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SOL (MSHA) V. SHAMROCK COAL
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Federal Mine Safety and Health Review Commission (F.M.S.H.R.C.)
Office of Administrative Law Judges

SECRETARY OF LABOR,
MINE SAFETY AND HEALTH
ADMINISTRATION (MSHA),
PETITIONER

Civil Penalty Proceeding

Docket No. BARB 79-272-P
A.O. No. 15-02502-03007V

v.

No. 18 Mine

SHAMROCK COAL COMPANY,
RESPONDENT

DECISION

Appearances: George Drumming, Jr., Attorney, U.S. Department of Labor,
Office of the Solicitor, Nashville, Tennessee, for the
petitioner
Neville Smith, Esquire, Manchester, Kentucky, for the
respondent

Before: Judge Koutras

Statement of the Case

This proceeding concerns a proposal for assessment of civil penalty filed by the petitioner pursuant to section 110(a) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. 820(a), on January 31, 1979, charging the respondent with one alleged violation of the provisions of 30 CFR 75.604. The alleged violation was cited on May 25, 1978, by an MSHA inspector in Citation No. 132945, which states as follows:

The electrical connections or splice in the conductors of the low medium voltage 550 volt AC 3 phase, roof bolter cable on the "G" section was not mechanically or electrically efficient. The splice was made by twist connection of the cable conductors. Section foreman stated knowledge of such type splice being in the cable and that other splices are made in the same manner.

The inspector cited a violation of 30 CFR 75.514 and fixed May 26, 1978, as the abatement date, but extended that date to June 30, 1978, at which time he modified the citation on May 26, 1978, by stating as follows:

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A new cable was installed for the roof bolter. The new cable did not contain any splices. This citation is hereby modified to terminate the violation within the cable. However, this citation is also modified to remain in effect until all electrical repairmen, which perform cable splicing are properly retrained in correct cable splicing techniques. MSHA shall be notified as to the time and place of such retraining.

The inspector terminated the citation on June 2, 1978, and the termination notice states: "A new cable was installed for the roof bolter and all maintenance men were retrained on the proper way to make a splice in a power cable."

On June 9, 1978, the inspector modified his original citation of May 25, 1978, as follows: "Change part and section of violation from 75.0514 to 75.0604. The type splice was made within a trailing cable to the roof bolter."

Respondent filed an answer contesting the citation on the following grounds:

- (1) The proposed penalty of \$1,000 is not based upon and in compliance with the six statutory criteria.
- (2) The annual company production for the year 1977 was not 2,424,628 tons and was substantially less than that amount.
- (3) No violation occurred in that 30 CFR 75.604 does not require that a "suitable connector" be used as required for abatement of the amended citation.
- (4) A square knot had been placed in the splice area in the manner usually and customarily done for many years at the mine, and such connection complies with the requirements of 30 CFR 75.604. Such connection had repeatedly been inspected and approved by other MESA and MSHA inspectors over a period of years and had been found acceptable, proper, and not in violation of the cited regulation or any other regulations.

A hearing was held in Lexington, Kentucky, on August 27, 1979, and the parties waived the filing of posthearing proposed findings and conclusions (Tr. 147).

Issues

The principal issues presented in this proceeding are (1) whether respondent has violated the provisions of the Act and implementing regulations as alleged in the proposal for assessment of civil penalty

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filed in this proceeding, and, if so, (2) the appropriate civil penalty that should be assessed against the respondent for the alleged violation based upon the criteria set forth in section 110(i) of the Act. Additional issues raised by the parties are identified and disposed of in the course of this decision.

In determining the amount of a civil penalty assessment, section 110(i) of the Act requires consideration of the following criteria: (1) the operator's history of previous violations, (2) the appropriateness of such penalty to the size of the business of the operator, (3) whether the operator was negligent, (4) the effect on the operator's ability to continue in business, (5) the gravity of the violation, and (6) the demonstrated good faith of the operator in attempting to achieve rapid compliance after notification of the violation.

Applicable Statutory and Regulatory Provisions

1. The Federal Mine Safety and Health Act of 1977, P.L. 95-164, 30 U.S.C. 801 et seq.
2. Section 110(i) of the 1977 Act, 30 U.S.C. 820(i).
3. Commission Rules, 29 CFR 2700.1 et seq.

