ORIGINAL

IN THE DISTRICT COURT OF DALLAS COUNTY, TEXAS
160th Judicial District

IN RE: ALL ASBESTOS PERSONAL INJURY CASES FILED IN DALLAS, TEXAS

West Conshohocken, Pennsylvania
Wednesday, April 29, 1992

TRANSCRIPT of testimony of JOHN J. TABBUTT, as taken by and before Sean M. Fallon, a Federally-Approved Registered Professional Reporter and Commissioner of Deeds of the Commonwealth of Pennsylvania, at the offices of Sherr, Joffe & Zuckerman, P.C., 200 Four Falls Corporate Center, 4th Floor, commencing at 10:00 o'clock in the forenoon.

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A P P E A R A N C E S:

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I N D E X

E X H I B I T S

-JOHN J. TABBUTT-

JOHN J. TABBUTT, after having been first duly sworn, was examined and testified as follows:

MR. STUTTS: I would like to read Andrew Roberts' -- at least the designation for Mr. Tabbutt.

MR. WATERS: I think it's the same as that found in the Deposition Notice. Just compare to make sure.

MR. STUTTS: Okay.

MR. WATERS: First page is the designation and then follows the --

MR. STUTTS: That's right.

MR. WATERS: I just kind of skimmed his. I believe it's the same.

MR. STUTTS: All right. We don't need to do that.

EXAMINATION

BY MR. WATERS:

Q. Could you state your full name for the record.

A. John J. Tabbutt, T-a-b-b-u-t-t.

Q. How are you presently employed?

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A. I beg your pardon?

Q. How are you presently employed?

A. I am presently employed.

Q. How or by whom?

A. My employer is Westinghouse Electric Corporation.

Q. And what is your position with that company?

A. I'm district service manager for the Westinghouse Power Generation Service Division.

Q. Power Generation Service Division. How long have you been in that position?

A. Since 1980.

Q. So since 1980 you have been the district service manager?

A. Correct.

Q. Have you had your deposition taken before?

A. Yes, I have.

Q. In how many instances?

A. Two.

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Q. And when was the most recent?

A. Two years ago.

Q. Where was that?

A. This room.

Q. Was that in connection with an asbestos case or asbestos cases?

A. Yes.

Q. And the previous time?

A. In Philadelphia.

Q. And how long ago was that?

A. About the same time frame.

Q. Other than those two times have you ever given your deposition before?

A. No.

Q. What was the difference between those depositions, to the extent that you are aware of any, what was the different in purpose or the difference in focus?

A. I really don't think there was any difference.

Q. As far as you can recall, your testimony was similar or the same?

A. I believe so.

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Q. Did you review any documents in preparation for your deposition?

A. Yes, I did.

Q. Tell me what you reviewed.

A. Process -- Westinghouse process specifications, Westinghouse material cards, proposals -- Westinghouse proposals, contracts, subcontracts.

MR. WATERS: Are you going to furnish those materials to us?

MR. STUTTS: I'll tell you what he's reviewed. What he's reviewed are the documents that were produced and that you all copied and that's all.

BY MR. WATERS:

Q. Where is your office located, by the way?

A. My office is located in Radnor, Pennsylvania.

Q. Is that close by?

A. It's about ten minutes from here.

Q. How long have you been there?

A. Six months.

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Q. And prior to that?

A. Bala Cynwyd, B-a-l-a capital C-y-n-w-y-d, Pennsylvania.

Q. Is that in the vicinity, as well?

A. About ten minutes.

Q. Were you in that office the entire time from 1980 to six months previously?

A. Right.

Q. Tell me generally what it is Power Generation Service Division does.

A. The Power Generation Service Division has responsibility within Westinghouse for the installation, maintenance, and repairs of the products manufactured by the Power Generation Business Unit.

Q. And what sorts of products does the Power Generation Business Unit manufacture?

A. The Power Generation Business Unit presently manufactures an assortment of -- variety of steam turbines, combustion turbines and generators.

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Q. And for how long has that been the case, that those were the things that they manufactured? You said "now" in your response earlier, that that's what they make now.

A. That's correct.

Q. So, I guess, how long has that been the case?

A. Those particular products that I had mentioned they've always made.

Q. And when you say always, you mean as far as back as you can recall?

A. As far back as I can recall.

Q. Are there some other things that they used to make that they no longer do, that you can recall?

A. We used to manufacture heat transfer equipment, which consisted of condensers, heaters, pumps, circulating water pumps, condensate pumps, air removal equipment, and what I'm going to class as small steam turbines, mechanical drive steam turbines.

Q. What was your position immediately

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prior to 1980?

A. Assistant manager.

Q. And where were you located as the assistant manager?

A. Philadelphia.

Q. How long were you there in that position?

A. Approximately five years.

Q. '75 to '80?

A. Yes.

Q. Let me backtrack for a second to your work as a district service manager. What have your duties entailed in that position?

A. The Power Generation Service Division covers the United States and we have various local district offices who are responsible for all the customers within its geographically assigned area, so I'm responsible for the servicing of industrial and electric utility customers within the mid-Atlantic area.

Q. Is there someone who has a similar title to you who is responsible in, for

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instance, the southwest of the United States?

A. Do you want to give me a state?

Q. Texas, for instance.

A. Yes, we have a local office in Dallas, Texas.

Q. And your counterpart in that position would be in Texas?

A. Correct.

Q. Do you know his name?

A. Gary Miller.

Q. He would be a district service manager like yourself?

A. Correct.

Q. Does Westinghouse have offices and operations in Texas, other than in Dallas, that you are aware of?

A. Houston, Texas.

Q. Anything else besides those two?

A. Those are the only two service offices that we have.

Q. Do you have any other sales offices or representatives that you are aware of?

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A. In Texas?

Q. Um-hum.

A. I'm sure there are.

Q. We'd have to go somewhere else for specifics on that?

A. For sales offices, yes.

Q. Okay.

A. We can provide that information, but I'm not -- I don't have a listing of each and every office for sales.

Q. Tell me what your duties were as an assistant manager -- duties and responsibilities from approximately '75 to '80.

A. The assistant manager was responsible for answering technical questions from our customers, assigning service engineers as required, processing administrative paperwork. Those were the major duties.

Q. So, is a portion of your -- would a portion of your work have been in sort of the customer relations department?

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A. Yes.

Q. How much of your work would have been involved with customer contact?

A. Probably fifty percent.

Q. And would that have been in the nature of responding to their inquiries about your equipment or your services?

A. Correct.

Q. During that time you would have still been employed by the Power Generation Service Division?

A. Correct.

Q. So, your interaction with customers or clientele would have been with regard to equipment that had previously been sold by Westinghouse to those customers, perhaps servicing, or other things going on?

A. The correspondence would be in relationship to operation, maintenance, repairs or installation of any of the products that we had previously discussed.

Q. Let me ask you about installation. Was the Power Generation

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Service Division responsible for installation of steam turbines, combustion turbines, generators and the like that were manufactured by Westinghouse?

A. Westinghouse Power Generation Business Unit is a manufacturer of steam and combustion turbines and generators. Each unit that's sold is rather unique, none of them are really the same. Traditionally the way the process worked was Westinghouse would receive requests for quotation from either a customer, such as Texas utilities, or from an architect engineer, such as Brown and Root, R-o-o-t. We would respond to that request for quotation and we would supply what the customer wanted.

Q. So, in that sense, would the --

A. Now, if --

Q. You were probably going to short cut me, so it's probably better to let you go on.

A. Now, if the customer desired installation services, they would normally ask for a quote for that, which we would respond

to installing a unit, but generally we sold the equipment and the equipment was installed by, I'm going to call it, an installation contractor. The installation contractor could have been Westinghouse, but it varied on a unit-by-unit basis. There could be a unit in Dallas that was installed by Westinghouse and there could be five units in Houston that could have been installed by Brown and Root, as an example. So, without really knowing a specific unit, we really don't know.

Our records are set up on a unit-by-unit basis, so if you were to give me a specific unit in a specific location we would be able to tell you whether or not we installed it or somebody else installed it.

Q. Then just so I'm clear on the relationship between the service division and the business unit, is the service division work sort of a subset, if you will, of the business unit, in terms of providing services that were needed and what not?

A. We are a division of the business

unit. We have the manufacturing division and we also have the service division, so we service what's manufactured.

Q. Tell me a little bit about sort of the range of issues that you would have dealt with in your time as an assistant manager, vis-a-vis the clients or the customers. Would this have been all across the board kinds of things you would have talked to customers about with relationship to the products or installation, repair, maintenance, that sort of thing?

A. It was a fairly broad spectrum.

Q. Did you travel in that capacity?

A. Yes, I did.

Q. Would you go to the location of the plant or the equipment or whatever and provide your advice or comments in that way?

A. I made trips to various site locations for customer meetings.

Q. And what would you discuss at those meetings?

A. Technical questions, repair

questions.

Q. So that if the customer had a question or a problem or a concern they could contact you?

A. Um-hum.

Q. And you were there to provide that service on behalf of Westinghouse?

A. Correct.

Q. And if it was something that you didn't feel qualified to address you could refer it elsewhere?

A. If there were a technical issue that I would be unable to answer I would provide the answer to the customer, but I may have to go to other sources to get that answer, such as, i.e., engineering department.

Q. Did the Power Generation Service Division provide any circulars or publications or mail-outs that went to customers on a routine basis? Just sort of industry information, that sort of thing?

A. The Power Generation Service Division did not put out bulletins, but the

Power Generation Business Unit did.

Q. And would those typically be mailed or sent to customers who had purchased some of these items, steam turbines, combustion turbines, generators?

A. They would be sent to whomever the bulletin applied to. Again, each unit was different, so a bulletin may not apply to all customers because the equipment is different.

Q. So would you have different bulletins about steam turbines and different bulletins about combustion turbines? That sort of thing?

A. Even more detailed than that.

Q. Even more specialized?

A. Yes.

Q. Were those a regular publication or is it just they came out when there was news that needed to be sent out?

A. The publications have always come out and still continue to come out.

Q. On a regular basis?

A. On a routine basis.

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Q. How often do they come out?

A. As required basis.

Q. Perhaps I'm misunderstanding, but I'm hearing two different things. To me there is a regular basis, be it monthly or bi-monthly or something like that, and you said "as required," and that implies to me that if there is something that's newsworthy they send one out, but they don't send one out on a routine basis unless they've got something specific they want to say.

A. There is not a monthly newsletter, if you will. The bulletins come out, again, on an as required basis with no specific time frame.

Q. Tell me what you mean by as required, so I understand.

A. As an example, if there is a specific problem that caused damage, we have an obligation to notify our customers that have the same piece of equipment that there was a problem and advising them what the problem was and what the corrective action

should be.

Q. And again that bulletin advising of a specific problem with a specific piece of equipment or whatever would be specialized in the sense that it would be sent only to the people who needed to know that information, is that right?

A. Only to those users that the bulletin would apply to.

Q. Can you tell me some of the names of some of the bulletins, if you know.

A. There are basically three types of bulletins that are presently sent to our customers. Those bulletins are categorized as, one, customer advisory letters. Number two is operation and maintenance memos, known as OMM's. And three is availability improvement bulletins, which are known as AIB's, so you have CAL's, OMM's and AIB's.

Q. And that's the case at the present time?

A. Correct.

Q. And how long has that been the

case, to your knowledge?

A. Westinghouse has always sent out bulletins. The three designations I gave you as what we are presently sending out, they have been coming out, I want to say, for ten years with that nomenclature.

Q. Prior to that was there something similar, just perhaps not called the same thing?

A. Correct.

Q. Let's go back to your career path, going backwards in time. Prior to 1975 what was your job description?

A. I was a field service engineer from 1967 to '85 and I was responsible for --

Q. To '85?

A. To '75.

Q. Continue.

A. I was responsible for the installation, repair and maintenance of our equipment at customers' site locations.

Q. Were you still in the Atlantic or mid-Atlantic region?

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A. Correct.

Q. And presumably that job would have entailed travel, as well?

A. Yes.

Q. How did your duties differ from your work as an assistant manager?

A. Field engineer's duties were site specific. You are assigned to one customer and one site, one turbine generator, whereas the assistant manager and manager were responsible for all equipment, again within that geographical territory.

Q. Would you personally supervise the installation, repair and maintenance of equipment?

A. Installation, again, was a contractual obligation. We provided technical assistance to our customers on site.

Q. If you are not actually contracting to do the installation are you going to be sort of in an advisory capacity?

A. If we had a contract to install a unit, then we would supervise the workers.

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Q. Okay.

A. If we did not have a contract and we were hired for technical field assistance, which is basically to answer any technical inquiries that come up, but we were not responsible for directing either the customer or his work place.

Q. But you would, presumably, in that situation, have some degree of input into the job that was being done, is that correct?

A. The principal duties of that position is to provide technical assistance. Each customer varied as far as what their requirements were.

Q. So you would respond to the customers' --

A. The customers' needs.

Q. Would that require an individual such as yourself to be on site during the entirety of the installation procedure? Again, assuming that Westinghouse does not contract to do the installation, but was there in an advisory or technical capacity?

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A. Again, it would vary on a unit-by-unit basis. If contractually we were obligated to be there for the entire duration we would be there for the entire duration.

Q. So that's going to vary?

A. Yes.

Q. And what about repair and maintenance type of work?

A. Would be the same. It would vary on a contract-by-contract basis.

Q. Would there be some instances where Westinghouse contracted to do the repairs in their entirety?

A. We would accept a contract to do the maintenance on a -- some type of generator, if requested by the customer.

Q. And if that were the case, then the work would be done entirely by Westinghouse or Westinghouse employees?

A. Not necessarily. Again, it would depend on the specific contract requirements.

Q. So, it's going to vary on a case-by-case basis?

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A. Every unit was different and every contract was different. In some cases our customers would want to do a portion of the work, such as remove insulation, and then Westinghouse would come in and pick it up from that point on. A lot of the utilities did that because we basically don't have our own insulators, so, therefore, we would subcontract and put a markup on it, so it was cheaper for the utility to just hire the same company without the markup. That is just one example.

Q. I should backtrack and go -- I know you've been deposed before, but I should go through a couple of the ground rules. I don't think we'll have any problem, but just to get it on the record.

You need to wait until I finish my question, you are doing a fine job of that. I need to let you finish your answer, I'm trying to do a good job of that, and we need to make sure we get everything verbal, no nods of the head, that sort of the thing, so the court

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reporter can have a good record.

A. Um-hum.

Q. You've been designated by Westinghouse Corporation as its employee or representative most knowledgeable about, and I'll go ahead and quote the record, Westinghouse's specification for use of asbestos-containing insulation materials on, in, or around turbines manufactured by Westinghouse. The individual or individuals, which is yourself, designated should also be able to testify as to how, where and why asbestos or asbestos-containing insulating substances or products were incorporated into, onto or otherwise made a part of defendant's -- that's Westinghouse's -- turbines.

Is that a subject that you are generally familiar with?

A. Yes.

Q. Are you aware of anyone else at Westinghouse you would consider to be more knowledgeable on this subject?

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A. Not that I am aware of.

Q. So, as far as you are aware, you would be the person at Westinghouse Corporation most knowledgeable on the issues I just listed, as far as you know?

A. I don't know if I would be considered the most knowledgeable, but I'm aware of the facts.

Q. You are not aware of anyone else who would be more knowledgeable, then?

A. I'm not aware of anyone. That doesn't mean that that person doesn't exist.

Q. The Notice of Deposition, which I'll have the court reporter mark as Exhibit 1, with the cover letter as part of that, dated April 21, contains a number of categories of documents that were requested to be produced at your deposition.

Did you have an opportunity to review that Notice of Deposition?

A. I don't believe I received it.

Q. It has not been shown to you?

A. I don't remember any document that

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I was required to bring documents.

