

BPA MANUFACTURING
DEER PARK MANUFACTURING COMPLEX

SAFETY MEETING MINUTES
(SHIFT 4)
MARCH 14, 1989

PARTICIPANTS: L. BECK E. MIKE
B. DAVIS D. SCHULZ
M. GOULD J. TIJERINA
A. MCGREW

GUESTS: W. UBERNOSKY

AGENDA:

2. SAFETY ORDER S-125 REVIEW

DISCUSSION:

LAM 025947

2. E. MIKE BEGAN THE REVIEW OF S-125 BY GIVING A DESCRIPTION OF WHAT ASBESTOS IS, AND SOME OF IT'S TYPICAL USES, AND THE EFFECTS THAT IT CAN HAVE ON ONE'S HEALTH. UBIE MADE THE STATEMENT THAT ALL ASBESTOS HAS BEEN REMOVED FROM THE BPA UNITS, BUT THAT THERE STILL IS INSULATION IN THE PIPERACKS AT THE BATTERY LIMITS TO THE UNIT THAT IS ASBESTOS.

B. DAVIS CONTINUED THE DISCUSSION OF S-125 BY REVIEWING SOME OF THE DEFINITIONS THAT PERTAIN TO THE HANDLING OF ASBESTOS. EXAMPLES ARE:

REGULATED AREA - ANY AREA WHERE AREA EXPOSURE IS ABOVE THE PEL, (PERMISSIBLE EXPOSURE LIMIT).

RESTRICTED AREA - ANY AREA WHERE EXPOSURE TO ASBESTOS IS LIKELY BUT BELOW THE PEL.

J. TIJERINA DISCUSSED PROPER WORK PRACTICES WHEN

ABS-006971

WORKING WITH ASBESTOS: ONE SHOULD WEAR DISPOSABLE
COVERALLS, AND RESPIRATOR. ASBESTOS SHOULD ALSO
WETTED WITH WATER WHEN REMOVING IT FOR DISPOSAL.

L. BECK CONCLUDED THE DISCUSSION OF S-125 BY
STATING THAT ANNUAL MEDICAL EXAMS ARE PROVIDED
AND THAT REVIEW OF THE SAFETY ORDER ON A YEARLY
BASIS WARN OF THE HAZARDS ASSOCIATED WITH
ASBESTOS.

D. D. SCHULZ

CC: J. E. McADAMS
W. C. UBERNOSKY
B. F. YARBROUGH

LAM 025948

ABS-006972

SHIFT TEAM TWO
SAFETY MEETING
MARCH 29, 1989

I. SAFETY ORDER S-125 - ASBESTOS

- A. Jerry Smith opened the meeting with an introduction of the Safety Order on Asbestos. He went into a discussion of the properties of asbestos and its uses. Also discussed were the potential health hazards involved with exposure to asbestos and the permissible exposure limit (PEL).
- B. Ron Henderson lead a discussion on the general practices involved in handling asbestos as written in S-125.
- C. Jimbo Ryan talked about the definitions contained in the Safety Order.
- D. Ray Malonson explained the DPMC work practices involved as defined in the Safety Order.

ACTION ITEM: Jerry Smith volunteered to contact the Industrial Hygiene Department and inquire about the BPA Control Room ventilation requirements regarding asbestos fibers.

- E. Ray Malonson also discussed the requirements for demolition and renovation of asbestos materials as contained in S-125.

ACTION ITEM: Ray Malonson agreed to notify the Industrial Hygiene Department concerning the asbestos removal which took place in the BPAM area approximately two years ago and request the air monitoring results.

- F. Enrico DeSalle discussed the sections contained in S-125 concerning asbestos disposal and also the section involving Annual Medical Exams and Employee Training.

LAM 025949

Page 1 of 2.

ABS-006973

SHIFT TEAM TWO
SAFETY MEETING CONT.

ATTENDEES: E. DESALLE
R. HENDERSON
R. MALONSON
J. MCGUIGAN
J. RYAN
J. SMITH

LAM 025950

Page 2 of 2

ABS-006974

GUESTS: F. YARBROUGH

J. NEADAMS

AGENDA.

2. REVIEW OF SAFETY ORDER S-125

DISCUSSION

2. AL LEDD LED THE DISCUSSION OF SAFETY ORDER S-125. HOWARD TALKED ABOUT WHAT ASBESTOS LOOKED LIKE AND THE POTENTIAL HEALTH HAZARD IT POSED. HE DISCUSSED THE DISEASES ASSOCIATED WITH ASBESTOS SUCH AS ASBESTOSIS, BRONCHOGENIC CARCINOMA AND MESOTHELIOMA. GOME ALSO TALKED ABOUT SOME OF THE AREAS OR USES FOR ASBESTOS. IT WAS POINTED OUT THAT ASBESTOS IS NOT ONLY USED IN THE PLANT BUT ALSO IN ITEMS OUTSIDE THE PLANT SUCH AS FLOOR TILE AND DRAKE LININGS. F. YARBROUGH POINTED OUT THAT ASBESTOS HAD BEEN REMOVED FROM THE BPA UNITS BUT THERE IS PROBABLY STILL SOME IN THE MAIN PIPEWAYS. A KEY POINT BROUGHT OUT IN THE DISCUSSION WAS THAT IF YOU ARE UNSURE ABOUT WHETHER A MATERIAL IS ASBESTOS OR NOT, TREAT IT AS IF IT WERE ASBESTOS.

ABS-006975

LAM 025951

BEST
AVAILABLE
COPY

MINUTES

ENGINEERING INSULATION MATERIALS STANDARDS AND USAGE MEETING

The purpose of this meeting was to review the changing status of engineering materials for insulation and the applicability of related Company standards.