Discussion

Stipulations

The parties stipulated to the following (Tr. 6-9):

1. This proceeding is governed by the Federal Mine Safety and Health Act of 1977 and the standards and regulations promulgated thereunder.
2. The Administrative Law Judge has jurisdiction over this proceeding.
3. Shamrock Coal Company is the operator of the No. 18 Mine, and, as such, is subject to the jurisdiction of the above Act.
4. The No. 18 Mine currently employs 262 persons; 164 in underground mining, 44 on the surface, 46 in the preparation plant, 4 in a surface mining site, and 6 in the mine office.
5. Respondent's ability to continue in business will not be affected by any civil penalty assessed in this matter.
6. The MSHA inspector who issued the notice and order in this matter was a duly authorized representative of the Secretary of Labor, and copies of the notice and order which are the subject of this hearing were properly served upon a representative of the operator.

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7. The No. 18 Mine's history of previous violations paid prior to the issuance of this order or notice is from January 1, 1970, to April 8, 1974. Total violations paid were 113. Total amount paid \$6,623. From January 1, 1970, to May 1, 1977, the total violations paid were 249 and the total amount paid was \$17,117.

8. Shamrock Coal Company is controlled by B. Ray Thompson, Jr., who also controls Greenwood Land and Mining Company, Clover Coal Company and Freedom Coal Company which are currently in production. The total coal production of Shamrock Coal Company for the year 1977 was approximately 1.3 million tons. The total coal production of Shamrock, together with the above-referenced coal companies controlled by B. Ray Thompson, Jr., for the year 1977 was approximately 1.4 million tons.

During the course of the hearing, respondent asserted that the total coal production for the respondent was somewhat less than that shown by the petitioner's documentation which initially indicated production to be in excess of 2 million tons. In any event, the parties further stipulated and agreed that for purposes of any civil penalty assessment, respondent should be considered to be a medium-sized operator (Tr. 9).

DISCUSSION

Testimony and Evidence Adduced by the Petitioner

MSHA inspector Paul L. Scall testified that he is an electrical engineer with 21 years' experience, 6 of which were in the mining business. He confirmed that he inspected the mine on May 25, 1978, for the purpose of checking on some previous citations and while there he observed a damaged trailing cable on a roof bolter. While looking at the damaged cable area, he also noted that a splice in the cable was made by twisting the connectors and tying them in a square knot. He determined that this was not a proper electrical connection because such a splice does not have a complete cross-sectional area of the two conductors in connection with each other and therefore there is no total current-carrying capability in that conductor. This will cause a "hot spot" to develop and will tend to heat up and further damage the stranded conductors (Tr. 10-13).

Inspector Scall testified that he initially cited section 75.514, a general standard, and then modified the citation to reflect a violation of section 75.604, which specifically deals with trailing cables. The standard has three requirements and it is intended to prevent persons from coming in contact with live exposed conductors. The mechanical strength of a square knot, as opposed to a splice made in conformity with the manufacturer's specification as to how the splice should be made, is questionable. A "pull test" would have to be made to determine whether a square knotted splice is as strong as the approved method of using a splice ring (Tr. 14-15).

Mr. Scall stated that permanent splices must be made in accordance with a manufacturer's specifications or a

manufacturer's splice kit

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approved by MSHA, and to his knowledge there is no manufacturer's specifications for permanent splicing which specifies that a square knot may be used. The respondent should purchase an MSHA approved kit which contains the specifications (Tr. 16).

If a person touched an unprotected 550-volt cable, electrocution and death could be expected, and the person that touched it would be the one exposed to such a hazard. The respondent was aware of the condition cited because he discussed the splice with section foreman Cecil Hooker who admitted he was aware of the splice being made with a square knot and acknowledged its use throughout the Shamrock mines. He cited the violation at 10:30 and fixed 8 a.m. the next morning as the abatement time, and respondent cooperated in achieving compliance by replacing the trailing cable in question with a new cable without a splice in it (Tr. 16-18).

Mr. Scall stated that the violation could have proceeded under section 75.514 without being changed to section 75.604, but he amended it because he believed the permanent splice should be made to a manufacturer's exact specifications. Section 75.514 was a general electrical standard, and section 75.604 deals with a specific standard for trailing cables. In achieving compliance, in addition to replacing or repairing the splice, he allowed the roof bolter to be put back into service provided the respondent retrained its personnel as to the method for making the splice and that MSHA be notified as to the time and place of the retraining. MSHA was so notified, an MSHA representative attended the retraining classes and the citation was subsequently terminated (Tr. 19-20).