Q. Did anyone advise you that it was necessary to bring documents or to look for documents or anything of that nature?

A. No.

(Exhibit Tabbutt-1 is marked for identification.)

MR. WATERS: In light of the fact that no documents have been produced at the time of the deposition, as attorney for the plaintiffs it would be necessary for us to preserve our right to continue the deposition at a later time after there has been a production of documentation.

I understand it's defense counsel's position that all the documents required to be produced have been produced as documents that were produced in other litigation.

It's our position that the judge initially required that production several months ago, I think after a hearing on February 14, 1992. There was no restriction

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on further production, as long as it was limited in scope and relevant to the inquiry and otherwise discoverable under the Texas Rules of Civil Procedure.

Having said that, we reserve our right to file a motion to get the documents and to continue the deposition as necessary.

BY MR. WATERS:

Q. Have you discussed your anticipated testimony in this case with anybody besides your attorneys?

A. No.

Q. Have you had any discussions with anyone besides your attorneys in the past five years about the possibility of exposure to asbestos while working on Westinghouse turbines or working in the vicinity of Westinghouse turbines?

A. Have I talked with anybody other than my attorneys -- I don't understand the question.

Q. Let me ask it again. I'm not interested in what you've discussed with your

attorneys.

Other than discussions with your attorneys have you had any conversations within the last five years with anyone pertaining to the possibility of or prospect that someone might be exposed to asbestos while working on or in the vicinity of Westinghouse turbines?

A. Probably frequently.

Q. Okay. And in what context would those have occurred? I mean, just -- let me strike that question.

With whom do you specifically recall having conversations of that nature?

A. Employees and also owners of equipment.

Q. When you say employees, you mean Westinghouse employees?

A. Correct.

Q. Let me focus for a moment on owners of equipment, your customers. In that context tell me how the discussions have arisen. I mean, have they come to you for

advice? Have you given them advice? What has been the nature of the discussion?

A. Many utilities and power plants have instituted programs for insulation replacement -- I should say, removal and replacement.

Q. Um-hum.

A. That normally enters into a discussion on turbine generator schedule, maintenance schedules, outage schedules, what have you. Again, it's fairly common in today's world that the insulation is replaced.

Q. Well, have customers come to you soliciting advice about how to go about removing the insulation? Is that the context?

A. Westinghouse really never was what I would call -- we were a turbine generator supplier. Our technical assistance related basically to the turbine generator proper. Turbine insulation was always done by a contractor, if you will, just as replacement is being done now by contractors, or the utilities, itself. If the utility, itself,

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had its own pipe coverers slash asbestos workers, insulators, they would do it themselves or they might sub it out to another insulation contractor. Normally we didn't get involved with that, only as a matter of scheduling type thing.

Q. Well, are you telling me, then, that your conversations with customers with regard to asbestos insulation on or in the vicinity of turbines or generators would have been limited to scheduling issues?

A. As far as the replacement times -- removal and replacement.

Q. Okay.

A. I mean, the utility -- again, it's a unit-by-unit specific case.

Q. Sure.

A. Varies by customer and by plant and again by unit. But usually the utility makes those arrangements. Whether it's to be replaced or whether it has to be re-used. It's their equipment. It isn't Westinghouse's equipment. Sold to them many years ago.

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Q. Sure.

A. So, we don't -- again, it's rare that we get involved in that process.

Q. Again, just talking for the moment about the past five years, have you had any discussions with customers or anyone else where you advised the possible dangers or hazards of this business, asbestos insulation, or was that common knowledge?

A. I want to say that, again, most utilities have been in some type of encapsulation and/or removal replacement program for many, many years. It's not a new issue.

Q. So, it's not something that you, as a Westinghouse employee in these past five years, as we've been discussing, felt it necessary to educate them about?

A. Correct.

Q. Okay. At this stage, like I said, you would consider that to be common knowledge, the dangers?

A. The power plant, itself, is -- you

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know, has a lot of insulation in a lot of locations and a lot of parts and pieces. I'm trying to think of a location where I've been where there wasn't some type of program that was going on, and I'm not aware of any specific location.

Q. That's fine. Let me go back to my specific question and then we can move on.

A. Okay.

Q. And I'm going to ask him to read it back. I don't think you responded to it and I want to go ahead and -- do you mind reading the last question back.

(Pertinent portion of the record is read.)

BY MR. WATERS:

Q. If you don't consider it to be common knowledge, that's fine, I just need to know if that's a yes or no.

MR. STUTTS: I think he's already answered the question. He talked about what others have done with respect to insulation being on the equipment. Are you asking

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whether he considers that to be common knowledge or whether that -- whether he infers from that that there was common knowledge that there were dangers from asbestos?

MR. WATERS: That's fine. I just want to know what his opinion or his personal knowledge is.

BY MR. WATERS:

Q. Do you consider it to be common knowledge among your customers, if you will, that asbestos is a hazardous substance and needs to be dealt with with care?

A. I would say, again, that most of the customers that I know recognize the dangers of airborne asbestos fibers and they are taking whatever steps are necessary to eliminate and/or reduce that hazard.

Q. Let me keep backtracking. Tell me what you did prior to or during and prior to 1967.

A. 1967 I joined the corporation.

Q. In '67.

A. Right.

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Q. What did you do prior to that?

A. I was in school.

Q. Where did you go to school?

A. Wentworth Institute of Technology in Boston, Massachusetts.

Q. Graduated in '67?

A. Graduated in '67, went into the Westinghouse field service engineering and training program at Lester, Pennsylvania in July of '67. Went from there to be a field engineer in Philadelphia.

Q. Are you a licensed engineer?

A. No.

Q. What degree did you get?

A. Mechanical engineering.

Q. Have you ever been a licensed engineer?

A. A licensed professional engineer?

Q. Yes.

A. No.

Q. And how old a man are you? I should be able to figure that out.

A. Forty-five.

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Q. Am I correct in assuming that, as a field service engineer -- well, let me ask it this way: The entire time you've been employed by the Power Generation Service Division, is that correct?

A. By Westinghouse.

Q. I guess I better get that clarified. From '67 to '75 you worked as a field service engineer. What division were you working for?

A. At that time it was called the Lester Divisions.

Q. Lester?

A. L-e-s-t-e-r.

Q. Because of the place?

A. Right. At that time the training programs were conducted at our manufacturing plant and the service department was a department of the manufacturing plant. It wasn't until years later that we actually became a division of Westinghouse.

Q. Do you know when that would have been, approximately?

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A. I'll say 1969 or '70.

Q. Sometime fairly shortly after you started?

A. Right, right.

Q. Well, did you have the Power Generation Business Unit as a continuing entity the entire time?

A. The Power Generation Business Unit has been called different things, but it's basically been the same, although it's had different names.

Q. What was it called prior to being named the Power Generation Business Unit?

A. Steam Turbine Division was one name. Lester Divisions was one name. But each name had the same responsibilities and that was for the manufacturing of power generation equipment.

Q. Did you have the same structure in the sense that Power Generation Business Unit contained within it either the Power Generation Service Division or its predecessor?

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A. Correct.

Q. In addition to manufacturing division or its predecessor?

A. Correct.

Q. Where is the headquarters, if you will, of the Power Generation Business Unit?

A. Orlando, Florida.

Q. And how long has it been there? Probably not that long.

A. Actually, it's been there for five years. Around five years.

Q. And prior to that?

A. Headquarters was in Pittsburgh, Pennsylvania.

Q. Now, as a field service engineer where were you employed? In what -- geographically what town? You may have told me about that.

A. Everywhere.

Q. Did you have an office?

A. My home location was Philadelphia.

Q. But you were on the road a lot?

A. I was on the road at numerous

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locations.

Q. Who was your immediate supervisor in that position?

A. My immediate supervisor was Frank Horan, H-o-r-a-n.

Q. Say that again.

A. In the '60's.

Q. H-o-r-a-n?

A. Right.

Q. And in the '70's.

A. Larry Berley, B-e-r-l-e-y.

Q. Are either of those gentlemen still employed by Westinghouse?

A. Frank Horan is deceased and Larry Berley retired -- he's retired.

Q. Very recently or do you recall approximately when?

A. 19 -- late '70's.

Q. Does he still live in this area?

A. Yes, he does.

Q. What town, if you know?

A. Media, Pennsylvania.

Q. Just like it sounds, M-e-d-i-a?

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A. M-e-d-i-a.

Q. Is he someone you keep in touch with?

A. Occasionally.

Q. What kind of occasions would you run into him or see him?

A. Retirements.

Q. So, during the time frame where you were a field service engineer, from 1967 to 1975, those two gentlemen would have been your immediate supervisors?

A. Correct.

Q. And would they have been district service managers?

A. District managers, yes.

Q. Well, when you were promoted in '75 to assistant manager would you still have been working for Mr. Berley?

A. Berley.

Q. Is that correct?

A. Yes.

Q. Did you replace him when you moved up to be district service manager?

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A. No, no.

Q. Was there someone who was the district service manager -- just tell me who was the district service manager prior to yourself.

A. Joe St. Laurent, S-t. L-a-u-r-e-n-t.

Q. Did he retire?

A. No, he's located at -- he has another position with Westinghouse. He's presently located in Charlotte.

Q. North Carolina?

A. North Carolina.

Q. Just so I understand the relationship, would he have been senior to Mr. Berley prior to Mr. Berley's retirement?

A. There was an overlap period.

Q. What do you mean?

A. We had a new manager coming in replacing a manager retiring, so we have an overlap period of time where they were both there.

Q. I see.

-JOHN J. TABBUTT-

A. Follow me?

Q. I think I understand. Berley would have been the one retiring --

A. Correct.

Q. St. Laurent would have been the one coming in?

A. Um-hum.

Q. All right. Then he wasn't in that position for very long, was he?

A. Correct.

Q. Where did he come from previously, if you know?

A. He came from the Baltimore office.

Q. Do you know his present position in Charlotte? What his title is? What his duties are?

A. Customer service manager.

Q. For the Power Generation Service Division?

A. For the Charlotte plant. Charlotte manufacturing plant.

Q. Any idea where he went in '80 when you took over as district service manager?

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A. He went to our headquarters organization, which at that time was located in Broomall, Pennsylvania.

Q. What did he do for them? Any idea?

A. He was the manager of the repair services product line.

Q. Repair services product line. Is that not going to be part of the Power Generation Business Unit or is it still --

A. Charlotte, Broomall, they are all part of the business unit.

Q. As field service engineer, '67 to '75, what was your regional area? Area that you covered?

A. We were responsible for anywhere in the United States. We could be assigned to anywhere in the United States.

Q. And what regions were you assigned to or was it just all over the map?

A. I've worked in numerous locations throughout the United States and Mexico.

Q. So --

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A. The management would try to assign you within your geographical district location, but obviously, if there wasn't any work, you would be assigned outside of that area.

Q. So, did you do your work up in New York, for instance?

A. Have I worked in New York State?

Q. During that time frame.

A. Yes.

Q. How about Texas?

A. Visited Texas, but never worked there.

Q. How about the great State of Alabama?

A. Never been in Alabama.

Q. Do you know a fellow by the name of John Morykon?

A. John Morykon?

Q. Yes.

A. Yes, I do.

Q. How do you know him?

A. John used to be in the same office

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I was located in in Bala Cynwyd.

Q. And what -- how did he -- did his duties interface with yours and how did you deal with one another on a professional basis?

A. We had a repair facility in Philadelphia and John was the plant manager. Then he got promoted to regional manager in Bala Cynwyd and he was responsible for a number of plants, so that's how I knew John.

Q. And when -- what's the time from when you all would have worked together?

A. In the '80's, early '80's.

Q. Did you ever have any conversations with him about asbestos insulation, the possible hazards of asbestos insulation, that you can recall?

A. John's responsibility was basically for the products manufactured by the Transmission Distribution and Control Business Unit, which I was not part of, so most of our conversations were on a social basis, not on a business basis.

Q. Well, is your answer, then, no,

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that you don't recall having any conversations of that nature with him?

A. That's correct.

Q. One of the things that I requested to be produced at the deposition was photographs or diagrams of turbines slash generator units so I could have you help me understand how some of this stuff works. We are not going to have that, unfortunately, but I was wondering if I might get you to draw a diagram of some sort to give me a general sense of what the component parts generally look like and how the things are going to fit together. Would that be possible? Understanding that these things are site specific, as you said.

MR. STUTTS: Let me make a comment. Many drawings were produced as part of our earlier document production, so all that was available.

MR. WATERS: In fact, I have some of them with me, but they seem to be often site specific. Maybe that's the nature of the

beast.

MR. STUTTS: That's the nature of the beast. There is no generic turbine drawing.

BY MR. WATERS:

Q. And I understand that, but just so, since I am a true layman when it comes to these things, would you be able to do that, just to help me visualize a description -- I can have you describe to it me, but it's not going to be nearly as helpful, unless you can do that for me. Do you mind doing that?

A. If you have drawings here --

Q. You would prefer to use those?

A. We can use a drawing and it will probably be a lot easier than me drawing.

Q. Maybe that's what we should do. I may need to get an extra copy or two. Tell me generally, and again understanding that these things are going to be size and unit specific, tell me generally what plant -- why a plant purchases a turbine generator unit to be used and what the purpose is behind that, in a

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general sense.

A. The reason that a utility purchases a new turbine generator is because of the electrical demand increase within its geographically assigned territory. Or, in the case of retiring older units, again requiring a new unit to replace those that they have retired.

Q. What about in the case of a manufacturing plant as opposed to a power plant.

A. Why an industrial customer would buy a turbine?

Q. Right, as opposed to a utility.

A. There is --

Q. I'm sure there is a number of reasons.

A. There is a lot of that going on right now and the reason for that is that an industrial plant may have a demand for process steam, where it needs steam in whatever process it's doing, whether it's making paper or making steel or heating greenhouses. If it

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has a demand for steam, then it becomes attractive to them to install a turbine generator to reduce the pressure of the steam for its process, at the same time to generate electricity for its own use, and to sell the surplus to the utility that serves it under some type of long-range contract. So it can be financially attractive for that industrial customer to do that, especially in an area that has high electric utility rates.

Q. So, as an example, if a paper mill were to order a turbine generator unit, if you will, the purpose would generally be to provide its own power, in addition, perhaps, to utilizing the steam that results?

A. Correct.

Q. And you said something just a few seconds earlier that caught my attention. Did you say that this is something that is happening more frequently now or did I misunderstand you?

A. No, there is a lot of what we call co-generators.

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Q. What is meant by that?

A. They co-generate for themselves and also for the utility and use the process steam again for whatever manufacturing process that they have at that specific site location.

Q. And are utilities often required to purchase back whatever excess there is?

A. There are specific requirements, location, states, et cetera. As an example, Texas is more lenient and encourages that more than other states, but it's a process that's happening nationwide, not restricted to any specific area. Co-generators really are in every state.

Q. For how long a period of time has Westinghouse been manufacturing and providing generators and turbines to manufacturing plants in the United States, that you are aware of? Understanding that you've only been there since '67, but I'm sure you've had some dealings with machinery that was installed long before.

A. Sixty years. Sixty-seven years.

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Q. So going back into the '20's?

A. Could be. Could be earlier than that.

Q. Are some of those old ones still operating?

A. There are some units that have been in service for fifty years.

Q. Is that right?

How do you -- what do you use as a measure -- or perhaps a better way to put it is, how do you differentiate between the sizes in turbines and generators in their uses? In other words, it would seem to me that if you have a very small manufacturing plant you might need a very small unit and if you had a large one you would perhaps need a larger one or more than one or whatever the case may be?

A. Is there some measurement or some grading level or some numerical system to assign a size or capacity to that sort of equipment?

A. Each application is different. Each application has different steam

requirements and each application has different load requirements, but the one who decides that is the user, the customer. Again, we respond to whatever it is that they want, but again they usually provide the specifications to us. Say Westinghouse, we would like a unit this size that has so much steam flow or so much electrical load.