Materials Supply

Thermal insulation manufacturers have experienced considerable difficulty in meeting the mushrooming demand for their products, precipitated by the energy (fuels) shortage and further complicated by changes in basic manufacturing materials and processes, along with expanding government regulations. Due to these problems, long (ca. 12-18 months) and unpredictable deliveries of insulation materials are now common for the petroleum industry. For example, Johns Manville has adopted a Japanese process to manufacture calcium silicate, but is only capable of producing at about sixty per cent (60%) of its previous asbestos production rate. Due to OSHA asbestos regulations, manufacturers have hurriedly switched to other types of insulation materials (e.g., calcium silicate and mineral wool) products. Government regulatory agencies are reportedly concerned that silica in insulation materials is a possible health hazard. Many insulation manufacturers are currently experimenting to find suitable replacement materials for asbestos and calcium silicate insulation. Manufacturers have attempted to change to glass fibers with organic binders (ca. 3-5%V) for high temperature (1100-1500°F) applications, but the organic binders burn-out rather quickly in hi-temp. service. Most Shell applications involve temperatures of 900°F, or less.

Company Standards

Shell Chemical insulation materials standards currently specify calcium silicate type products, which could be banned by future OSHA regulations if silica is proven to be detrimental to health. The question of whether test procedures are available to measure free crystalline silica was raised. It was stated that OSHA does have a specification test, which quantifies the amount of free silica present in a test sample. Indications are such that insulation materials manufacturers will try to avoid making products available which might later become susceptible to rigid governmental restrictions.

ASTM/AIChE Meeting

John Johnson reported that the recent ASTM/AIChE Tulsa, Oklahoma meeting on Thermal Insulations Materials in the Chemical Industry produced five (5) papers. Two (2) papers presented at this joint symposium were of interest to Shell - entitled as follows:

- 1.) "Economic Thickness of Thermal Insulating Materials" by J. Barnhart
and
- 2.) "Requirements for Selection and Use of Thermal Insulation in the Petrochemical Industry" by W. C. Turner.

ABS-006976

LAM 025952

Additionally, it was learned at the Tulsa meeting that the ASTM C-16 Committee on Thermal and Cryogenic Insulating Materials (Frank A. Govan, Chairman) is setting up two (2) new committees; 1) Design Committee, and 2) Geographical Design Subcommittee. These committees should become functional within the near future. It does not appear necessary for Shell to place a man on the ASTM C-16 Committee, although general knowledge of their activities should be maintained.

Research Project

Shell Research at Bellaire are currently conducting thermal conductivity tests of various insulation materials under contract for Shell Canada. It was agreed that the Engineering Council Office would contact Bellaire Research to advise that we are interested in the Shell Canada insulation materials program and are solicitous of any testing information which they develop.

Recommendations (Scope)

The suggestion was made that Shell departments need to know what insulation materials specifications have to be met, in order to procure acceptable insulation products for on-going and future construction projects. Although the work contractor is initially responsible for purchasing and installing insulation materials, Shell assumes the responsibility upon acceptance of the completed facilities. Insulation materials have been treated as a stable commodity in the past, but these increasingly scarce engineering materials will evidently demand more of Shell's time in the future. It was reported that the T.I.M.A. (Thermal Insulation Materials Association) report entitled "Econ I" on insulation materials economic thicknesses should not be used, since it gives misleading results. Since defining all the pertinent and appropriate basic data for insulation materials is very important to all Shell engineering functions, there was general agreement that Shell should develop a guide that would uniformly define basic parameters for engineering insulation materials.

Recommendations (Criteria)

The following insulation materials information needs should be covered by the Shell guide, or white paper:

- 1.) Economic Criteria Required for Evaluation of Insulation Materials - (To be set by Shell Management)
- 2.) Insulation Materials Thickness - Thermal Conductivity (k -factors) Values should be determined and charted for three (3) basic types of Insulation Materials:
 - a.) Calcium Silicate
 - b.) Cellular (Fiber) Glass
 - c.) Other Materials
- 3.) Contact Resistances of above Insulation Materials (e.g., aluminum sheathing and insulation)

LAM 025953

ABS-006977

- 4.) Pipe Coatings and Insulation Layering
- 5.) Binding Materials for Insulation Products
- 6.) Susceptibility of Insulation Materials to Fire-Fighting Techniques
- 7.) Health Hazards of Insulation Materials. ✓

Recommendations (Development)

It was recommended that an experienced engineer, with some heat transfer background, should be selected to develop and coordinate a Shell white paper incorporating available basic and pertinent insulation materials information. The basic engineering data provided by a Shell white paper covering insulation materials should have a useful life approximating five (5) years, at which time the data could be reviewed and updated, if warranted. Additionally, a uniform approach to the selection, application, and use of insulation materials Company-wide would be possible through utilization of the Shell white paper. Further, the paper would provide an equal-footings basis, through standardization, for economics evaluations and other insulation materials investigations.

Recommendations (Application)

The engineering information provided by the insulation materials white paper could be used by various Shell engineering functions as input data for access to the Norco, or Wood River, Insulation Materials Economic Thickness Computer Programs to evaluate insulation products and projects. It was pointed out that Chemical Engineering has previously accessed and run the Norco Computer Program directly from the Shell ITC Building. Interested groups may contact them for particulars.

Conclusion

It was suggested that members of the meeting group should maintain contact to facilitate the dissemination of related technical information. The guidelines provided by the development of a Shell guide (white paper) on engineering insulation materials would provide invaluable information and a solidified Shell approach for our various engineering functions. There was unanimous agreement that high priority should be given to the development of the Shell white paper on engineering insulation materials, due to the present and anticipated criticality of these materials to our business.

LAM 025954

ABS-006978

ABS-006971 thru ABS-0007089

10

LAM 025946

ABS 006970.1