On cross-examination, Mr. Scall testified that he was not aware of any MSHA guidelines regarding the use of square knots while making a permanent splice, but he did refer to a November 1973 MESA Guideline and Instructions for electrical inspectors, or manual, and specifically, page 17 (Tr. 26-27). He had previously inspected the mine in question, but the question of the use of square knots had not previously arisen, and none of his fellow inspectors ever advised him that they found nothing wrong with the use of square knots (Tr. 29). He did discuss with his supervisor Henry Standafer the question of whether section 75.514 or 75.604 should be cited, and Mr. Standafer advised him that in his enforcement of the standard he did not permit the use of square knots (Tr. 30).

Mr. Scall testified that the MSHA Manual referred to does make reference to manufacturer's specifications, and while he could not specify any specific one for the kind of cable in question, he did make reference to kits manufactured by Raychen, CSI, and 3-M and stated that they all call for the use of splice rings (Tr. 32-33). He has never conducted any splice tests or examinations to confirm that a reduction in voltage occurs through the use of a square knot as compared to the use of splice rings, and he has conducted no tests regarding the "hot spots" previously mentioned (Tr. 34). He was not aware that square knots were used generally in the industry for many years (Tr.

34). He indicated that a slip ring would provide uniformity,
while the size of a square knot would depend on the person making it

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(Tr. 35). Any moisture seal and vulcanization would be the same insofar as splices made with square knots or splice rings are concerned, and the difference in the two methods is in connection with the splice being mechanically strong, adequate conductivity, and flexibility (Tr. 36).

On redirect, Mr. Scall stated that the splice kits previously referred to have been approved by MSHA, and they are some of the major splice kits manufactured (Tr. 38). He described the method for making a square knot, and stated that the conductivity is not as adequate or as good as a splice made with a ring. A ring encircles both conductors which are being spliced by pressure and it mechanically joins the two conductors, but the square knotted splice is joined only by the knot arrangement. The strength of the two types of splices can only be determined after they are subjected to a pull test. The square knot also develops heat because of the voltage drop across the knot due to a smaller cross-sectional area of the conductors being in contact with each other. Although a square knot is more convenient to make, it does not provide long lasting protection as does the splice ring (Tr. 39-40).

On recross, Inspector Scall confirmed that he relied on the 1973 Electrical Inspector's manual, page 17, in interpreting section 75.514 and the use of square knots, and he read the pertinent provision into the record as follows (Tr. 41-42):

Electrical Connections or Splices Suitability. This section requires that all splices and current carrying conductors be made with clamps, connectors, track bonds or other suitable connectors to provide good electrical connections. Tape such as rubber, tar, impregnated glass, asbestos or plastic will be accepted as insulation. Friction tape alone is not acceptable but can be used over other tapes to provide mechanical protection. Spliced conductors in all multiple conductor cables shall be re-insulated individually and an outer jacket compatible to that covering the remainder of the cable shall be placed around the complete splice. Splices made by twisting conductors together or by tying knots in conductors, splices that have bare or exposed conductors, splices that heat or are under load or splices in multiple conductor cables that do not have the outerjacket replaced shall constitute noncompliance.

Inspector Scall also read into the record the following pertinent excerpt from page 27 of the Manual concerning the interpretation of section 75.604 (Tr. 43-44):

Materials used by the Bureau approval and testing section as flame resistant for use in making permanent splices in trailing cables shall be used in complete accordance with manufacturers' instructions. Splice insulating kits shall be applied without any substitution or alteration of parts

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in order to duplicate the conditions under which the materials were tested and accepted. Any deviation would require additional evaluation or testing by the Bureau and if used without such evaluation, would constitute noncompliance with this provision.

In response to bench questions, Mr. Scall stated he holds a B.S. degree in electrical engineering from the University of Kentucky. He confirmed that the gist of the alleged violation lies in the fact that in permanently splicing the trailing cable the respondent used a square knot rather than making the splice with a mechanical device such as a connector and a ring. Although he conceded that section 75.514 would cover a situation where a splice is made without the use of a connector, he cited section 75.604 because of a November 20, 1974, MESA memorandum addressed to District Managers from MESA Assistant Administrator John W. Crawford (Tr. 45-49). The thrust of the violation also lies in the fact that he did not believe that the square knot was mechanically strong and it did not provide efficient electrical conductivity (Tr. 49-50).

