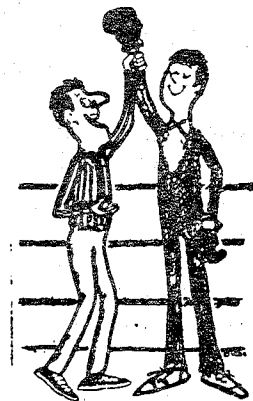
A sign installer, working from an aluminum ladder, was electrocuted while reaching inside a sign.

The equipment was wet from a recent rainfall; the worker was not wearing rubber gloves; the supervisor had gone into the customer's place of business to turn off the power -- no power lockout switch.



THE WINNER!

If you want to win a prizefight-- don't drop your guard. You must stay alert to danger. The same is true on the job. Guards are placed on machinery to protect you, but they can't do the job if they aren't used properly.



Keep your guard up by always (1) making sure machine guards are in place and adjusted before starting an operation; (2) checking to see if limit and control switches and interlocking devices are working and (3) following shutdown and lockout procedures before making adjustments or doing maintenance.

Don't let your guard down. Never (1) alter or disconnect speed control devices (2) operate equipment that you are not authorized or qualified to use or (3) leave a running machine unattended.



No Nagging Doubts

"Turn it off!"

No matter how often that order is repeated, the good sense behind the order somehow fails to sink in--and the army of walking wounded expands every day with recruits who insist on working on machinery that is not turned off.

"TURN IT OFF! TURN IT OFF! TURN IT OFF!"

Nagging is never pleasant. But the real point of nagging is to force a desired act through persistent repetition that harrasses and even distresses -- "So, why don't you turn it off?"

Workers who do not understand the safety reasons behind **"Turn it off"** apparently need to be nagged into turning off the source of power for all machinery shut down for cleaning, adjusting, repairing, or work of any kind. Workers who carry the scars from machinery that they falsely thought was turned off may prefer to term this kind of nagging as educational.

So, please turn off all power for machinery to be worked on, and make doubly sure no one can turn power back on so long as the work continues. **"Lock out" the control source whenever possible.** And **"lock out"** means a padlock or some other tamper-proof device. If a lock is not practical, then seal the power control. You may be able to think of other adequate substitutes. Another sure safeguard is the caution sign placed squarely on the **"locked out"**, warning potential tamperers that the machinery is being worked on.

Turn it off! Lock it out! Seal it! Put a warning sign on it!

You may feel a little nagged, but that's better than even one nagging doubt while working on a shut-down machine.



H.S.A. SAFETY TOPIC



COULD THIS BE YOU???

THE ACCIDENT: A plant maintenance man heard a noise coming from a bearing on the tension roll of a conveyor belt. He crawled under the conveyor to check on it, and he was pulling himself out, he caught his left hand in the inrunning tension roll and the conveyor belt. A fellow employee stopped the belt and reversed it to free him. He suffered a severe bruise to his forearm and injury to the shin and muscle.

WHY IT HAPPENED: The maintenance man should have turned off the conveyour and locked it out before investigating any problems with the machinery.

ALWAYS LOCK OUT MACHINERY BEFORE REPAIRING OR SERVICING

LOCK IN SAFETY

The purpose of locking out a machine or electrical circuit is to prevent accidents that might be caused by unexpected starting. Most commonly a lockout is called for when someone is repairing or making adjustments to a machine or to prevent an unauthorized individual from starting a machine.

The lockout device is usually a key or combination lock that holds a switch lever or valve handle in the "off" position. If more than one employee is working on a machine, each should place a lock on the control switch box or valve. This way the machine cannot be operated until all the locking devices are removed.

Once the energy source has been locked out, the lockout should be tested by trying to activate the controls on the machine. If the machine still starts, the lockout isn't effective or the wrong control has been locked out.

It is not only machinery that should be locked out. Other energy sources that can cause accidents -- compressed air, springs, steam, hydraulic sources, unattended vehicles -- also should be locked out.



For Safety's Sake ...