Q. You just mentioned three things that perhaps can be helpful in that regard, unit size, steam flow and electrical load. Those are all things that the customer asks for, correct?

A. Right.

Q. And then, when you say unit size, how is that measured?

A. Megawatt output. Generator output.

Q. And give me, if you can, what your range is going to be, the smallest to biggest, in that sense.

A. We have units in service from two megawatts up to twelve hundred megawatts.

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Q. That seems like quite a difference. Again, just so I can try to visualize what this is going to look like, how big is a unit, physical size, that generates or has output of two megawatts, approximately?

A. Twenty feet long, six foot high, eight foot wide.

Q. And on the other end of the spectrum, a generator that has an output of twelve hundred megawatts, approximately the size of a unit of that nature?

MR. STUTTS: Can I ask for a point of clarification?

MR. WATERS: Sure.

MR. STUTTS: You said generator. Do you mean the turbine and the generator together or -- I assume you are not just talking about the generator portion of it.

BY MR. WATERS:

Q. Thank you. My understanding is that the two are sort of in tandem, is that correct?

A. Not necessarily.

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Q. So they wouldn't necessarily be side by side?

A. Those are called cross compound units, side by sides, and then tandem, in-line units. Again, each one is different.

Q. Well, when you gave me the --

A. The larger units, the twelve hundred megawatt units are basically nuclear steam turbine generators. They are massive. If you were standing on the floor that they are located on they would be probably a hundred fifty, hundred sixty feet long, twenty foot high, thirty foot across.

Q. Going back to the --

A. One -- just one component of the nuclear unit can weigh two hundred tons, just one piece of it. Massive.

Q. Going back to what you described as two by six by eight, the two megawatts --

A. Twenty.

Q. I'm sorry, you're right. Twenty by six by eight, would that be just the size of the generator, itself?

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A. No, that would be the whole unit.

Q. Generator and the turbine?

A. Um-hum. Again, these are all approximations.

Q. Sure. No, absolutely.

Is it necessary to insulate or place insulation over some aspect of your generator and your turbine when the two are in combination, either side by side or tandem as you've described, or for that matter, if they were further apart?

A. The twelve hundred megawatt unit that we were talking about basically consists of four separate turbines and a generator. There is a high pressure turbine, which -- the steam comes into the high pressure turbine, an exhaust from the high pressure turbine, and it goes into three, what I'll call, low pressure turbines. Those turbines drive one generator. The generator is not insulated. The three LP turbines were not insulated, there is no insulation on them. The high pressure turbine is insulated.

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Q. Let's, again, speaking in terms of this twenty by six by eight unit, how large would the high pressure turbine, itself, be in that unit we've been theorizing about?

A. About half the size.

Q. So ten by six --

MR. STUTTS: Let me make another -- make sure we are talking about the same thing. Mr. Tabbutt was just talking about, on this example here, of a twelve hundred megawatt unit as having high pressure, which is insulated, three low pressure turbines and a generator.

MR. WATERS: I beg your pardon.

BY MR. WATERS:

Q. Were we talking about the twelve hundred?

A. The twelve hundred.

Q. I apologize. I meant to be asking you about the two megawatt unit that we discussed earlier.

A. Um-hum.

Q. Let me go back and ask you the

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same questions in that regard. Are you going to have a similar setup?

A. It would be -- the two megawatt unit would be one turbine, one generator.

Q. Okay. Now, in that context, would the turbine be insulated?

A. The turbine would probably be insulated.

Q. Given that the unit as a whole is twenty by six by eight, how large would the turbine, itself, be, the single turbine?

A. About ten by six by eight, roughly. Roughly half the size.

MR. STUTTS: Again, to make sure we are talking about the same thing, you are talking about a two megawatt steam turbine and generator.

MR. WATERS: Right.

BY MR. WATERS:

Q. In a little while, once we start going through these documents and I run across one, we'll get a diagram and you can explain this to me a little better, but again in a

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typical context, where on that -- I'm assuming again that there is not going to be any insulation on the generator, correct?

A. Correct.

Q. Where, on the turbine, itself, exterior of the turbine, are we likely to find insulation materials?

A. It would be located on the turbine.

Q. On the turbine, okay, which you've described as being approximately ten by six by eight in the context --

A. Correct.

Q. Would it be all around the exterior of that piece?

A. It could cover the exterior surfaces.

Q. Would it also have pipe covering that runs to and from the turbine unit?

A. On the two megawatt units we didn't have -- there is no turbine piping, if you will, other than oil piping, which is not insulated. The pipes to the turbine is the

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architect, engineer, constructor and/or owner's responsibility, so they take all the piping to the turbine. Again, on a two megawatt unit. So there is no piping.

Q. Make sure I understand, in this two megawatt unit we've been discussing, are you saying that there is not going to be any piping other than oil piping?

A. Correct.

Q. And in larger units --

MR. STUTTS: Let me make sure, because I'm not sure we are talking about the same thing, there is no piping that Westinghouse supplies to the two megawatt turbine, is that right?

THE WITNESS: There is no Westinghouse supplied piping other than the oil piping.

MR. STUTTS: But there is piping to the turbine?

THE WITNESS: To the turbine, yes.

MR. STUTTS: I'm not sure that you

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are straight about that.

BY MR. WATERS:

Q. Just to clarify again, on this smallest unit that we've discussed, you are going to have piping, none of it supplied by Westinghouse, except the oil piping, correct?

A. Correct.

Q. It's your testimony that the oil piping is not insulated?

A. Correct.

Q. Now as we move up the spectrum in terms of size of these types of units, is there some size or some point in time at which the piping is insulated by Westinghouse?

A. Piping is insulated by Westinghouse where required by contract.

Q. Again, so it's going to vary?

A. The insulation could be supplied by the utility, by the architect engineer, the constructor of the equipment. Again, so each unit -- keep in mind, each unit is different. But, in the case of turbines that have more than one cylinder, as an example the nuclear

unit that we talked about, the thirteen hundred megawatt unit that we talked about, there is piping that was furnished by Westinghouse that interconnects each turbine.

Q. And whether or not that piping is actually insulated by Westinghouse is going to depend on the specifics of the contract, is that correct?

A. Right, for that individual unit.

Q. When Westinghouse manufactures a turbine generator to be installed at a specific site, I understand from your earlier testimony that the extent of Westinghouse's involvement with the installation is going to vary depending on the contract.

A. That's correct.

Q. And the extent of Westinghouse's participation in future repair or maintenance work is going to vary by contract.

A. Correct.

Q. As far as the insulation is concerned, does Westinghouse specify what type of insulation it feels should be used to

insulate the turbines?

A. Each turbine generator that Westinghouse manufactures has an engineering record and those records are maintained for the life of the unit. The engineering records contain a detailed list of all the drawings used for assembly of the unit. There is, within that drawing list, a drawing entitled insulation for that specific unit. That drawing defines who supplies the insulation, who installs the insulation.

Q. And when you say it defines who supplies the insulation, will it actually describe the products that can be used for that purpose?

A. The detail drawing for the insulation gives a material list and the material list may be a result of the AE's requirement, the architect engineer's requirement, or the owner's requirement, but that drawing does tell you what materials were used for the insulation on that specific unit.

Q. And is that a decision that's made

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by Westinghouse?

A. The decision is made by the customer, as far as whether they are going to supply it or whether they are going to install it.

Q. I understand, but as for what would be the best material to use, who makes that decision?

A. In some cases, in the documents that I reviewed yesterday about the New York cases I remember that United Engineers' proposal and other proposal -- a request to quote specifically stipulated what types of materials to be used, so in which case we would quote what the customer wanted. Again, we are a turbine generator manufacturer and ninety-nine percent of our questions, et cetera, et cetera, relate to the turbine generator, itself.

The insulation aspects of it were pretty much governed by what the architect engineer or the customer desired at that time. We did make drawings to show how the

turbine is insulated as part of the equipment sale, but who supplied it, who installed it was, again, a unit specific decision.

Q. It's going to vary?

A. Exactly.

Q. Is the type of insulation that's utilized or specified going to vary depending upon the size of the units or the amount of heat involved or that sort of thing?

A. The insulation varied from unit to unit. One of the main factors that you had to look at was the temperature, steam temperature, into the turbine. Some plants had higher steam temperatures than others. The higher the steam temperature generally meant the greater the thickness of the insulation.

Q. Are you familiar with cards, I think maybe four by six inch cards, that indicate or specify certain products, materials to be used when insulating turbines? Have you seen those?

A. Material cards.

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Q. Okay, material cards. Do material cards have an M number?

A. Correct.

Q. Have those cards or that -- has that system been in place the entire time you've been working at Westinghouse?

A. The card system now is -- comes on fiche, but basically the same concept.

Q. Just in a general concept -- general sense, what is the concept, just so I can understand it?

A. If you purchase the turbine from me there would be a drawing list telling you all drawings that make up your turbine generator. If you were to pick one of those drawings and look at it, it would list a number of details on that drawing. Next to the detail item there is a material spec number and the material spec number refers you to the card that you are describing, it's a Westinghouse internal material card, and that card will tell you what that product is, and where to get it, who the approved suppliers

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are to provide you with that specific material.

Q. So the material spec number is the same as the M number?

A. Yes.

Q. So that the customer will see on a diagram or a drawing a reference to a number which he can use to go back to the card and find out, for example, what type of insulation should be used?

A. That would give the insulation material, correct.

Q. So is that Westinghouse's way of advising the customer what to use if it's necessary to replace or something of that nature?

A. The drawings are a communication vehicle as far as what's to be installed on equipment.

Q. Let's just narrow our focus to insulation material, since that's the reason we are here.

If the customer -- just again in a

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hypothetical sense, if the customer has to re-insulate his turbine for whatever reason and he looks at his drawings, at the turbine generator system, and finds an M number, will he then be able to reference through you all and understand which particular products are recommended for that insulation work? Have I got the picture down yet or not?

A. You do.

Q. Is that how it works?

A. He could go to that card, but that card would reflect today's standards.

Q. Okay.

A. In other words, the cards are not -- if you have a number of a material from 1920 and you get the description from 1920 it's not going to be the same description as it is today.

Q. So the cards are changed over the course of time?

A. Correct.

Q. The numbers stay the same, but the cards change?

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A. The numbers always stay the same. There is revisions to the numbers.

Q. Revisions to the numbers or to the description?

A. To the card.

Q. And I think I've seen some of that. Now I want to ask you about how the cards themselves are generated and revised and that sort of thing. How does that work?

A. The Power Generation Business Unit in Orlando, Florida has a standards group.

Q. And are they constantly monitoring these things and changing them as necessary or as better products become available?

A. They are always being revised.

Q. And why are they revised? What sorts of things occur that make it a good idea or somebody thinks it's a good idea to revise a card?

A. Maybe the product is now obsolete, not manufactured. That's one simple example.

Q. All right. Would another example be if it was determined to no longer use

asbestos-containing insulation materials, but instead to try to utilize some asbestos-free insulation materials, would the card be changed to reflect that change, or the appropriate cards, I should say?

A. The cards would be revised to reflect that, yes.

I would like to take a five-minute break, if that's all right.

(Recess called at 11:35 a.m.)

(Resumed at 11:45 a.m.)

BY MR. WATERS:

Q. Right before we took a break we were talking about the standards group. Prior to being in Orlando where was the standards group located?

A. The standards group was always located at either Orlando or Lester, Lester, Pennsylvania.

Q. So did they move with everybody else down to Orlando?

A. Right. Keep in mind that if you look at organizational charts you'll see all

kinds of headquarters charts and what have you. The standards group responsible for the Power Generation Business Unit products were located in Lester and are now currently located in Orlando, Florida.

Q. Is that a -- what kind of people work for the standards group? Is it R and D people? Science people? What sort of people do that work? Is it engineers? Just a combination?

A. Really a mix.

Q. Is it -- do you know someone, for instance, who is on it now or a member of it, I should say?

A. As of today I really don't know who's in that -- in the standards group. I normally don't deal with them.

Q. Tell me, if you can, who, over the course of your time with Westinghouse, you have known to be a member of the standards group, if any names come to mind?

A. Again, we rarely deal with them. Most of our material is on drawings and the

drawings refer you to the material cards and the drawing says use this material, then that's the material you use.

Q. Okay.

A. The people in the field had very little dealings with the standards group.

Q. Would the folks in the standards group ever come to you and say -- and ask for input on how a certain product worked or how efficient it was or anything along those lines?

A. No.

Q. Going back to what you said earlier, just to make sure I'm clear on this, the drawing for a specific turbine and generator would contain references to an M number which would permit the customer to determine what products could be used for that particular purpose. Have I got the picture straight now?

A. The engineering records define the drawings, the drawings define the detail parts and the material specifications for that

part.

Q. And, in defining the material specifications, the drawings would refer the customer to the M cards?

A. To the material spec card, yes.

Q. And, so, if the customer -- another hypothetical, if you will. If the customer needs to replace insulation on his turbine and he looks at his drawing and his drawing says -- gives him an M number, what does he then do? Does he ring up Westinghouse and say, what can I use for this -- I'm going to go ahead and get this insulation work done, I don't want you guys to do it because you guys cost too much, is that how he gets the information?

A. They could get the information that way, but usually the insulator looks at the job and says that these blankets are four inches thick, so I'm going to buy -- supply you with four inch thick blankets. I'll take these ones off and use them as a template. Reverse engineering.

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Q. Okay.

A. I don't ever remember, in my career -- in my twenty-five years at Westinghouse where a customer called me asking for details on insulation.

Q. Okay. That's something that they would leave to their insulator, presumably?

A. Either there in-house -- again, a lot of the utilities and industries have their own employees who do the insulation or they sub it out to another contractor who is frequently on site doing other things.

Q. Um-hum.

A. But they recognize that Westinghouse isn't really an insulation contractor, so they rarely -- again, I don't know of anybody that has ever called me and asked for, quote, replacement insulation.

Q. Okay, then. Well, on a sort of a day-to-day basis how are the material cards used by Westinghouse? Let's just do this, let's just stay with insulation, if we can, to the extent that you know. If you don't know

about insulation, we'll talk about some other things, about who looks at them, who refers to them?

A. The only time that they are really used is the installation of a new unit. That's really the only time they are used. They are used for when we go out -- if we have the installation contract and if we are responsible to install insulation, we would use that information to get bids from insulation contractors to do that part of the work.

Q. And if a customer was going to be doing the initial insulation, itself, or arranging for a contract with someone other than Westinghouse, would the customer understand what the specifications were for the appropriate kind of insulation?

A. We would furnish them the drawings that we would furnish an insulation contractor.

Q. Well, then, if the customer is going to be arranging for it, himself, and

he's got the drawing, as you say, to refer to, is he going to know what that M number means or is he going to have to talk to somebody at Westinghouse to determine what is the appropriate type of insulation to be used?

A. That information, again, on a specific unit basis, they may already have that because they may have specified it to us, as far as what it should be and how thick it should be and what have you. So, again, we are back to the individual unit.

Q. And regardless of what --

A. We would provide a drawing and we would provide the information on the drawing which would allow a contractor to do that.

Q. Regardless of what the M number happened to be? He could do it without referring to that, is that what you are saying?

A. I'm saying that the drawing gave them enough information so that they could do the job.

Q. And then, in the same context,

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they could make the determination as to what should be used, in terms of insulating materials?

A. It could be changed by them. It could have been specified by them initially. We could have put down the material on the drawing that they requested initially.

Q. Okay.

A. But the drawings are our permanent record of that unit.

Q. Does Westinghouse maintain drawings for each and every unit that it has sold in the last sixty years?

A. I have never been able -- I've always been able to get drawings for all the units --

Q. That you've been involved with?

A. -- that I've been involved with.

Q. As far as the specifications provided by the standards group are concerned, are you aware that the standards group specified use of asbestos or asbestos-containing insulation for the

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insulation of turbines -- of any turbines?