Mr. Scall conceded that no pull or stress test had ever been conducted with the square knot and the reason MSHA insists on the use of approved manufacturer's splice kits lies in the assumption that splices have been tested by the manufacturer (Tr. 51). He made reference to an April 6, 1973, MESA memorandum dealing with sections 75.604 and 77.602, and pertinent portions were read into the record by me as follows (Tr. 52-53):

JUDGE KOUTRAS: Let the record show that the inspector just handed me a memo, April 6, 1973, which is addressed to all inspection personnel. The subject is Section 75.604 and 77.602, Permanent Splicing of Trailing Cables.

Let me just read the first paragraph gentlemen. And this memo, again, is signed by John W. Crawford and it says: [Reading] "It has come to the attention of this office," then he's got in brackets, visual examination, "that the adequacy of permanent splices in trailing cables leaves a lot to be desired. Many of these so-called permanent splices are being accepted by inspection personnel, when, in fact, many of the splices are poor excuses for temporary splices."

"All splices shall be inspected to ascertain whether they are effectively insulated and sealed so as to exclude moisture. Particular attention should be paid to splices which are made with lapped tape to ensure compliance with the above-mentioned sections."

"If the splices, regardless of who the manufacturer may be or what has been printed in the industry literature, do not conform to the requirements of Section 76.604 and

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77.602, a notice of violation shall be issued. All inspection personnel to pay particular attention to the requirements as set forth above."

Mr. Scall testified that the trailing cable splice in question was not well insulated or sealed so as to exclude moisture in that the outer jacket was "ragged where I could see the inner conductors" and it was not sealed to prevent moisture. He required that the splice be opened so that he could inspect it and he could see it was square knotted because of the bulk of the conductors. The splice was made and then an attempt was made to reinsulate it but the moisture seals were damaged because they were ragged and split (Tr. 54-56). The condition of the cable led him to require that it be opened up and inspected, and since MSHA does not require all permanent splices to be opened up unless they are damaged, for all he knows square knots could still be used, and if they are small, vulcanized, and well insulated, he would not know the difference (Tr. 56). A square knot may be electrically efficient and good when it is first made, but it will deteriorate over a period of time and a lesser degree of electrical continuity will result due to the heating effect (Tr. 59).

The roof bolter was energized at the time of the inspection, and it was shut down so that the section repairman could open the splice for his examination. The bolter was taken out of service and a new cable was brought in to correct the cited condition. He did not attend the retraining and did not know the type of splicing presently used at the mine. He confirmed that he discovered the square knotted splice while at the mine to abate previous citations concerning low voltage monitors on the cables, and this required the inspection of the cable which disclosed the faulty splice in question. He discovered no similar violations on the section (Tr. 59-62).

Inspector Scall testified that the operator could have selected the proper kit to use in splicing the cable in question, but other than the November 1973 MSHA guideline, he was not aware of any current publications which may have informed the respondent of the proper splicing as of the time of the citation in 1978 (Tr. 66-67). The MSHA district office had no procedure for advising operators as to the requirements of section 75.604. He did not know when the splice in question was made (Tr. 67). The respondent exercised excellent good faith abatement (Tr. 69). The previous citations did not concern defective splices, and at the time of the inspection coal was not being cut or loaded. The power center conditions were dry and the cable in question was rolled up on the reel but was taken off in order to allow him to inspect it. The cable was 500 feet long and only one place was defective. The electrical equipment is required to be inspected weekly, he did not check the preshift books, and did not know when the cable was last inspected. With the cable on the reel, it is reasonable to conclude that someone walking by and visually inspecting the cable would not be able to detect the condition cited unless the cable was reeled out and examined (Tr. 73-80).

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On further recross, Inspector Scall stated that there was no problem with the cable moisture seal or vulcanization, and his concern was with the fact that respondent was using a square knot to make the splice (Tr. 81-82).