Be Aware..... of potentially hazardous situations:

- Falling objects...
- Cluttered aisles and walkways...
- Lifting and handling heavy objects...
- Operating vehicles and moving equipment...
- Loading and unloading trucks and rail cars...
- Using equipment and tools...
- Handling hazardous materials...



Know and Follow Safe Work Rules:

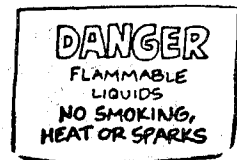
- Pay attention to warning signs, markers and general information signs.
- Know the location of all fire exits and fire equipment.
- Keep aisles and work areas clean and orderly.
- Maintain tools and equipment in good repair.
- Follow the right procedures for each assignment.




Color It Safe!

Learn to recognize color coded areas and equipment:

- RED** indicates fire equipment.
- YELLOW** means caution. It signals hazards that might cause falling, tripping, bumping, etc., such as stairwells, pillars or posts.
- Green** marks first-aid kits and safety equipment.
- Blue** indicates general information.




CHECK FOR SAFETY
EXPECT THE UNEXPECTED



H.S.A. SAFETY TOPIC



No Time for Dreaming

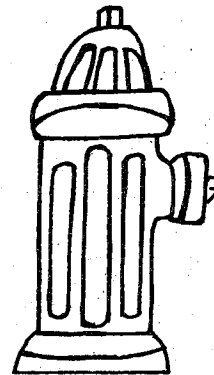
When you're doing a new job or practicing a skill with which you're unfamiliar, you're apt to pay close attention to your work. But when you're occupied with something more routine and familiar, your mind may stray. This is when injuries are most likely to occur. It's pleasant to daydream, but if you allow your mind to wander, you won't be as likely to react to something unexpected. Also, you may omit a step in the usual safe sequence of tasks necessary to perform a job safely. It requires as much practice to develop concentration as your other job skills and it is just as important.

Remember, daydreaming is out when you're on the job (or, for that matter, on the road or in the middle of any activity). Save your dreaming for when you're asleep.

Where is it???

One way to prepare for emergencies in the workplace is to know how to get out quickly and where to find essential alarms and equipment. Can you locate the following in your shop:?

1. All exits.
2. Fire extinguisher.
3. Fire alarms.
4. First aid equipment.
5. Main power disconnect switch.





CHANGING JOBS

On occasion, employees are asked to perform duties that are not a part of their regularly assigned duties. During the times that you are performing these tasks, your undivided attention is required if you are to prevent an accident from occurring.

You should not be asked to perform unfamiliar duties until proper guidance and training has been given. Even then you will need time to gain experience and develop into a competent worker at these new duties. Patience and training are the answers to this problem.

In the meantime, if you are asked to perform nonregular duties, realize that you cannot plunge headlong into your new job without first acquainting yourself with the duties and usually performing at a slower pace until your thoughts are in tune with the various steps of the new job. For example, a timberman, once a good shuttle-car operator, but not having operated such equipment in several years, will need a period of adjustment before operating the vehicle at maximum efficiency.

It is during a period of adjustment that you are more likely to commit an error that might produce an injury. For this reason, you need to "make haste slowly" until your timing and movements are completely centered on your new duties.



H.S.A. SAFETY TOPIC



HOUSEKEEPING

When a husband and wife have reared their children without their having had a serious accident, it is more than likely that good housekeeping was followed day in and day out. It is also quite likely that the family did not associate the good accident record in the home with good housekeeping, but as good luck. Of course, we know that in order to receive the "luck" of a good safety record, you have to work at it. We also know that good housekeeping covers a lot of ground. Everything connected with our job has a housekeeping angle with a direct bearing on safety. Each of us can apply the rules used by the good housekeeper in the home -- orderly storage and prompt attention to correct disarrangements entailed while doing work.

Like the good housekeeper, you should have all the tools you need, keep them in good condition and know where to find them. You should load or store your supplies so that they will not be a cause for injury to yourself or coworkers. Waste materials should be discarded in waste containers. Reasonable cleanliness should be practiced with an eye to fire prevention in regard to accumulations of oil and paper, or combinations thereof. Remember that oil spilled does not need a hot cable or flame to ignite it. Spontaneous combustion can take place long after an area is worked out.