A. Was I aware?

Q. Do you have knowledge of that?

A. We have material cards, old material cards, that contained asbestos insulation products that we purchased from insulation suppliers, yes.

Q. Was it, back when you started with the company in '67, was it normal or routine to utilize asbestos-containing insulation materials for the insulation of turbines, as far as Westinghouse was concerned?

A. Again, it depended on a specific unit as far as what insulation was put on that unit. It would be really unfair to generalize that all turbines contained asbestos insulation.

Q. Okay.

A. Westinghouse units generally had asbestos blankets -- not asbestos blankets -- insulation blankets that covered areas that were normally disassembled. Removable insulation blankets.

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Q. But, you are also aware, I'm sure, and we'll go into the specifics later, that some of the Westinghouse specifications for insulation of turbines included the use of asbestos comment or asbestos-containing block or pipe -- asbestos-containing pipe covering and products of that nature?

A. Correct.

(Recess called at 12:02 p.m.)

AFTERNOON SESSION

(Resumed at 12:25 p.m.)

BY MR. WATERS:

Q. We've been talking about specifications for insulation on turbines and you've told us that you are familiar with, you are aware of the fact that there are specifications for asbestos-containing cement and block and pipe covering that are part of these material cards, is that correct?

A. Correct.

Q. My understanding is that there are no -- that there were no such material cards that specified use of nonasbestos-containing

block, cement, or pipe covering until sometime in the 1970's. Is that correct?

A. Early '70's, '73.

Q. If a turbine is insulated with asbestos-containing block, cement, or pipe covering, to some extent, I take it, that it will be necessary to remove some of that insulation to do work on the turbine, understanding that it will vary depending on what's being worked on and the nature of the turbine and that sort of thing, is that correct?

A. Most of our turbine generators were -- the insulation system was -- on most turbine generators were designed with maintenance in mind. The majority of the turbines, and again I want to caution you that each unit is specific and you should really get the engineering records for each unit to come up with a conclusion, but the majority of the units were insulated with block insulation in areas that were never to be disturbed. The areas that required access for maintenance and

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disassembly had removable blankets over those areas, so that every five or six years when the unit was opened, to gain access to the bolting to open it, one would merely have to remove the blanket insulation for disassembly, which is a few hours to remove.

Q. Let me object to the non-responsive aspect -- portion of your answer. Let me ask you the question this way: And understanding what you've said about blankets, you'll agree with me, I think, from time to time it would be necessary to remove block insulation or cement insulation or pipe covering that contained asbestos in order to do repair or replacement work on turbines?

MR. STUTTS: Let me object to the form, because I think you are asking about two different procedures. You say repair or replacement.

BY MR. WATERS:

Q. I'll be happy to segregate it into two or just talk about repair for the moment.

Obviously the specifications call

for use of these items, and that's not really in dispute, and I understand what you have to say about blankets, but I just want to know if I'm correct, if you'll agree that from time to time it was necessary, would have been necessary to remove block or cement or pipe covering containing asbestos to do repair work?

A. All the units that I've seen and I've worked on, to disassemble the unit for repair work all that was necessary was to remove the removable blankets.

Q. All right. So if there was removal of asbestos-containing insulation, block, cement, or pipe covering, it's your testimony that it wouldn't be necessary? Is that what I understand you to be saying?

A. The drawing for the specific unit would indicate what areas of the turbine were insulated with block. An example is the base of the turbine would be insulated with block, but there was never any reason to access that area for a maintenance and/or repair. The

areas on the turbine that contain bolting for disassembly of the unit were normally covered with blankets.

Q. What about --

A. Which were tied to rails on the turbine via wire, they were wired to the rails.

Q. What about the pipe covering? Would it be necessary to remove pipe covering from time to time to complete repairs -- asbestos-containing pipe covering?

A. Pipe covering to me means a covering on pipe, and there would not be any reason to remove covering on pipe to do a turbine inspection.

Q. Okay. What if work was -- it was necessary to do some work on the pipes that run to or from the turbine?

A. I have never known us to do repair work to pipes.

Q. But if it was being done by someone else, understanding that Westinghouse doesn't normally do that sort of work?

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A. Normally there is no repair work done on piping. It's installed, it's insulated and it runs for X number of years.

Q. Doesn't ever need to be replaced?

A. At some point in time everything has to be replaced, but --

Q. And if pipe is to be replaced, then primarily the pipe covering will have to be replaced, as well, or at least removed so that the pipe can be replaced?

A. Correct.

Q. And you are aware that there are Westinghouse specifications, material cards, that specifically call for asbestos -- use of asbestos-containing pipe covering?

A. Not for today.

Q. I beg your pardon? Not for today, no, absolutely not, but that there have been?

A. In the past were there cards that -- yes.

Q. Let me ask you a few questions about these blankets that we talked about.

A. Sure.

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Q. How thick would they be?

A. The thickness varied depending upon the temperature application.

Q. And just give me a range, if you can.

A. Two, three, four inch.

Q. Were the blankets -- tell me, if you can describe them for me, in terms of their consistency or their makeup.

A. The best way to describe it is like a cushion on a chair.

Q. Cloth or canvas on the outside?

A. Cloth, canvas and filled with fiberglass.

Q. Or asbestos?

A. They stopped using asbestos forty-five years ago in blankets.

Q. When you say they, you mean Westinghouse?

A. The Westinghouse blankets did not contain asbestos fill after '46.

Q. Now, make sure I understand this, is it your testimony that you would expect the

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diagram or the drawings for a particular unit to reference a material card indicating the use of asbestos blankets for insulating -- excuse me, start this one over.

Is it your testimony that you would anticipate that a drawing for a particular unit would reference a material card that would tell you to use insulating blankets as opposed to some type of asbestos-containing insulation material on areas where it would be -- where you would need access for repairs? That was a very long question.

MR. STUTTS: Let me just make one comment. I don't want you to get the wrong impression. I think John is being, as he ought to be, very technical about his terms and what's used in a blanket as fill and in the outer covering of the blanket, and this has come up before and I want to make sure you understand that, while John is talking about fill being fiberglass, there are two components, one is the covering and one is the

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fill, so with that you may want to --

BY MR. WATERS:

Q. Okay, I appreciate that. Let me go back to that. The external portion of the blanket, the cloth, or what we've described as canvas material, did that contain asbestos at any time?

A. That contained asbestos cloth. Asbestos cloth covering.

Q. Up until what time?

A. '73.

Q. All right. Let me go back to my other question, the long-winded one. Can you read back that other question?

(Pertinent portion of the record is read.)

THE WITNESS: If I understand your question correctly, the drawing, itself, will tell you where blankets are located and where block is located.

BY MR. WATERS:

Q. What about other types of insulating materials, cement, pipe covering?

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A. It would give you all information needed to insulate the turbine.

Q. In addition to the blankets and the block, what else is used on the turbine for insulation purposes?

A. Well, again, the blankets normally cover any areas that you would require access for disassembly. The remainder of the turbine would be a combination of block and -- well, they call it plastic insulation or mud, with a cloth covering that would go over the block.

Q. That may well be what I'm calling cement.

A. Yes.

Q. Is it something that's mixed with a water base?

A. Yes.

Q. All right.

A. But the cloth encapsulates plastic insulation and the block insulation.

Q. Let me object to that nonresponsiveness, as well.

The -- did Westinghouse

specifications in certain circumstances call for the use of what you've called mud or I've called cement that contained asbestos?

A. The engineering records define the drawings. The drawings really define two things. They define the materials, which is in the form of an M card, and they also define the process in which the material is to be applied. Those are known as process specifications. The process spec tells you how to do it. In other words, how to insulate the turbine, and the M cards tell you what materials to use. So to insulate a turbine you would need the drawings, the process specs and the material cards.

Q. So, do the drawings then reference both the process spec cards and the material cards?

A. Correct.

Q. So if you look at your drawing and it says, look at this process spec card, you can go look at that and you can see how you are supposed to insulate the thing?

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A. Correct.

Q. And then you would look at the material cards and you see with what you are supposed to insulate it?

A. Correct.

Q. The material cards, would they ever be sent to customers? Copies of them be sent to customers?

A. As a normal course of business, they were not.

Q. If a customer asked you for one you wouldn't have any problem sending it to him, presumably?

A. For insulation?

Q. Yes.

A. No. That should not be a problem.

Q. I mean, is there any kind of trade secret or anything that needs to be protected?

A. On some cards, yes. That's why I wanted a further definition from you, but that applies to other things, such as bolting, blades, mechanical devices.

Q. Do the material cards represent

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what Westinghouse presumes would be or believes to be the best insulating materials or the most appropriate insulating materials in a certain situation?

A. I would say so.

Q. Now, from time to time would customers send their equipment in to be repaired at one of your facilities?

A. Some components of the turbine were frequently sent into our factory for repairs.

Q. But not the turbines, themselves?

A. Not the cylinder that contained the insulation.

Q. Internal parts?

A. Internal parts, yes.

Q. So if the internal parts were received at one of your factories, presumably there wouldn't be any external insulation on it?

A. Correct.

Q. That would be back with the -- what did you call the outer part again?

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A. Outer cylinder.

Q. Outer cylinder, okay.

Prior to the early 1970's were there any specifications or material cards for insulation on turbines that specified mud or cement or block that did not contain asbestos?

A. The question, itself, is in a general nature. A customer might have elected an option of putting blankets on the entire turbine and no block, as an example.

Q. I understand that, but my question to you is, and maybe the better way to ask it is this: If a customer relied solely on your material cards to determine what type of mud or cement or block or pipe covering to use in insulating portions or all of his turbine or turbines prior to the 1970's, would those products have all contained asbestos?

A. Prior to 1970 --

Q. You said early '70's.

A. We used mineral wool on some units prior to 1970.

Q. Okay.

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A. But again, I don't remember and I'm not -- each material card had a number of revisions to it. If you were to give me a specific unit our records should be able to indicate what material was on that specific unit, but to say that I knew every material spec and process spec for every year from '73 back, I don't think I can answer that.

Q. You mentioned mineral wool. Is that a material that can be used in place of asbestos for insulation products such as we've been talking about?

A. Mineral wool was used.

Q. And you've said it was used prior to the '70's?

A. Right.

Q. And has it been used since the '70's -- I mean, since that time frame, as well?

A. I don't believe so.

Q. What did --

A. I don't believe so.

Q. Did there come a time at some time

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in the early '70's that asbestos stopped being used for insulating turbines and something in its place began to be used?

A. Up until -- well, if you've had access to our M cards you'll notice that on all of those cards that you are referring to for all of those products, that Westinghouse purchased them through various suppliers, Owens Corning, Keane and whatever the cards show. If Westinghouse had a contract with a utility to supply a turbine, if part of the that contract was for us to supply insulation, we would purchase the insulation from one of those suppliers on one of those cards and that supplier would send it to Houston Light and Power, and then it would be the responsibility of the installation contractor to install that. That was how the process went.

In the early '70's, '72 -- '73, I believe it was, there was a massive program to go to nonasbestos insulation and, as that became available, Westinghouse put that type of insulation on the material cards. Now, I

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don't know if that answers your question.

Q. It does, in part, I think. What material or materials were used to -- in the place of asbestos as part of that changeover?

A. Example would be the blankets. Again, we've been using the fiberglass fill for forty-five years, but they were covered with an asbestos-containing cloth material. That was changed to a fiberglass cloth. That's one example. But, the insulation today is all totally nonasbestos material for federal installations. Again, the latest M card would reflect who we would purchase it from and also what their brand names would be.

Q. Was the changeover fairly quick? I mean, did sort of the word come down from on high and you stopped using asbestos in your insulation of these turbines? The specifications changed fairly quickly, is that what happened?

A. What do you call fairly quickly?

Q. Well, I mean, did it take a year to get it implemented? Did it take a month?

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What's your recollection of that?

A. I think it became effective immediately upon notification.

Q. What is your recollection about the notification? I mean, when did you first become aware personally that asbestos was a health hazard and that something was being done about it?

MR. STUTTS: Object to the form.

BY MR. WATERS:

Q. Let me rephrase it. When did you first became aware that asbestos was a health hazard?

MR. STUTTS: Are you asking him personally?

MR. WATERS: Personally.

MR. STUTTS: Not as a witness designated to testify to that?

MR. WATERS: I'm only asking about his personal knowledge, anyway.

MR. STUTTS: But if the question is not to be included within the scope of his designation, then I will object to it. He can

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answer the question, but I think it's outside the scope of what he's here to testify about.

BY MR. WATERS:

Q. So when did you personally become aware of the hazards of asbestos, regardless of whether you learned about it at work or wherever else?

A. In the early '70's.

Q. And did you learn about it at work?

A. Yes.

Q. And how did you learn about it at work?

A. Through an insulation contractor.

Q. And do you recall his name?

A. No.

Q. Do you recall the name of the company?

A. I think it was Keane Insulation.

Q. Keane Insulation?

A. No, was it Keane? Philadelphia Asbestos, I think.

Q. Philadelphia Asbestos?

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A. Yes.

Q. And what was the nature of the communication that you received that gave you this understanding?

A. I think the conversation was something to the effect that they are changing all the materials. Going to nonasbestos material because of medical problems associated with the asbestos workers.

Q. Okay.

A. That the major companies were all going that way.

Q. When you say the major companies, does that mean the manufactures of insulation?

A. Correct, yes.

Q. So the first you heard of the hazards of asbestos didn't come from someone within Westinghouse, it came from someone outside of Westinghouse that you were dealing with on a business basis?

A. Correct.

Q. Did you report that back to someone at Westinghouse?

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A. At the same time that this was going on Westinghouse came out and notified everyone that there was changes in turbine insulation, the requirements.

Q. So that --

A. It's difficult for me to home in as far as exact time frames twenty years ago.

Q. I understand.

A. Conversations.

Q. All right. Is it fair to say, then, that you heard about it from an external source sometime in the relatively near future after it became an issue within Westinghouse?

MR. STUTTS: I'm going to object to the form. When you say, it became an issue within Westinghouse, I think that's not what he's testified to.

BY MR. WATERS:

Q. Let me rephrase that. Became a matter of concern for Westinghouse.

MR. STUTTS: Same objection. My objection is what became a concern to Westinghouse and the time it became a

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particular concern is different from the time when Mr. Tabbutt was informed about any formal program to switch over to a different kind of product.

BY MR. WATERS:

Q. Would it be fair to say that you heard about it from an external source and sometime in -- relatively soon after that you heard it from within Westinghouse that they were going to be changing to using a different type of insulation that did not contain asbestos?

A. That's correct.

Q. And was there a memorandum or some sort of written communication that you received at Westinghouse in that regard?

A. Yes.

Q. And do you recall approximately when you received it?

A. '73.

Q. Have you --

A. March, '73.

Q. Do you recall from who or which

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department it came?

A. Came from the technical support group.

Q. Where were they located?

A. Lester. Lester, Pennsylvania.

Q. Do you remember who was in charge of that group?

A. Came from technical development, I'm sorry.

Q. Technical development?

A. Technical development. The manager in charge at that time was John Ristuccia, R-i-s-t-u-c-c-i-a.

Q. And to the extent you can recall the substance of that memo -- was it a short memo?

A. Two page.

Q. Have you seen it since 1973?

A. Yes.

Q. Have you seen it recently?

A. Recently meaning?

Q. Well, when was the most recent time you saw it?

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A. When was the last time I saw it? Probably a year ago.

Q. Did you see it in the context of one of your other depositions?

A. I don't believe so.

Q. Tell me in what context you reviewed that memo?

A. I was using it for another case.

Q. Another asbestos case?

A. Correct.

Q. And how were you using it?

A. Information only.

Q. To refresh your memory or something?

A. Yes.

MR. WATERS: Is that a document you all have?

MR. STUTTS: I don't know.

MR. WATERS: I presume it is, but we haven't been provided it.

MR. STUTTS: It came up in which other -- Morykon's deposition?