Respondent's Testimony

Gordon Couch, respondent's safety director, testified that prior to his employment with the respondent during the past 2 years, he was employed by the Bureau of Mines at Barbourville, Kentucky as a Federal coal mine inspector and worked in that capacity, as well as a supervisory inspector, from 1969 to 1977 (Tr. 92). He and inspector Scalls discussed the citation in question during the inspection closeout conference, and he was not present during the actual inspection when the defective splice was discovered (Tr. 96). In his view, the only mandatory requirements for the use of manufacturer's specifications in splicing is in regard to the requirements of Part 800 of the regulations dealing with high voltage cables rather than low voltage equipment, and nothing in section 75.604 mentions manufacturer's specifications (Tr. 98). Respondent uses thermo-fit splice kits on their trailing cables and follows the manufacturer's recommendations in all regards (Tr. 98). He confirmed that square knots were used on shuttle car and roof bolter cables, and that they have been using them on cables such as the one in issue since 1957. Connectors are used on larger sized cables because they are not flexible enough to bend to facilitate the use of a square knot (Tr. 99).

Mr. Couch stated that prior to the citation issued by inspector Scall, MSHA inspectors had never complained about the square knot splices, they were used prior to his employment with the respondent, and in his view they satisfactorily comply with sections 75.604 and 75.514. Square knotted splices provide adequate current-carrying capacity and provide adequate strength. Splice rings presented problems on small cables since they tended to cut and break the cable at the point where it entered the splice ring (Tr. 100-101). At the present time, the square knot is still used, but the splice ring is placed over the square knot and MSHA district supervisor Henry Standafer approved of this practice and that is the way the men were "re-trained" to make the splice (Tr. 102).

Mr. Couch testified that the use of a square knot is 60 percent better in terms of mechanical strength, conductivity, and flexibility than the use of a splice ring or a connector on a small cable, and in his experience, he has encountered no problems with overheating or decreased conductivity (Tr. 103). After the inspection, respondent used both methods, i.e., square knot and splice ring (Tr. 104). He has never encountered any problems with the use of a square knot, but problems have been encountered with regard to the use of splice rings, particularly with regard to slippage and flexibility (Tr. 105-106). Splices are usually made on the section by a repairman, and he does not believe there was an unwarrantable failure because the respondent was not trying to hide anything and was following what it

believed was an acceptable practice since 1957 and no one had previously questioned it (Tr. 109). Respondent is very safety conscious and that was the case even when he was employed as an MSHA inspector (Tr. 110).

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On cross-examination, Mr. Couch testified that he did not recall inspecting the Shamrock Coal Company operations while he was an MSHA inspector. He was aware of the MSHA manual referred to by inspector Scalls, and was familiar with the information dealing with sections 75.514 and 75.604, and he was aware of violations issued under those sections while he was employed as an MSHA supervisory inspector (Tr. 111-114). A square knotted cable splice would only be checked if there were visible signs of damage such as poor outer jacket bonding or peeling, and there are no procedures for inspecting cables splices (Tr. 117). A square knot splice could be subjected to a tremendous amount of pulling and tension without deterioration, he has never heard of such deterioration occurring, and has not conducted any pull tests with regard to the square knot (Tr. 118). At the present time all cable repair personnel make the same square knot splice as was made prior to the inspection (Tr. 119). Mr. Couch conceded that the use of the splice ring in conjunction with the square knot provides an added safety feature (Tr. 133).

Findings and Conclusions

The original citation as issued by the inspector charged the respondent with a violation of section 75.514, which reads as follows: "All electrical connections or splices in conductors shall be mechanically and electrically efficient, and suitable connectors shall be used. All electrical connections or splices in insulated wire shall be reinsulated at least to the same degree of protection as the remainder of the wire.

The citation was subsequently modified to change the section cited from 75.514 to 75.604, which reads as follows:

When permanent splices in trailing cables are made, they shall be:

- (a) Mechanically strong with adequate electrical conductivity and flexibility;
- (b) Effectively insulated and sealed so as to exclude moisture; and
- (c) Vulcanized or otherwise treated with suitable materials to provide flame-resistant qualities and good bonding to the outer jacket.

The condition or practice described on the face of the citation alleges that the permanent cable splice in question was not mechanically efficient, in that the splice was made by "twist connection of the cable conductors." The inspector's written statement made at the time the citation issued (Exh. P-10), reflects that the splice was made with "twist connections" and the inspector observed that the "cable could be pulled apart at splice which would expose energized power wires." The narrative statement prepared by the assessment officer containing his recommendations as to a proposed civil

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penalty (Exh. P-6) contains the conclusions that the splice was made by "twisting the wire ends together" and that a cable fire could result "due to high resistance from the improper connections." Abatement was achieved by installing a new cable, and as part of the abatement process, MSHA required the respondent to retrain its personnel as to the "proper way" to make a splice.