Good housekeeping goes hand in hand with safety at the mine. Keep in mind that much of our safety depends on each other.

BE A GOOD EXAMPLE.

It's little careless habits
that make BIG accidents



THE LAST WORD

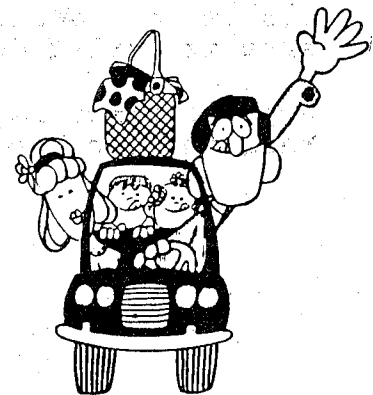
The Safety Credo

I believe in safety
both on the job and off.
I strive for the goal
of a safe workplace,
not only for myself,
but also for my fellow employees.
I know that I am not alone.
My fellow employees
are committed to the same goal
of safety.
We are all willing
to take the necessary steps
to reach that goal.
I know that my organization
cares about me
as an individual
and that it too is concerned
about my safety.
I am proud
of the work that I do
and I am proud
of the organization
that I do it for.
I believe
that this is a good place to work
and that through working safely
together
we will keep the organization
running smoothly and profitably.

PLEASE PASS THE MUSTARD

We are currently in the middle of the picnic season. With the warm weather, it becomes increasingly important to guard against getting food poisoning from consuming your picnic fare. To prevent picnic poisoning, follow these commonsense rules when you plan your outdoor meals:

- Keep all perishable foods cold until just before serving or cooking them at the picnic site. Hot foods should be maintained at temperatures above 140°. Portable ice chests and vacuum containers should be used to keep food at the desired temperature.
- Don't make sandwiches the night before your picnic. The combination of cooked meat and moist bread provides an excellent breeding spot for bacteria.
- Have your picnic in a cool, shady spot and put leftover foods back into your portable refrigerator immediately after the meal.
- Choose foods that are less vulnerable to poisoning bacteria: canned goods left unopened until serving time, well-washed raw fruits and vegetables, and foods prepared with vinegar.
- If a food shows any signs of spoilage, don't even taste it.



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**MSHA, Office of Holmes
Safety Association**
Educational Policy & Development
4800 Forbes Avenue, Room A268
Pittsburgh, PA 15213

5000-22

(Rev. 12-78)



**HOLMES SAFETY ASSOCIATION
MEETING REPORT FORM**

For the month of _____

TOTAL meetings held this month _____

TOTAL attendance this month _____

Chapter Number _____ (See address label, if incorrect, please indicate change.)

(Telephone No.)

(Signature)

(Title)

FILL OUT - FOLD AND STAPLE - FREE MAIL-IN

NOTE: BE SURE OUR ADDRESS SHOWS

If you do not care to receive this Bulletin, please check here and return this form.

Please include any change of address below:

Joseph A. Holmes Safety Association

Awards Criteria--Outline

Type "A" Awards - For Acts of Heroism

The awards are medals with Medal of Honor Certificate.

Type "A" - For Acts of Heroic Assistance

The awards are Certificates of Honor.

Type B-1 Awards - For Individual Workers

(40 years continuous work experience without injury that resulted in lost workdays)

The awards are Certificate of Honor, Gold Pins and Gold Decal.

Type B-2 Awards - For Individual Officials

(For record of group working under their supervision)

The awards are Certificate of Honor.

Type C Awards - For Safety Records

(For all segments of the mineral extractive industries, meeting adopted criteria)

The awards are Certificate of Honor.

Other Awards - For Individual Workers

(For 10, 20, or 30 years without injury resulting in lost workdays)

The awards are 30 years - Silver Pin and Decal, 20 years - Bronze Pin and Decal, 10 years - Decal bearing insignia.

Special Awards - For Small Operators

(Mine operators with 25 employees or less with outstanding safety records)

The awards are Certificate of Honor:

Contact: HSA Office

Department of Labor
MSHA, Holmes Safety Association
4800 Forbes Avenue
Pittsburgh, PA 15213

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