MR. WATERS: Yes. I'm assuming

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it's the same memo. It may not be.

MR. STUTTS: I don't know. I'll check.

BY MR. WATERS:

Q. Tell me what you can about what it said, the two-page memo.

A. Basically what it said is, effective as of this date the insulation has been changed to a nonasbestos type insulation, and listed a number of companies and replacements. Who to buy the insulation from, in the event that we had to supply it, who the approved vendors were of nonasbestos insulation. List of various types, block, blanket, cloth.

Q. Mud?

A. Yes, plastic cement.

Q. Other than telling you we are not going to use asbestos-containing insulation anymore and these are the replacements, did it say anything else about anything that should be done about asbestos that might already be in place?

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A. I believe that this was based purely on new work.

Q. Was it followed by any other memorandum on the same topic or on the general topic of asbestos that came to you?

A. I don't recall. I don't remember any. Again, you know, the documents that get changed are the drawings, the process specs and the M cards. That's what we normally use in the field.

Q. Tell me what you were doing a year or so ago that required you to look at this memo.

A. Again, it was doing some investigative work for another case.

Q. Where did you find the memo?

A. I beg your pardon?

Q. Where did you find it? Did somebody give it to you to look at?

A. No, I have it in my office.

Q. You have it in your office now?

A. Yes.

Q. Well, at least we know where it

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is. Would you be able to send a copy of that to your attorney?

A. Certainly.

Q. Or to Westinghouse's attorney?

A. Certainly.

Q. Would you be able to do that tomorrow? Are you going to be in the office tomorrow or are you going to be playing golf?

A. I will not be in the office tomorrow.

Q. When will you next be in the office?

A. Next Monday.

Q. When you are in the office next Monday will you be able to send that to your attorneys down in Richmond?

A. Yes.

MR. WATERS: Do you have any problem with getting that and sending it on to us?

MR. STUTTS: I don't think so, but until I look at it and know what really I'm dealing with --

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MR. WATERS: Okay. Just for the record, I would state that I think that particular document would fall within the scope of the documents requested under the depo notice and, as I stated earlier, we reserve our right to continue the deposition to ask questions about that document and some other things.

BY MR. WATERS:

Q. The substitute materials, and if you are not comfortable with that term I'll try to define it in a different way, but the materials that have been used in lieu of asbestos-containing insulation since '73, do they do the job, as far as you know?

A. As far as I know, the thermal insulation materials that have been supplied recently have been adequate to perform their functions.

Q. You haven't had any complaints from customers that there is a problem with the insulation materials that Westinghouse now specifies?

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A. Not that I'm aware of.

Q. When you saw the memo in 1973, presumably the materials that were to be substituted were available sometime before 1973, is that correct?

A. I can't answer that question.

Q. You just don't know?

A. I don't know.

Q. Did you ever receive any instructions or did you ever see any written instructions as to how to deal with or what to do with asbestos insulation that was already in place with respect to this 1973 memorandum and what may have occurred after that?

A. I don't really understand your question.

Q. I'll be happy to rephrase it. Did you ever receive any instructions or did you ever see any instructions or are you aware of any instructions from anyone in Westinghouse with regard to asbestos insulation that was already in place in 1973? Understanding that they are not going to use it anymore for new

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work, but there may have been some already in place as a result of prior work.

A. I don't recall -- I don't recall anything coming down about that during that time frame. Again, at that particular time frame I was a field service engineer going from site to site. Generally, when we arrived at a customers' location for a maintenance outage, the insulation had already been removed, the blankets had already been removed before they started disassembly, so even when we were requested to be there to provide technical field assistance during repairs and/or maintenance, normally the insulation was off and normally we left before it got put back on. Again, it depends on location by location, customer by customer.

Q. During that time frame --

A. We were not looked at as the technical experts of insulation. That was not really our forte. Customer always relied on whoever his insulation contractor was or his insulation people at the site.

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Q. Did Westinghouse ever advise any of its customers -- by any of those bulletins or other circulars, things that we discussed earlier, did Westinghouse ever advise any of its customers that it was no longer specifying use of asbestos or asbestos-containing insulation because that was considered to be a health hazard?

A. In the sense we notified them, from a technical nature, on the drawings and the process specs that we were using nonasbestos materials.

Q. With the exception of the actual material cards and the drawings, are you aware if Westinghouse sent anything to any of its customers to advise of the possible hazards of asbestos?

A. I really don't know the answer to that question.

Q. Who would know the answer to that question?

A. We have a safety and hygiene department. That would probably fall under

that department. If there was any warnings or cautions sent directly to customers, other than via drawings, process specs and material cards.

Q. Safety and health department, okay. Where are they located?

A. Orlando.

Q. But, as far as you know, the Power Generation Service Division and the Power Generation Business Unit did not send any such written warnings to any of their customers?

A. I don't know.

Q. You are not aware of any such warnings being sent?

A. I do not know that they were or were not sent out. I would have to look into that further.

Q. And who, understanding what you've said about the safety and health department, but who at the Power Generation Service Division and the Power Generation Business Unit would know what warnings were sent by either of those two entities?

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A. I could answer that question by contacting other people.

Q. Who would you contact?

A. I don't know yet.

Q. Pardon?

A. I don't know yet.

Q. During that time frame, '67 to '75, when you were a field service engineer, did you basically have a series of appointments? I mean, did you have a schedule where you knew you were going to be going to this plant for three or four days and then to that plant for a few days and on and on? I mean, did you have a schedule in advance?

A. There was never any schedule.

Q. Just sort of happened when it happened?

A. Yes.

Q. Did the customers advise Westinghouse that they were going to be making repairs?

A. Each customer is different. There were some customers that may not advise

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Westinghouse, that may do an inspection without Westinghouse and re-assemble the unit without Westinghouse. There are other customers who Westinghouse becomes an integral part of planning for the outage. It varies and it varies within individual power plants within an individual utility's system.

Q. If a customer wanted a Westinghouse representative to be on site for the duration of repair work, presumably they would advise Westinghouse before the repair work began?

A. If it's planned repairs, hopefully, yes.

Q. Do you recall any instance where Westinghouse was aware that repairs were going to take place and advised the customers to take special precautions when removing the asbestos insulation around the turbine in question?

A. Normally the utility, again, does not discuss that with Westinghouse, because we are not the technical expertise of

insulation. I mean, the insulation was provided by Westinghouse under contract initially only as part of a bid spec and it's provided by an insulation contractor and installed by an insulation contractor. We were rarely involved in that process of replacement. Again, I say rarely involved.

Q. I understand that they may not have asked you or solicited your advice about how they should remove the insulation or in what fashion they should do it or what precautions they should take, but my question to you is, are you aware of any instance where Westinghouse provided that information, whether or not it was requested?

A. The question -- during a pre-outage meeting with a customer you normally go into recommendations, Westinghouse recommendations, and what they were going to do during the inspection, what repairs are going to be made and what parts are going to be replaced. Normally, again, the insulation is not an issue.

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Q. Well, let me get back to my original question, because I think you are saying no, but I want to make sure. I can take it, then, that you are not aware of any instance where Westinghouse provided information to a customer about how to remove asbestos or how to deal with asbestos insulation, regardless of whether that information was solicited by the customer?

A. I'm not aware of it.

Q. You do not personally recall, yourself, ever giving that information to the customer, correct?

A. Giving what information?

Q. About the dangers of asbestos or care should be taken when removing asbestos insulation?

A. Again, I'm normally not involved in that process. It's normally the customer telling me that he's going to strip his turbine and re-insulate it. I sit and listen.

Q. Okay.

A. Again, that's a process that has

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been going on at power plants across the country for years and years as part of their asbestos abatement programs at the plant sites.

Q. Okay.

A. We are not, again, the leader of the insulation replacement.

Q. So the short answer is, no, you don't have any recollection of giving anyone advice about how they should remove asbestos insulation?

A. I don't recall.

Q. Are you saying you don't recall if you've done so or you don't recall whether or not you may have done so?

A. I don't recall seeing anything going to our customers telling them about the dangers of asbestos. I don't remember that, but that does not necessarily mean that that wasn't transmitted by another group.

Q. After this, what you've described as the initial memo, I think, in 1973, were there any subsequent memos dealing with the

hazards of asbestos or how to deal with asbestos in Westinghouse plants or in any other context?

A. The individual process specs and the material cards, you will find that they have caution notes on them, ala, do not breathe, that kind of thing, so notes of warning and caution were placed on even the older cards, if I recall.

Q. I'm not understanding you. When you say "on the older cards" you mean prior to the '70's?

A. Exactly. I believe that you have some material cards in the documents that were given to you that have caution statements on them for anybody using that particular material.

Q. Because of asbestos dust or whatever?

A. The reason for the caution note I can't comment on, other than there were caution notes that were placed on material cards and process specifications.

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Q. And that goes back as far as the '40's?

A. The earlier cards had it. I don't know if it went back to the '40's. I would have to look to refresh my memory.

Q. Prior to that 1973 memo that we've talked about a little bit did you have any idea whatsoever, you personally, that asbestos might be a health hazard?

MR. STUTTS: Same objection. If this is meant to be within the scope of his designated testimony, you can answer it. The objection is that you are not speaking for Westinghouse, you are speaking for yourself, apparently.

THE WITNESS: It was my understanding that asbestos was nonhazardous to your health. That if it was encased you could look at it, you could put it in your pants, you could jump -- you know, put it on your dresser drawer. What I was advised on was that if it was airborne and you breathed it every day and you ate it every day that it

could be hazardous to your health.

BY MR. WATERS:

Q. How did you know that?

A. Again, this was from the insulation contractor that I dealt with. We relied on them. Again, they provided all materials and they installed it. It was not a business that the Westinghouse Power Generation Business Unit was heavily involved with.

Q. They provided the materials in response or in accordance with your specifications, correct?

A. In accordance with the customers' specifications.

Q. And in accordance with --

A. If the customer and his architect engineer or his constructors request a quote and said the turbine shall be insulated and specified in some cases what insulation was defined as, we responded to that specification.

Q. But there were occasions, were

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there not, where the specification was provided by Westinghouse in the form of what's stated on the material cards?

A. Again, it was on a unit-by-unit basis.

Q. But that was the case from time to time?

A. Occasionally that could happen, sure.

Q. Would you agree, Mr. Tabbutt, that if Westinghouse had known earlier than 1973 of the dangers and hazards of asbestos, that it should have warned its customers or switched to different types of insulating products?

MR. STUTTS: Object to the form of the question and the substance of the question. It's beyond this witness' designation and the designation for Mr. Tabbutt, as stated in the notice, and you will be provided with some other witnesses, I believe it's been agreed, in the area of industrial hygiene, and whether or not Westinghouse should or should not have warned

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is beyond the scope of his designation.

BY MR. WATERS:

Q. You can answer the question.

MR. STUTTS: Could we have the question repeated?

(Pertinent portion of the record is read.)

MR. STUTTS: The question is also vague when referring to the dangers of asbestos. It's a generic general question and really has no specific meaning.

THE WITNESS: I don't feel I'm qualified to answer that question.

BY MR. WATERS:

Q. Okay.

Who would be qualified to answer that question?

MR. STUTTS: I'm going to object to the question. If you have an area of testimony that you want designated, then the appropriate way to do that is to send that notice to us and we then have a right to designate a witness to testify in that area.

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I don't think it's up to this witness to be questioned about who the appropriate designee should be for areas outside of his designation.

MR. WATERS: Well, he's been designated to testify about the use of asbestos insulation on turbines.

MR. STUTTS: Right.

MR. WATERS: And if that's unsafe in any respect I think that's something he can testify about, and if he feels it's not unsafe he can say that. If he feels it should or shouldn't have you been used, he can say that. I don't think it's outside the scope at all.

MR. STUTTS: I think it is outside the scope and I think you know that what we've got here is an engineer and you know that you have asked for and we are going to give you somebody from industrial hygiene. At some point it's clear to you and to me when you are going outside of the expertise of a witness like an engineer and you know it gets to be

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unfair. To ask him questions of a medical nature when, in fact, he's here to testify about engineering issues on the turbine.

MR. WATERS: Well, if he doesn't have an opinion, he can tell me that.

MR. STUTTS: I don't want the witness testifying -- I'm going to let him give his answer, but I want to make sure I have an objection here, because I don't want the witness testifying on behalf of Westinghouse on an issue that I think is outside the designation. Whether or not his answer is, I can't answer, or whether or not he gives you an answer beyond that.

MR. WATERS: I understand. I think you've adequately registered your objection.

MR. STUTTS: All right.

BY MR. WATERS:

Q. Can you answer the question?

A. Could you repeat the question?

MR. WATERS: Could you read back the question?

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(Pertinent portion of the record is read.)

THE WITNESS: The answer to that is, I cannot answer that question.

BY MR. WATERS:

Q. How can we determine the location of Westinghouse units in the State of Alabama?

A. We maintain an engineering record for every unit we sold, turbine generator record.

Q. So, if we have the name of the plant will Westinghouse be able to provide some of the documents we have talked about today, such as the drawings and other documents related to the units that would have been at those plants?

A. If you could provide me with the customer and the plant location I can tell you, number one, if Westinghouse had equipment there and, two, if the equipment is still there we should be able to provide the engineering record which would give the drawings.

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Q. Do you have any knowledge about asbestos-containing gaskets being used on any of these units we've been talking about, the turbines and generators?

A. Various types of gaskets are used on various types of turbines. Again, if you could give me a serial number or a customers' name, location, plant, we should be able to tell you what gaskets were originally supplied.

Q. Did Westinghouse --

A. Keep in mind that gaskets are replaced on a fairly routine maintenance basis by the customer. They are not a Westinghouse replacement part. So after the original part went in in, say, 1950, in all probability what's in there now is not what we supplied. So all I can tell you is what was originally installed and that is not indicative of what's in there now. Gaskets are replaced at every overhaul.

Q. Did Westinghouse manufacture gaskets for use in its turbine?

A. No, not that I'm aware of.

Q. Where did the gaskets that Westinghouse used in its turbines, where did they come from, do you have any idea?

A. They are purchased from outside suppliers.

Q. Would that be a part of the specification sheets or the material cards?

A. Drawings.

Q. Drawings.

A. But again I want to caution you that this gasket was installed in 1950 and there was an inspection in '51, every gasket from '51 on was probably somebody else's.

Q. Are you saying that you are certain that Westinghouse did not make gaskets or that you do not know whether Westinghouse made gaskets?

A. Most of the gaskets that were made were made on site out of sheet material. Gasket sheet material. There were specialty gaskets made by Flexitalic Corporation and there were -- the gasket depended upon the

application, the temperature, there were a number of factors, so there were a number of gaskets involved and, again, if you could tell me a specific unit, we can look into that.

Q. Let me go back to my question. My question was, are you saying you don't know whether Westinghouse made any gaskets? Is that the case? Or are you saying that they did not?

A. I'm not aware that Westinghouse made gaskets. To my knowledge, they were supplied by outside vendors.

Q. What about packing material? Do you know whether Westinghouse provided packing material to its customers?

A. What we call packing material is made of steel.

Q. Do you know if Westinghouse ever provided sheet material to its customers from which gaskets could be made?

A. That's what I was just telling you about. You would get a sheet of material, cut it to fit a certain bolt circle, but that was,

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I'm going to use the term, gasket material.

Q. As opposed to gaskets?

A. No. As opposed to asbestos gaskets.

Q. Okay. Let me backtrack a second.

A. All I'm saying is there is a multitude of gaskets and there is a multitude of applications and if you were to give me a specific unit, then we can look up in our files and tell you what we think was originally there. Again, in all probability, that was replaced by a customer many times since the unit was installed.

Q. Did Westinghouse --

A. So we, Westinghouse, do not necessarily know what's in there now.

Q. I understand. Well, did Westinghouse ever sell or provide gasket material or sheets from which gaskets could be made to any of its customers?