There is no dispute as to whether the splice in question was in fact tied in a square knot. As a matter of fact, the testimony and evidence adduced establishes that respondent readily acknowledged the use of square knots throughout the mine in the past. Further, the evidence also establishes that square knots are still used in the making of permanent splices and MSHA has approved of the practice provided a spliced ring is added as an additional safety feature. In short, the square knot, which MSHA has previously condemned, is presently in use in the mine, as long as a ring is attached over the square-knotted splice to keep it secure.

The square knotted splice in this case was detected by the inspector during the course of his inspection of a previously cited violation dealing with an unrelated condition. During his inspection to determine whether the previous violation had been abated, he detected a damaged trailing cable on a roof bolter. Upon further examination of the cable, and after it was opened, he observed that the conductors had been square knotted and that no splice ring was installed. Were it not for the fact that the cable was damaged, he would never have known that the conductors inside the cable were tied in a square knot. The inspector was initially prompted to open the cable and check the splice after detecting damaged cables on other pieces of equipment, and that damage was unconnected with the manner in which the splice in question was made (Tr. 62). After observing the damaged cable in question, he ordered the equipment shut down and taken out of service because the cable failed to meet the requirements of section 75.514 (Tr. 65). The previous citations which were being checked for abatement had nothing to do with the use of a square knot to make the splice (Tr. 73). The defective splice was only on one location on the entire 500 feet of cable (Tr. 77).

The citation here was not issued because of the damaged cable. The inspector testified that his concern was with the fact that the use of a square knot was not a proper method for splicing an electrical connection because he believed that such a splicing method resulted in an incomplete cross-sectional connection which somehow detracted from the total current-carrying capability of the conductors, thereby resulting in a possible "hot spot" in the cable. In addition, he obviously believed that the use of a square knot, rather than an MSHA-approved splicing kit, could result in the separation of the conductors, thereby leading to a possible exposure of energized wires. Although the inspector did testify as to the condition of the cable, his testimony in this regard is somewhat confusing and contradictory. For example, at one point in his testimony he stated that the splice was not well-insulated or sealed so as to

exclude moisture and that it was in a "very ragged" condition (Tr. 55). He also indicated that

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the moisture seals were damaged because they were split in such a fashion as to expose the inner conductors (Tr. 56). His earlier testimony was that the factors of moisture seal and vulcanization with respect to a square-knotted splice remain constant and that the only issue presented is whether the splice in question was mechanically strong so as to insure adequate conductivity and flexibility (Tr. 36). When asked to clarify his testimony concerning the requirements of subsection (a) of section 75.604 dealing with the mechanical strength of the cable, subsection (b) dealing with effective insulation and seals to exclude moisture, and subsection (c) dealing with vulcanization so as to provide a flame-resistant quality for the cable, the inspector conceded that he had previously stated that there was no problems with the requirements of subsections (b) and (c) dealing with moisture seals and vulcanization and that he issued the citation charging a violation of section 75.604 because he believed that the use of a square knot did not insure adequate cable conductivity and flexibility (Tr. 81, 82).

Based on the evidence adduced in this case, it seems clear that the inspector and MSHA have never conducted any tests or studies to determine the mechanical and electrical efficiency of square knots on a cable splice, notwithstanding the fact that respondent's testimony here indicates that the use of such square knots has been an ongoing past and present practice in the mine and possibly throughout the industry for a number of years. He also testified that the question concerning the relative mechanical strength of a splice made with a square knot and one made with a splicing ring can only be determined by means of a "pull-test." In these circumstances, I conclude that the thrust of the alleged violation is the inspector's belief that the use of the square knot rendered the splice inefficient because over a period of time it would deteriorate the electrical conductivity of the cable (Tr. 52). Petitioner's counsel conceded that the issue is the use of the square knot as a method for splicing the cable in question (Tr. 80). In order to sustain its burden of proof with respect to the alleged violation, the petitioner must establish by a preponderance of credible evidence that the use of the square knot in making the splices in question in fact rendered the splice mechanically or electrically inefficient. After careful analysis and review of the evidence in support of its case, I conclude that the petitioner has failed to establish that the use of a square knot, per se rendered the splice in question mechanically or electrically inefficient, and my reasons for this conclusion follow.

