

TESTIMONY OF EDWIN P. HOFSTADTER
CONCERNING CONTENTION 14

1. Q Please state your full name and address.

A Edwin Hofstadter, 20 Aquilla, Florence, Kentucky, 41042.

2. Q State your professional background.

A I have been a Manufacturing Engineer in many areas of manufacturing for over 40 years. For over 25 of these years I was in various supervisory levels and 18 of these years I was at the manager level. I was Manager of Industrial Engineering at Husky Products for 5 $\frac{1}{2}$ years. There I was responsible for Manufacturing Methods and Labor Standards, Tooling and Equipment, including selection and procurement and maintenance of same.

3. Q Were the welders at Husky who welded the cable trays for Zimmer required to be certified at the time they did that welding?

A Yes, welders were required to be certified according to Section 9, A.S.M.E.

4. Q On what do you base that answer?

A Certification procedures commenced in September of 1974, Husky required this certification. Welders were to work on the Zimmer plant with the understanding and stipulation that they would be properly certified.

5. Q Describe the type of certification required for welders in order to do welding on the cable trays, specifically the vertical fittings.

A To obtain certification, welders were furnished four sets of test pieces. One was a practice piece which they could practice on for 15 minutes. Afterwards, they were given two test pieces—one vertical and one horizontal. These pieces were welded and checked for visual defects. Then the pieces were grinded and checked for visual defects. Then the pieces were cut to check for fusion. If these were broken, the welds were bad, and supposedly the welders were not given certification. The welds did not fuse. All the test pieces broke on the first round. Certification was to prove that these welders had the training, skill, and aptitude to make good quality welds. These welders did not, yet they were certified.

6. Q Did the welders at Husky who welded the cable trays for Zimmer meet the certification requirements described above at the time they did that welding?

A No.

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7. Q On what do you base that answer?

A Some welders were falsely certified. A welder must pass eight tests (four mig tests: aluminum, steel, horizontal, vertical; and four tig tests: aluminum, steel, horizontal, vertical) in order to become fully certified. However, some of the welders were declared fully certified even though they only passed two of the tests.

8. Q Were the welders who performed the welds on the cable trays for Zimmer ever tested for purposes of certification prior to performing those welds?

A Yes, the testing for certification started prior to cable tray work for Zimmer.

9. Q What, if any, role did you play in that testing process and why?

A After the Zimmer order had arrived in May, 1974, we set up our certification testing for August, 1974. I contacted Gladstone Laboratories and the Lab helped develop the first tests. All welders were tested and all of them failed. I observed all of the testing because I was responsible for processes used for manufacturing.

10. Q Describe any programs or procedures that you are aware of that Husky employed to attempt to train and certify the welders who performed the welds on the Zimmer cable trays.

A After the welders failed, I contacted John Uhrig at Hobart Manufacturing. He suggested we contact a welding school to which our welders could attend to overcome their particular problem areas. I contacted John Spievack of Technicron, Inc., School of Welding. He came to Husky and spent an afternoon with our welders during which time he observed them welding. Mr. Spievack offered two main conclusions in his report:

1. Husky welders lack proper technical training to do quality welds;
2. The incentive system of paying welders is not conducive to quality welding.

Because of the conditions that exist (welding machine settings and gas flows), it was observed that improper welding is a common occurrence at Husky Products and the welds are not structurally sound. This report was shown to the editor of Weld Engineer and he confirmed that Mr. Spievack's technical description of the welding was accurate. Mr. Spievack suggested Husky Products should consider a training program for its welders.

11. Q Describe in detail the Husky incentive system in force at the time the Zimmer cable trays were welded at Husky.

A Standards are set on all welding jobs. Husky welders were given a specific time to weld. If they welded more pieces, they would get paid more. Husky was paying for good welds and getting inferior welds. Even after the welders were tested for certification, the welds remained the same. Production welding took place not the quality welding process that was required in specifications for Zimmer.

12. Q What employees were subject to the incentive system?

A All production employees were subject to the incentive system. All processes were on the incentive system.

13. Q Describe in detail how the incentive system affects the quality of the welds produced.

A In order for a welder to meet required production levels and benefit from the incentive system that welder's machines were set at maximum output levels. This condition is just below the point of blowing holes in the parent metal and thus creates inferior welds. The metal is merely blasted together. This method is costly and produces improper welds that do not meet specification.

14. Q In what way, if any, does the incentive system have the effect of reducing the quality of quality production welds as compared with test welds?

A The welding test procedure is set up differently than production line welding. Production line welding was not in accordance with good welding procedures. Because of the incentive system, welders tried to produce as many welds as possible in a short period of time. Welders used extremely high amperages and gas coverage. Welders ran extremely hot welds due to speed and thus welds cooled quickly and cracked. Penetration is poor and weakening of the parent metal takes place. Although these conditions were not present during the testing for certification, the welders could not even pass on their test pieces.

15. Q Describe in detail in what way the welds on the cable trays at Zimmer, specifically on the vertical fittings, do not meet the specifications.

A I feel it is mandatory that I testify in person on this question. Visual understanding of this welding process is necessary. I will answer this question with visual aids.

16. Q Describe how you came to the above conclusion.

A The welders had not met certification requirements or were certified falsely. Therefore, it is clear that these welders were incapable of producing quality welds on the production line, especially in light of Husky's incentive system. These inferior welds cannot meet specifications.