A. The turbine generator, when it was sold, came with gaskets, came as a complete unit, we supplied everything. Therefore, if

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you are saying that a gasket was part of the turbine generator contract, yes, we sold the gaskets, if it was part of that contract.

Q. I asked about gasket material or sheets from which gaskets could be made, if Westinghouse ever sold or provided any of those to its customers. Not talking about gaskets that may have come with the finished product already in place.

A. I really -- whether any of our customers, there is thousands of them, ever placed an order with us for gasket material? I can't answer that question.

Q. That wasn't my question.

My question was, did Westinghouse ever sell it? And if you don't know, that's fine.

A. Did we ever sell it? We have sold replacement gaskets. I'm sure of it.

Q. Have you ever sold replacement gaskets that contained asbestos?

A. I don't know.

Q. Who would know that?

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A. Again, all of our files are by unit numbers. We do maintain records of renewal parts orders for a period of time. So whether or not that particular customer on that particular unit we provided gaskets, that's the only way I can answer the question.

Q. Did Westinghouse ever sell or distribute Micarta sheets, that you are aware of?

MR. STUTTS: I'm sorry. I started reading that.

BY MR. WATERS:

Q. Did Westinghouse ever sell or distribute Micarta sheets.

MR. STUTTS: You mean in connection with turbines?

MR. WATERS: Yes.

THE WITNESS: I'm not aware of it. Not for steam turbine generators.

BY MR. WATERS:

Q. Did you ever see any documents from -- any Westinghouse documents, I guess, after 1973 that identified asbestos as a

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health hazard and then set forth some sort of precautions to be taken when having to deal with it?

A. I don't recall any.

Q. Okay.

A. Again, that does not necessarily mean that there was never any generated.

Q. Is it your understanding that, after that memo of 1973, that Westinghouse, subsequent to that time, did not -- no longer specified use of asbestos-containing products with regard to its turbines?

A. It's my understanding that all of the thermal insulation specifications were changed after that date.

Q. Do you have any personal knowledge as to whether or not asbestos-containing products were or were not used after that date to insulate Westinghouse turbines?

MR. STUTTS: By anyone?

MR. WATERS: Pardon?

MR. STUTTS: By anyone?

MR. WATERS: By anyone.

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BY MR. WATERS:

Q. I'm understanding that the specifications were changed. My question to you is, do you have any knowledge one way or the other about whether the specifications were followed in every instance, or do you know of any occasion where they may not have been?

A. I'm not aware of any occasions where they weren't followed.

Q. Were you told by anyone to get rid of asbestos that was -- asbestos insulation materials that were in stock?

A. We did not stock thermal -- asbestos thermal insulating material. They were purchased from insulators and shipped to various site locations.

Q. As need be?

A. On a contract-by-contract basis.

Q. Are you aware that anywhere within Westinghouse there was a move to get rid of any asbestos materials that had been stockpiled?

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MR. STUTTS: I'm going to object to the form of the question and also the assumption in the question that asbestos was stockpiled. It's also outside this witness' designation. You can answer.

THE WITNESS: As far as I know, the Power Generation Business Unit did not stockpile any asbestos thermal insulating product.

BY MR. WATERS:

Q. Were there ever any occasions when a turbine would come to Westinghouse for repair and it would still be within its casing and within its insulation shell?

A. Westinghouse made a multitude of steam turbine generators ranging in size from units that can fit on top of this table to units that were absolutely massive.

Q. Let the record reflect we are talking about a table about fifteen feet in length. Twelve to fifteen. Okay.

A. There were some smaller units that were returned for service, but the smaller

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mechanical drive turbines weren't insulated.

Q. Okay.

A. Generally speaking, the outer cylinder became a permanent fixture in the power plant.

Q. So, is that, then, the basis for your earlier testimony that you would not anticipate asbestos insulation being something that Westinghouse employees would have to deal with at a Westinghouse plant in working on a turbine?

A. Correct.

Q. Are you familiar --

MR. STUTTS: Let me make sure I understand. That's a follow-up to the question, I take it, about the repair of turbines that would be -- or turbine parts that would be shipped in to Westinghouse for repair?

MR. WATERS: Right.

THE WITNESS: The Westinghouse factory versus the plant.

BY MR. WATERS:

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Q. Right. The plants that -- the Westinghouse factories that you are familiar with, did they have a requirement that workers wear respirators or dust masks of some sort?

A. The Westinghouse manufacturing facilities did have certain requirements for working in certain areas. It's a very, very general question.

Q. Okay.

A. As an example, if a rotor was returned to our factory to be dust blasted, the operator or the dust blasting would wear protective equipment during that process.

Q. So, was there a policy that required dust masks in certain situations? If you don't know, that's fine, we'll move onto something else.

A. I think that the industrial hygienist, who is going to speak with you at a later date, is better qualified to answer that question.

Q. Do you have, at Westinghouse, or have you seen some sort of a publication that

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goes to employees or to managerial employees like yourself? We talked about circulars earlier that go to customers, for example. What I'm asking about now is if there are some sorts of publications that are distributed to either all employees or some portion of employees or people who are involved with management and that sort of thing?

A. There are publications that go to all of our employees.

Q. Are there any publications that you, for example, received that someone further down the line might not?

A. I'm sure that there are.

Q. Have you ever seen any articles or comments or anything in writing in a company publication of that nature addressing asbestos or the dangers of asbestos?

A. Not that I can recall.

Q. Did your particular division or does your particular division have its own safety department?

A. Yes, it does.

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Q. And is that a component, if you will, of a larger safety department for the bigger Westinghouse?

A. Yes.

Q. Where is your safety department located?

A. Orlando, Florida.

Q. Where is the big Westinghouse safety department located?

A. Orlando, Florida.

Q. Do you know how many employees there are in your division's safety department?

A. No, I do not.

Q. Does the overall safety department distribute things to the individual safety departments to distribute to that division, the specific division? Is that how the chain of command goes?

MR. STUTTS: I'm going to object. This is outside his scope of designation. If he knows, he can answer, but I think you'll get somebody else.

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THE WITNESS: Our division distributes safety information directly to each and every employee on a number of issues.

BY MR. WATERS:

Q. Do you have any knowledge about dust level studies as related to insulation products used on or around turbines?

A. I think that that question could be best answered by our industrial hygienist.

Q. If you are not aware, fine.

A. I'm not really knowledgeable on that subject.

Q. I didn't ask you if you were knowledgeable, I asked if you were aware of any studies.

A. No, I'm not aware of any studies.

Q. In your division medical department and the safety department, are they one and the same?

A. They are all part of the human resources group.

MR. WATERS: Do you want a take a

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break for a couple minutes.

(Recess called at 1:57 p.m.)

(Resumed at 2:11 p.m.)

BY MR. WATERS:

Q. Do you know a gentleman named Mr. GiUlicci?

A. Joe GiUlicci.

Q. Did much better than I. How do you know Mr. GiUlicci?

A. Joe used to be a project engineer at Lester.

Q. Did you work with him?

A. Not really.

Q. Where is he presently, do you have any idea?

A. No idea.

Q. How old a man was he when you worked in his vicinity?

A. I would suspect he's retired.

Q. Let me ask you again, how old do you think he was when you worked with him or around him? How much older than you is he, would you suspect?

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A. I think Joe is in his late sixties.

Q. At the present time?

A. That's a guess.

Q. How about a man by the name of Quinn, R. Quinn?

A. Don't know him.

Q. Doesn't ring a bell, okay.

I'm not sure if you answered this before, I think you may have, but I just want to make sure. I don't recall.

In connection with Westinghouse turbines, is it your testimony that Westinghouse does not specify or condone the use of asbestos-containing products in, around, or on its turbines at the present time?

A. To the best of my knowledge --

Q. As the person most knowledgeable.

A. -- Westinghouse does not recommend the use of asbestos in thermal insulating systems.

Q. Does it recommend asbestos --

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MR. STUTTS: Let me make objection to the comments that were just made, as the person most knowledgeable. As I recall, his testimony was, he does not know anybody more knowledgeable than he is. There are lots of people in Westinghouse that may be as knowledgeable as he on this subject. So why don't we accept the person as he is a person knowledgeable. I think the testimony was, he doesn't know of anybody who has any more knowledge than he does.

MR. WATERS: He's been designated at the person most knowledgeable.

MR. STUTTS: He's been designated by Westinghouse as the person who will testify on this subject. You asked him whether or not there would be anybody within Westinghouse more knowledgeable. The answer was, he didn't know of anyone. Whether or not his counterpart in Texas or the State of Washington has as much knowledge as John Tabbutt does is a question that he did not answer, and I think it's fair to say, given

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his testimony today, that there would be others who would have as much knowledge as Mr. Tabbutt would, and I don't, in fact, know if that's the case about this particular subject.

BY MR. WATERS:

Q. Going back to my question, are you aware if Westinghouse has recommended the use of any asbestos-containing products other than thermal insulation products with regard to their turbines?

A. On --

Q. At the present time, I should clarify.

A. For high temperature gasket applications there is no acceptable substitute at this time for asbestos gaskets.

Q. So, is it your testimony that Westinghouse continues to specify asbestos-containing gaskets for use in its turbines, in certain circumstances?

A. In certain applications, certain high temperature applications, Westinghouse

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continues to recommend the use of asbestos gaskets.

Q. What would asbestos felt be used for with regard to Westinghouse turbines?

A. Do you have a copy of a card? May I look at it?

Q. Yes.

A. Used as a liner for metal jackets, turbine covers, to prevent turbine heat from burning the paint from the outside surfaces of the jacket.

Q. Do you have any personal experience with that?

A. This is -- the turbines came with an enclosure and it can be classified as a housing, enclosure, or lagging, or a turbine cover. This spec dates backs forty-six years ago, so forty-six years ago this was used on the inside of the covering for the turbine, metal covering.

Q. That's not something that's been used during the time frame that you've worked for Westinghouse?

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A. Well, this would have been used for turbines installed in '46 that had metal jackets.

Q. The materials cards, I asked you a question sometime ago about whether those were ever sent to the customers, and correct me if I'm wrong, but I believe you stated that you don't recall that ever happening or anybody ever asking for it or anything like that?

A. I think what I said was that it was rarely done.

Q. Would it only be done if the customer asked for it?

A. It would not be done for a product that could be manufactured by somebody else that was in direct competition, ala a bolt, as an example. A customer may have a bolt on a turbine, we don't really want to tell him what the material is because that would enable him to go outside and have it made by another vendor, so we consider that proprietary information. Insulation, we bought it from somebody else anyway, and we have no real

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desire to be in that business.

Q. Okay.

A. Therefore, that was normally provided to somebody that had an installation contract for the insulation so that they would know what the requirements are to bid on it.

Q. So, while Westinghouse didn't have a problem with providing materials cards to a customer, with regard to insulation, who may have wished to review them, it wasn't something that was done as a matter of course, is that fair to say?

A. Cards were not normally sent out automatically, if that's your question.

Q. Well, do you have a specific recollection of ever sending out a card to a customer who had requested it?

A. Well, a customer or an architect engineer or an owner or a constructor or a turbine installer would need to know what's on those cards in order to submit a quotation to install what's shown on those drawings.

Q. They would need to know the types

of products that met the specifications so that they would know how much they cost and they could add that into their quotation?

A. Correct.

Q. And could they get that information from you over the telephone?

A. Normally that was sent out on a formal request to quote.

Q. Tell me how that worked. You would send out a formal request for a quote? No?

A. Yes.

Q. You would?

A. Yes.

Q. And in it you would --

A. No. We, meaning the service department or the service division, depending what year you are talking about, we would go out for quotations, if we -- again, if we had contractual obligations to furnish or furnish and install insulation, we would go out for competitive bids from approved suppliers to do that work. Westinghouse did not do, quote,

its own insulation work.

Q. Right. Well, would part of the package be the materials cards or would that information just be incorporated on what you sent out?

A. It would be part of the bid package, drawings, process specs, material, all the information required to bid on it.

Q. And that would go to, for instance, an insulating contract?

A. Right, to a J and M or a Keane. Usually what happened in power plants is that there was an insulation contractor on site doing everything else, the balance of plant work, the boiler, the reactor, whatever the case may be. Generally what happened was that that was the same contractor that did the turbine work, only because they were there on site and could do it usually cheaper than other vendors that would have to come out.

Q. I'm just confused about a little piece of the process. I understood you to say earlier that it was relatively rare for the

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materials cards to be sent out.

A. Right.

Q. Now I think I'm hearing you say that as a normal routine part of the bidding process they would be sent out as part of the package, and I don't mean to confuse you, but I'm confused.

A. Okay. Again, the only time that normally we get involved with the process is on new equipment. When a new turbine generator is sold. We are required -- if the contract requirement was that Westinghouse provide the insulation, provide and install the insulation, we would solicit bids from various contractors requesting a formal quote on the work scope. The work scope is defined in the drawings and process specs and material cards. We provide all the bidders the same information as to what we want, and they, in turn, respond back to us.

Q. Okay.

A. We select the appropriate bidder to be the contractor for that particular

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contract.

Q. And that's a situation where --

A. They come in at the end of the installation, install the insulation and they leave. The unit goes into operation and Westinghouse's obligation for their contract is over.

Q. And this is in the relatively rare context where Westinghouse is responsible for providing insulation services and they contract it out to someone else, correct?

A. If required by Westinghouse. If it's part of a contract by Westinghouse. We don't do it ourselves.

Q. Right, I understand. I guess what I got confused with was this is a relatively rare procedure because, for the most part, the customer took care of the installation, correct?

A. No. What I mean by rare is we normally don't send those cards out because there is literally hundreds of thousands of cards for different products, bolting, on and

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on and on. So, it's rare that we sent out material cards, but on insulation, because we don't have anything to do with it, the people bidding on it need that information to bid.

Q. I'm sorry for the breakdown, but I understood you to say earlier that the insulation was taken care of by a contractor, it was not something that Westinghouse was contractually obligated to provide. If Westinghouse was contractually obligated to provide the insulation work they would do so, but they would get somebody else to do it. In other words, they would contract with someone else to provide the service and then they would bill the customer for it, correct?

A. Now I'm confused.

Q. Let's go off the record.

(Discussion is held off the record.)

BY MR. WATERS:

Q. Let's talk about this one first, we'll mark this as Exhibit Number 2. Can you tell me what this document is?

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A. It's a process specification, number 600433.

Q. And what is it a process specification for?

A. Process spec is for application of block and molded insulation.

Q. What sort of information does this provide?

A. Provides the how to, as far as application of block and molded insulation of turbine cylinders, valve covers, steam chests, pipes, flanges and other parts as described in the specification.

Q. And the specification is two pages in length?

A. Correct.

Q. Would this specification apply to a specific turbine or two specific turbines?

A. There is no way to take the specification, which is sub 16, dated 1965, and find out what units this applied to.

Q. But, if you had other documentation --

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A. But, if I had a turbine generator that was installed in 1965 and looked up the records and the records showed that process specs 600433 sub 16 was used, then this would be the document.

Q. And then this document would explain to you how that turbine was meant to be insulated?

A. Correct.

Q. Can you look at the diagrams on the right-hand column of the first page and tell me -- actually, it appears to be fairly specific, although it's a little bit difficult to read. Does this call for -- can you tell whether this calls for use of asbestos insulation?

A. This specification calls for utilizing Westinghouse material 46102BB, calcium silicate blocks.

Q. And to know more about that we could look at a material card?

A. A 1965 material card, correct.

Q. Without looking at that card, do

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you know if that calcium silicate is an asbestos-containing product?

A. I would prefer to look at the card from that specific time frame.

Q. Okay.

A. To reacquaint myself.

Q. The reference to molded insulation, is that what you and I've been calling pipe covering?

A. Correct.

Q. Let's take a look at the other document, which we'll call Exhibit Number 3. What is this a specification for?

A. This is Westinghouse process specification 600729, sub 10, dated 1965. It generally covers the application of water resistant thermal insulating block on the inner and outer surfaces and of plastic insulation over the block on the outer surface of turbine cylinders and other turbine parts.