In *MSHA v. Empire Energy Company*, DENV 78-422-P, decided by me on December 8, 1978, I sustained a citation for a violation of the provisions of 30 CFR 75.603, and found that a temporary splice in a trailing cable of a water pump was not made in a "workmanlike manner" or "mechanically strong" because it was made by the use of a square knot rather than a splicing ring. Section 75.603 requires that a temporary "splice," which is defined by that section as "the mechanical joining of one or more conductors that have been severed," be made in a workmanlike manner and be mechanically strong. My finding of a violation in *Empire Energy*

was based

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on the facts of that case, and MSHA there sustained its burden of proof when it established that a splice made by use of a square knot resulting in a splice three times the size of a normal splice made with a splicing ring was not one which is mechanically strong or made in a workmanlike manner. In that case, contrary to the position taken by the respondent in this case, Empire conceded that the use of square knots in a splice was not an acceptable practice in its mine. Further, in that case, MSHA took the position that the critical issue presented was not whether Empire used a square knot, but rather, whether the requirements of section 75.603 were violated.

In the instant case, respondent is charged with a violation of section 75.604, which is a statutory provision. That section does not contain a definition of a permanent "splice" as does section 75.603, nor is there any requirement that a permanent splice be made in a "workmanlike manner." The only requirement relied on by MSHA to support the citation is the requirement contained in clause (a) of section 75.604 that the splice be mechanically strong with adequate electrical conductivity and flexibility. In issuing the citation, the inspector relied in part on an MSHA manual which mentions the use of splice insulation kits, and he believes that the use of any method for making splices short of those kits does not comply with the requirements of section 75.604, notwithstanding the fact that the manual section quoted specifically states that "any deviation from the use of a splice kit would require additional evaluation or testing by the Bureau and if used without such evaluation, would constitute noncompliance with this provision." This manual language, if taken at face value, means that any deviation from the use of a splicing kit in making a permanent splice would subject an operator to a citation for violation of section 75.604 even though the inspector is oblivious of the fact that and MSHA testing had been done on that splice. In short, it seems obvious here that the inspector treated the manual reference as part and parcel of the mandatory requirements of section 75.604. In addition, he was also obviously influenced by the interpretive memorandums alluded to during his testimony. The problem with this is that such manual references and internal memorandums are clearly not mandatory requirements binding on a mine operator, and the manual clearly does not have the status of mandatory Secretarial regulations, Kaiser Steel Corporation, 3 IBMA 489, 498 (1974).

The testimony adduced in this case reflects that a splice made by means of a square knot cannot readily be discovered by casual visual observation, unless of course it is so large or damaged so as to call one's attention to it. In this case, the inspector discovered the square knot when he opened the splice up while in the process of looking at other damage. Further, as indicated earlier, square knots are presently still in use in the mine with MSHA's blessing, with the stipulation that a splice ring also be used. The point is, that the inspector, on the facts presented here, believes that the use of square knot for making a permanent splice is per se a violation because a square knotted splice is not mechanically strong and does not provide

adequate electrical conductivity and flexibility. However, these are unsupported conclusions by the inspector. As such, they

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may not legally support the citation, and for that reason I conclude that MSHA has failed to prove a violation and the citation is VACATED. It seems to me that if MSHA believes that the use of approved splicing kits is a tested and proven method for insuring the mechanical and electrical integrity of a splice, then it should take steps to promulgate a clear and concise regulatory standard requiring the use of such splice kits, rather than relying on some nebulous and general statutory language which puts the inspector in the position of legislating as to what the standard should be, and leaves a mine operator in the vulnerable position of not knowing what its responsibilities may be in terms of compliance. The promulgation of a regulatory mandatory standard which directly requires the use of an MSHA splicing kit, or the amendment of MSHA's Schedule 2G, Part 18, Title 30, Code of Federal Regulations, will go a long way clearing up what I consider to be a recurring problem with respect to the enforcement of mandatory safety standards containing broad and general language which leaves much to the imagination. The citation is VACATED.

ORDER

On the basis of the foregoing findings and conclusions, Citation No. 0132945, May 25, 1978, citing an alleged violation of 30 CFR 75.604 is VACATED and this case is DISMISSED.

George A. Koutras
Administrative Law Judge