Q. Why is it necessary to have water resistant insulation on the exterior of a turbine cylinder?

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A. Which process spec is used is usually dependent upon the customers' requirements. There are some of our units that are outdoor units that do not have -- or not contained within a building, per se, that are exposed to the elements. Some of those units there are different specifications than indoor units.

Q. This particular specification is an example, I guess, of a situation where asbestos-containing blankets were not used to insulate the cylinder?

A. This process spec does contain total block insulation over the turbine.

Q. Okay. Do you find that to be unusual?

A. Very unusual.

Q. But it is an example of a turbine insulation specification that requires thermal block insulation to be used and surround the entire cylinder, correct?

A. Correct, right.

Q. And if the cylinder were so

insulated it would be necessary to remove at least some portion of that block insulation to make repairs on the turbine, itself?

A. Our competitors use the design shown on 600729. Most of our customers did not use this specification purely for the maintenance reason, that it has to be totally disassembled for access to the joint bolting. None of my customers, to my knowledge, in my region, or the units I've worked on, would have had this type of insulation system on their turbine generators. Again, the specific drawing list for a specific unit would indicate which one of these process specs would apply.

Q. Let me again object to the responsiveness of your answer.

My question was, in this context it would be necessary, would it not, to remove the block insulation in order to effect repairs to a turbine?

A. If a customer chose process spec 600729, sub 10, it would be necessary to

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remove the block to inspect the turbine.

Q. And you stated earlier that this was a design utilized by your competitors?

A. Correct.

Q. But it was also, as is apparent from the Westinghouse document in front of you, that it was utilized by Westinghouse?

A. It was a design that was available to our customers. None, to my knowledge, have taken advantage of it.

Q. What are the numbers of those two, again? 600729. What was the number?

A. 600433.

Q. Do either of those -- we know that one of them doesn't, but do they both anticipate using block rather than blankets?

A. The 600433 utilizes the removable blankets over the joint bolting for maintenance.

Q. What sort of -- how would you describe the texture of the blankets, the exterior of the blankets? Rough like canvas?

A. Um-hum.

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Q. Do those blankets need to be replaced from time to time?

A. Everything needs to be replaced from time to time.

Q. How often would the blankets need to be replaced?

A. It varies. On an as required basis.

Q. Did Westinghouse advise any of its customers on or about 1973 that they should replace their asbestos-containing blankets with some other type of blankets that did not contain asbestos?

A. If the unit was made before 1946 -- after '46 it didn't contain asbestos.

Q. But I believe you told us that the exterior --

A. Was an asbestos cloth. You said asbestos filled, I thought.

Q. I didn't mean to if I did. I apologize. Let me put this question to you this way: On or about 1973, when Westinghouse became aware of the hazards of asbestos and

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stopped using asbestos insulation materials and stopped specifying them, did Westinghouse do anything to advise its customers that they should replace the asbestos blankets with the exterior of asbestos cloth that they were using in many cases to insulate their turbine cylinders?

MR. STUTTS: Object to the form of the question to the extent that you have built in an assumption that it was on or about 1973 that Westinghouse learned of the hazards of asbestos. But, other than that, you can answer the question.

THE WITNESS: I'm not aware of any customer correspondence at that time or around that time advising them to replace their insulation blankets. That does not necessarily mean that that was not done.

BY MR. WATERS:

Q. Did the exterior of the asbestos blankets become worn or frayed over the course of time?

A. The insulation blankets did, like

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any other component, wear out over time.

Q. Now I would think that you personally wouldn't have a lot of occasions to work with well worn or well used asbestos blankets, because when you went to have a look at the turbine the insulation was already removed, correct?

A. Right.

Q. Are these documents, Exhibits 2 and 3, documents that would have been prepared in the usual course of Westinghouse's business?

A. Yes.

Q. And they would have been maintained, again, in the usual course of Westinghouse's business?

A. Correct.

Q. Do you have any doubt that these are true and correct copies of the originals? Feel free to take a look at them again, if you want.

A. They would appear to be originals.

Q. They are not originals.

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A. Copies of originals.

(Exhibit Tabbutt-2 is marked for identification.)

(Exhibit Tabbutt-3 is marked for identification.)

BY MR. WATERS:

Q. I take it that you were aware when you started working for the company in 1967 that material cards or some of the material cards contained a warning about asbestos dust?

A. Correct.

Q. From what you've seen in the Westinghouse records, how far back in time were there warnings on material cards about asbestos dust?

A. I really don't remember how far back the warnings go. It's something we could look up, but I don't really remember how far back they go on the cards.

Q. All you can say with certainty is that they were there when you got there in 1967?

A. Yes.

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Q. And the designation, GTS engineering, what does GTS stand for you, if you know?

A. Gas turbine systems.

Q. Gas turbine systems?

A. Um-hum.

Q. Do you recall a Mr. --

A. It depends on what year it was.

Q. July of '72.

A. That was the year of the gas turbines. Gas turbine systems. Did it pertain to a combustion turbine or a steam turbine?

Q. Just a memo on asbestos from '72. Just talks about substitutes for block. What I wanted to ask you about is if you recalled a Mr. Haftel?

A. Al Haftel.

Q. Al Haftel. Is he still with the company?

A. I don't believe so.

Q. How did you know him?

A. He was with the gas turbine

-JOHN J. TABBUTT-

division in the '70's and at that time I was installing combustion turbine systems.

Q. Did you all have any dealings with one another?

A. Business.

Q. Did you work with him -- just business?

A. Yes.

MR. WATERS: I don't have any more questions. At this time.

MR. STUTTS: Why don't we take about a five-minute break.

(Recess called at 2:55 p.m.)

(Resumed at 3:08 p.m.)

MR. STUTTS: We've just taken a break and I've talked to Mr. Tabbutt about a couple points just for clarification, that I would like to state for the record that, if it prompts any follow-up questions, then, Andy, you are free to follow-up on those.

First I wanted to make sure that one point Mr. Tabbutt made was understood, and that is, he commented that the felt lining for

-JOHN J. TABBUTT-

the lagging was used in 1946 and, as I recall his testimony, it would have been used for turbines installed in 1946. I want to make sure that you don't understand that to mean if it was 1947 or 1948 that it may not have been installed in one in 1947 and 1948 or some other time. The point is, you have to look at the engineering record, the turbine record, to know whether or not that particular product was called for for a specific turbine. He was not saying exclusively it was used only in 1946.

And the second thing is that Mr. Tabbutt has been testifying about material cards and the relationship between Westinghouse and its customer and the insulation contractor or the architect engineer, and that has been to the extent that it has been general or generic in nature, it has been with relation to turbines that are installed and erected in the field; that is, at the power plant, itself, and again I think that the point to be made is that you have to

-JOHN J. TABBUTT-

look at each record individually to know what was called for, but I want to make sure that we are clear on those two points.

MR. WATERS: I don't have any further questions.

We have an agreement that the witness will review his deposition and make any changes and sign the original and that, if notification of changes has not been provided within thirty days of his attorney's receipt of the deposition, that we can use the original or a copy unsigned for any purposes at trial or whatever.

MR. STUTTS: Or for whatever purposes you can use a deposition for.

MR. WATERS: Fair enough.

(3:11 p.m.)

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April 21, 1992

VIA TELECOPIER

Mr. Robert E. Thackston
McGuire, Woods, Battle & Boothe
One James Center
901 East Cary Street
Richmond, Virginia 23219

Re: Dallas County Asbestos Litigation

Dear Robert:

Please find enclosed a notice of deposition as we have discussed. Please note that the deposition notice requests the production of certain documents specifically dealing with Westinghouse turbines. I believe that this is in line with your request that discovery in this respect be limited to specific Westinghouse products.

With regard to your request to review documents/exhibits, please contact Pat Folkerth directly to arrange for a convenient time. In addition to the documents you have requested, Plaintiffs, of course, reserve the right to use as exhibits any of the documents produced by Westinghouse in the last six weeks. Those documents will not be made available for review as you have already reviewed them in conjunction with their production.

Please let me know if you will be attending the deposition in Philadelphia. If not, I hope to meet with you on Thursday the 30th or Friday the 1st to discuss other outstanding discovery issues.

Very truly yours,

C. ANDREW WATERS

CAW/k
Enclosure

cc: Mark Hendrix
Dallas Counsel

IN RE: ALL ASBESTOS PERSONAL INJURY CASES FILED IN DALLAS COUNTY, TEXAS	§ § §	IN THE DISTRICT COURT OF DALLAS COUNTY, TEXAS 160TH JUDICIAL DISTRICT

NOTICE OF DEPOSITION

TO: ALL COUNSEL OF RECORD

PLEASE TAKE NOTICE that Plaintiffs, by counsel, will take the deposition of JOHN TABBUTT, designated by Westinghouse Corporation as its representative most knowledgeable to testify concerning:

> Defendant's specification for use of asbestos-containing insulation materials on, in, or around turbines manufactured by Defendant. The individual or individuals designated should also be able to testify as to how, where and why asbestos or asbestos-containing insulating substances or products were incorporated into, onto or otherwise made a part of Defendant's turbines.

The deposition upon oral examination will take place before an officer duly authorized to take depositions and swear witnesses from Pappas Reporting, 710 5th Avenue, Suite 1000, Pittsburgh, Pennsylvania 15219 (412/566-2209). The oral examination will commence at 10:00 AM on Wednesday, April 29, 1992 at the law offices of Sherr, Joffee & Zuckerman, P.C., 200 Four Falls Corporate Center, Suite 400, West Conshohocken, Pennsylvania. The deposition will continue from day to day until completed and you are invited to attend and cross-examine.

The witness is required to produce the following documents at the time of the deposition, as follows:

1. Any and all photographs or diagrams not already produced that demonstrate, show, depict or indicate the application or presence of asbestos insulation materials, or other insulation materials, on Westinghouse turbines or attached piping or other attachments to Westinghouse turbines;

2. Any and all documents not already produced describing, detailing or discussing the application of asbestos insulation, to Westinghouse turbines or attached piping or other attachments to Westinghouse turbines;

3. Any and all written instructions not already produced relating to the application or replacement of asbestos insulation Westinghouse turbines, or attached piping or other attachments to Westinghouse turbines;

4. Any and all written precautions or warnings not already produced regarding, indicating or discussing the application of asbestos insulation to Westinghouse turbines or attached piping or other attachments to Westinghouse turbines;

5. Any and all printed or written warnings or instructions not already produced that relate to the dangers of possible inhalation of asbestos fibers or dust during the application of asbestos insulation on or in the vicinity of Westinghouse turbines.

Respectfully submitted,

BARON & BUDD
A PROFESSIONAL CORPORATION
The Centrum, Suite 1100
3102 Oak Lawn Avenue
Dallas, Texas 75219
214/521-3605

BY _____
RUSSELL W. BUDD
State Bar No. 03312400

BY _____
C. ANDREW WATERS
State Bar No. 20911450

CERTIFICATE OF SERVICE

I hereby certify that an exact copy of the foregoing has been telefaxed to counsel for Westinghouse on this the 21st day of April, 1992 and sent regular U.S. mail to all other counsel of record herein.

C. ANDREW WATERS

ISSUED	1
DRAFTSMAN	
CHANGED	
4/13/62	15
7/29/65	16

PROCESS SPECIFICATION
APPLICATION OF BLOCK AND MOLDED INSULATION

GENERAL. THE DETAILED PROCEDURES NECESSARY FOR THE APPLICATION OF INSULATING BLOCK AND OR PIPE COVERING TO TURBINE CYLINDERS, VALVE COVERS, STEAM CHESTS, PIPES, FLANGES, OR OTHER PARTS ARE DESCRIBED IN THIS SPECIFICATION. THE INSULATION TYPE AND THICKNESS WILL BE SHOWN ON THE INSULATION DRAWING FOR EACH CLASS OF TURBINE.

THIS SPECIFICATION IS DIVIDED INTO TWO PARTS AS FOLLOWS:-

PART I - APPLICATION OF BLOCK.
PART II - APPLICATION OF MOLDED PIPE COVERING.

PART I - APPLICATION OF BLOCK.

GENERAL. WHERE TEMPERATURE DOES NOT EXCEED 600°F., MATERIAL 4610288 CALCIUM SILICATE BLOCKS SHALL BE APPLIED IN A SINGLE LAYER DIRECTLY TO THE SURFACE BEING INSULATED.

WHEN TEMPERATURE RANGES FROM 601° TO 1050°F., A DOUBLE LAYER OF MATL. 4610288 BLOCK INSULATION SHALL BE USED.

OVER 1050°F., A DOUBLE LAYER CONSISTING OF MATERIAL 46601AA (INNER) AND 4610288 (OUTER) SHALL BE USED.

OPERATIONS-

1. SELECTING, CUTTING AND FITTING BLOCKS.
2. ATTACHING ANCHOR POINTS.
3. ATTACHING RETAINING WIRES.
4. COVERING TURBINE ASSEMBLY FLANGES.
5. COVERING PIPE FLANGES.
6. PATCHING, FILLING AND FINISHING WITH MATERIAL 461108A CEMENT.
7. COVERING PIPES OF LARGE DIAMETER.

1. SELECTING, CUTTING AND FITTING BLOCKS.

BLOCK SHAPES SHALL BE SELECTED TO CONFORM AS NEARLY AS PRACTICAL TO THE SHAPE OR CONTOUR BEING COVERED. INSULATION MAY BE CUT WITH EITHER A HAND OR A POWER SAW, DEPENDING ON THE QUANTITY AND AMOUNT OF FITTING NECESSARY.

IN GENERAL, THE LONG DIMENSION OF BLOCKS OR SHAPES SHALL BE PLACED 90° TO THE CURVATURE OF THE SURFACE BEING COVERED.

WHEN FITTING BLOCKS, SLIGHT DIFFERENCES IN CONTOUR BETWEEN THE INSULATION AND THE PART TO BE COVERED ARE PERMISSIBLE. IN SUCH CASES, THE INSULATION BLOCKS SHALL BE SECURED OVER A THIN COATING OF INSULATION CEMENT MATERIAL 461108A APPLIED DIRECTLY TO THE SURFACE OF THE PART. BLOCKS SHALL BE APPLIED WHILE THE CEMENT IS WET.

WHERE SEVERAL LAYERS OF BLOCKS ARE REQUIRED, THE JOINTS OF THE TOP LAYER SHALL BE STAGGERED IN RELATION TO THE INNER LAYER. EACH LAYER SHALL BE WIRED TO THE ANCHOR POINTS AND ALL JOINTS AND OPENINGS FINISHED WITH CEMENT MATERIAL 461108A.

2. ATTACHING ANCHOR POINTS

ON ALLOY STEEL CASTINGS OR FORGINGS, AT POSITIONS SHOWN ON "CYLINDER (AND OTHER) INSULATION PAD" DRAWINGS, INSULATION PADS TO STYLE NUMBER 270A089H0 WILL BE WELDED IN PLACE.

CAUTION: NO FURTHER WELDING OF ANY ANCHOR POINTS DIRECTLY TO ANY ALLOY STEEL CASTINGS OR FORGINGS SHALL BE DONE WITHOUT ENGINEERING APPROVAL.

EYE BOLT STUDS, STYLE NUMBER 270A091H01, SHALL BE WELDED TO THE INSULATION PADS ONLY WHERE REQUIRED TO ANCHOR INSULATION, USING A NELSON OR EQUAL STUD WELDING GUN. (SEE FIGURE 1).

ON CARBON STEEL CASTINGS OR FORGINGS, EYE BOLT STUDS MAY BE WELDED DIRECTLY TO THE CASTING OR FORGING USING THE STUD WELDING GUN. THE STUDS SHALL BE LOCATED SO THAT RETAINING WIRES ATTACHED TO THEM SHALL RUN AT RIGHT ANGLES TO THE CURVATURE OF THE SURFACE BEING COVERED, OR AT RIGHT ANGLES TO THE LONG DIMENSION OF FLAT SURFACES.

3. ATTACHING RETAINING WIRES

FOR SERVICE TEMPERATURES UP TO 500°F., SOFT GALVANIZED OR BLACK STEEL WIRE, MATERIAL 3637-1, OF 16 GAGE SIZE SHALL BE USED FOR RETAINING WIRES. FOR SERVICE TEMPERATURES ABOVE 500°F, STAINLESS STEEL WIRE, .062 DIA., OF 7860-2 MATERIAL SHALL BE USED.

THE WIRES SHALL PASS OVER THE BLOCKS OR SHAPES AND BE TIED TO THE ANCHOR POINTS SECURING THE BLOCKS FIRMLY IN PLACE.

WIRE LOOPS SHALL BE USED ON PIPE INSULATION AND SHALL BE TWISTED TOGETHER AND BENT TO PREVENT SNAGGING. THE PITCH BETWEEN LOOPS SHALL NOT EXCEED 15 INCHES.

4. COVERING TURBINE ASSEMBLY FLANGES

INSULATION SHALL BE STOPPED A SUFFICIENT DISTANCE FROM ALL FLANGES TO ALLOW ACCESS TO OR REMOVAL OF BOLTS AND ASSOCIATED PARTS AT OR ADJACENT TO THE FLANGES.

IN GENERAL, INDUSTRIAL TURBINE ASSEMBLY FLANGES SHALL BE COVERED WITH BLANKETS AS SHOWN IN FIGURE 1. (SEE PROCESS SPEC. 600359).

ON SPECIAL INSTALLATIONS, BLOCKS MAY BE REQUIRED FOR JOINT COVERING. IN SUCH CASES THE JOINT SHALL BE PROTECTED BY A COVERING OF [illegible] INCH SHEET STEEL, MATERIAL 1516-1 REINFORCED WITH SUITABLE ANGLES TO ASSURE RIGIDITY OR AS PROVIDED IN PROCESS SPEC. 600[illegible]. BLOCKS SHALL THEN BE APPLIED TO THE PROTECTING SURFACE.

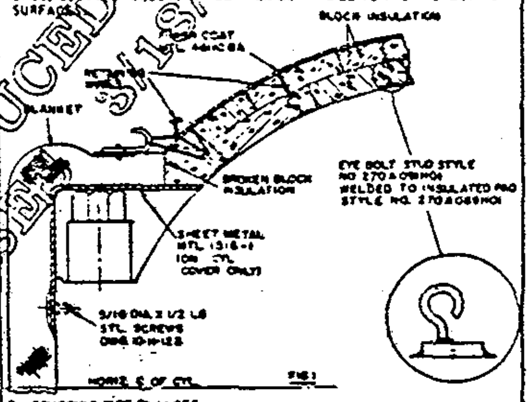
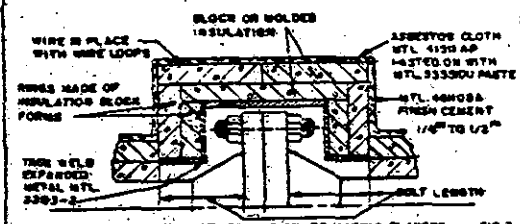


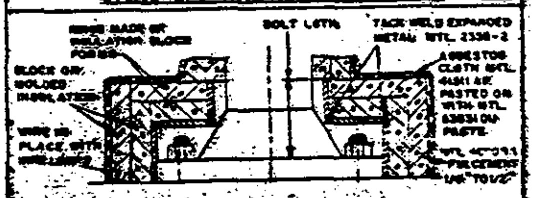
FIG. 1

5. COVERING PIPE FLANGES

WHEN PIPE FLANGES 6 IN. AND OVER ARE INVOLVED COVER THEM WITH EXPANDED METAL COVERS AND INSULATE AS SHOWN ON FIGURES 2 AND 3 AND AS DESCRIBED IN PART II OPERATION 2.



APPLICATION OF INSULATION TO MATING FLANGES FIG. 2



APPLICATION OF INSULATION TO SINGLE FLANGE FIG. 3

WESTINGHOUSE ELECTRIC CORPORATION, LESTER, PA., U.S.A.
STEAM DIV. STANDARDS ENGRG.

Tabbutt
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4/29/92

PROCESS SPECIFICATION
APPLICATION OF BLOCK AND MOLDED INSULATION

6. PATCHING, FILLING AND FINISHING WITH 46110BA MATERIAL

INSULATION CEMENT MATERIAL 46110BA SHALL BE USED WITH 46601AA OR 46120BB BLOCK FOR PATCHING, FILLING IRREGULAR AREAS AND FOR APPLYING THE FINISHING COAT, 1/4 TO 1/2 INCH THICK, OVER THE FINAL LAYER OF BLOCK.

MATERIAL 46110BA IS APPLIED BY MIXING WITH A MINIMUM AMOUNT OF WATER TO PRODUCE A STIFF MIX AND THEN TROWELING IN PLACE.

7. COVERING PIPES OF LARGE DIAMETER

LARGE PIPES (OVER 10 IN.) SHALL BE COVERED AS PREVIOUSLY DESCRIBED IN OPERATIONS 1 AND 3 WITH BLOCK INSULATION AND FINISHED AS DESCRIBED IN PART II, OPERATION 3.

PART II - APPLICATION OF MOLDED PIPE INSULATION

GENERAL: MATERIAL 46601BA, HI-TEMP. PIPE INSULATION AND MATERIAL 54251AH SILICATE PIPE INSULATION ARE MOLDED TO FIT STANDARD PIPE SIZES. MATERIAL 46601BA CONSISTS OF A SINGLE LAYER OF HI-TEMP. INSULATION IN SIZES UP TO 1-1/2 IN., INCL., AND A DOUBLE LAYER OF A HI-TEMP. AND A SILICATE INSULATION IN SIZES OVER 1-1/2 IN.)

OPERATIONS:
1. SELECTING AND FITTING PIPE INSULATION.
2. COVERING PIPE FLANGES.
3. SECURING INSULATION.
4. FINISHING.

1. SELECTING AND FITTING PIPE INSULATION.

STRAIGHT PIPE SECTIONS

ON STRAIGHT SECTIONS OF PIPE SPLIT CYLINDRICAL MOLDED SECTIONS OF PIPE INSULATION SHALL BE USED. EACH LAYER SHALL BE INDIVIDUALLY APPLIED, ONE OVER THE OTHER, UNTIL THE SPECIFIED THICKNESS HAS BEEN ATTAINED. THE END JOINTS BETWEEN SECTIONS SHALL BE TIGHTLY BUTTED IN EACH LAYER, AND THE LONGITUDINAL JOINTS FROM SECTION TO SECTION SHALL BE STAGGERED AND TIGHTLY DRAWN TOGETHER BY MEANS OF WIRE LOOPS. THE LONGITUDINAL AND CIRCUMFERENTIAL JOINTS FOR EACH LAYER SHALL ALSO BE STAGGERED WITH RELATION TO THE ADJACENT LAYER.

CURVED PIPE SECTIONS

ON CURVED SECTIONS OF PIPE USE SPLIT, MOLDED CURVED PIPE INSULATION WHEN AVAILABLE, AND WIRE IN PLACE.

WHEN CURVED SHAPES ARE NOT AVAILABLE, USE LENGTHS OF STRAIGHT MOLDED PIPE INSULATION OR BLOCK. THESE SHALL BE WIRED IN PLACE OVER A WET LAYER OF CEMENT MATERIAL 46110BA APPLIED DIRECTLY TO THE PIPE SURFACE. WHENEVER IRREGULAR SHAPES ARE USED, THE OUTSIDE SURFACE SHALL BE FINISHED NEATLY AND SMOOTHLY, USING 46110BA CEMENT, TO PRODUCE THE DESIRED RESULTS.

2. COVERING PIPE FLANGES

PIPE INSULATION SHALL BE STOPPED A SUFFICIENT DISTANCE FROM FLANGES TO ALLOW ACCESS TO AND REMOVAL OF FLANGE BOLTS OR TO ALLOW FOR FLANGE INSULATION THICKNESS, WHICHEVER IS GREATER.

PIPE FLANGES FOR PIPE 6 IN. AND OVER SHALL BE PROTECTED WITH EXPANDED METAL COVERS MTL. 4951-2 BEFORE APPLYING INSULATION AS SHOWN IN FIGS. 2 AND 3 AS FOLLOWS:-

FIT EXPANDED METAL COVERS MADE IN A MINIMUM OF TWO SECTIONS AROUND THE FLANGE. BUILD UP SECTIONS WITH BLOCK OR MOLDED PIPE INSULATION TO REQUIRED THICKNESS. (SECTIONS NOT TO EXCEED 40 LBS.). APPLY SECTIONS TO FLANGE AND TIE TOGETHER WITH MTL. 7860-2 WIRE EMPLOYING TIE WIRES AT SECTION JOINTS IN ORDER TO FACILITATE DISMANTLING.

ON PIPE FLANGES UNDER 6 IN. INSULATE AS SHOWN IN FIG. 4.

PATCH, FILL AND FINISH ALL OPENINGS AND JOINTS WITH CEMENT MTL. 46110BA AS DESCRIBED IN OPERATION 4.

3. SECURING INSULATION

PIPE INSULATION SHALL BE SECURED IN PLACE BY MEANS OF WIRE LOOPS OF SOFT STEEL 18 GAGE WIRE, MATERIAL 3697-1, FOR TEMPERATURES UP TO 500°F, AND WITH STAINLESS STEEL .062 DIA. WIRE, MATERIAL 7860-2, FOR TEMPERATURES OVER 500°F. WIRE LOOPS SHALL BE TWISTED TOGETHER AND LEFT IN A MANNER TO PREVENT SNAGGING. THE PITCH BETWEEN LOOPS SHALL NOT EXCEED 18 INCHES.

4. FINISHING

INSULATION CEMENT, MATERIAL 46110BA, SHALL BE USED FOR FITTING, PATCHING AND FINISHING PIPE INSULATION.

WHEN PIPE INSULATION IS SECURED IN PLACE, FILL ALL JOINTS AND OPENINGS WITH CEMENT 46110BA MIXED WITH A MINIMUM OF WATER TO PRODUCE A STIFF MIX. TROWEL IN PLACE UNTIL A SMOOTH NEAT APPEARANCE IS OBTAINED.

PIPING EXTERNAL TO THE TURBINE SHALL BE COVERED WITH 12 OUNCE PER SQUARE YARD ASBESTOS CLOTH MATERIAL 41511AM PASTED ON WITH MATERIAL 533510U PASTE. A FINAL COAT OF PASTE SHALL BE APPLIED OVER THE ASBESTOS CLOTH.

ON CROSS-OVER PIPES, WHEN PASTE IS DRY, PAINT SHALL BE APPLIED IN ACCORDANCE WITH FINISH SPECIFICATION 118C.

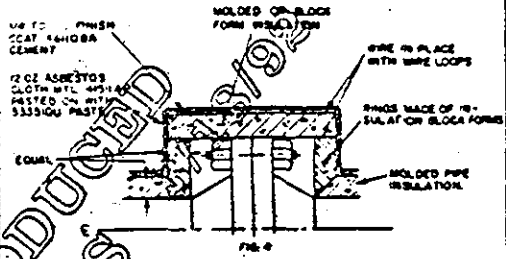

FIG. 4

WESTINGHOUSE ELECTRIC CORPORATION, LESTER, PA., U.S.A.
MESC DIVISION — STANDARDS ENGRG.

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16 7/24/

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APPLICATION OF BLOCK AND PLASTIC INSULATION

GENERAL

THE DETAILED PROCEDURES NECESSARY FOR THE APPLICATION OF WATER RESISTANT THERMAL INSULATING BLOCK ON THE INNER OR HOT SURFACE AND OF PLASTIC INSULATION OVER THE BLOCK ON THE OUTER SURFACE OF TURBINE CYLINDERS AND OTHER TURBINE PARTS ARE DESCRIBED IN THIS SPECIFICATION.

THE INSULATION DRAWINGS FOR EACH TURBINE WILL SHOW THE INSULATION TYPE AND THICKNESS TO BE APPLIED.

THIS SPECIFICATION IS DIVIDED INTO TWO PARTS AS FOLLOWS:-

PART I THE APPLICATION OF BLOCK INSULATION.

PART II THE APPLICATION OF PLASTIC INSULATION.

PART I THE APPLICATION OF BLOCK INSULATION

GENERAL

ONLY WATER RESISTANT THERMAL INSULATING BLOCK MATERIAL 4660IAB SHALL BE USED ON APPLICATIONS PERTAINING TO THIS SPECIFICATION. THESE BLOCKS ARE CHARACTERIZED BY THEIR DIRTY BROWN COLOR AND THEIR RESISTANCE TO WATER ABSORPTION.

OPERATIONS -

(1) ATTACHING ANCHOR POINTS.
(2) SELECTING, FITTING AND ATTACHING BLOCKS.
(3) COVERING TURBINE ASSEMBLY FLANGES.
(4) COVERING VALVE BONNETS.
(5) PATCHING, FILLING AND FINISHING.

(1) ATTACHING ANCHOR POINTS

ON ALLOY STEEL CASTINGS OR FORGINGS, AT POSITIONS SHOWN ON "CYLINDER (AND OTHER) INSULATION PAD" DRAWINGS, INSULATION PADS TO STYLE NO. 270A089H01 WILL BE WELDED IN PLACE.

CAUTION- NO FURTHER WELDING OF ANY ANCHOR POINTS DIRECTLY TO ANY ALLOY STEEL CASTINGS OR FORGINGS SHALL BE DONE WITHOUT [illegible] ENGINEERING APPROVAL.

EYE BOLT STUDS, STYLE 270A091H01, SHALL BE WELDED TO THE INSULATION PADS ONLY WHERE REQUIRED TO ANCHOR INSULATION USING A NELSON (OR EQUAL) STUD WELDING GUN. (SEE FIG. [illegible])

ON CARBON STEEL CYLINDERS, EYE BOLT STUDS MAY BE WELDED DIRECTLY TO THE CYLINDERS USING THE STUD WELDING GUN.

(2) SELECTING, FITTING AND ATTACHING BLOCKS

BLOCK SHAPES SHALL BE SELECTED AND CUT TO CONFORM AS NEARLY AS POSSIBLE TO THE SHAPE OR CONTOUR OF THE SURFACE BEING COVERED. THE METHOD OF CUTTING MAY BE GOVERNED BY THE QUANTITY REQUIRED OF EACH SIZE OR SHAPE AND THE AMOUNT OF FITTING NECESSARY. IN GENERAL, THE LONG DIMENSION OF BLOCKS SHALL BE PLACED 90° TO THE CURVATURE OF THE SURFACE BEING COVERED. WHEN FITTING BLOCKS, SLIGHT DIFFERENCES IN CONTOUR BETWEEN THE INSULATION AND THE PART TO BE COVERED ARE PERMISSIBLE. IN SUCH CASES, THE BLOCK MAY BE SECURED OVER A THIN LAYER OF PLASTIC INSULATION, MATL. 461108J, APPLIED DIRECTLY TO THE SURFACE OF THE PART. THE BLOCKS SHALL BE APPLIED WHILE THE PLASTIC IS WET.

ON CYLINDER COVERS, BLOCKS SHALL BE SECURED BY 20 GAUGE POULTRY NETTING WIRED TO THE ANCHOR POINTS.

ON CYLINDER BASES, BLOCKS SHALL BE SECURED TO THE ANCHOR POINTS BY .035 DIA. STAINLESS STEEL WIRE, MATERIAL 7860-2, IN ADDITION TO THE POULTRY NETTING.

BLOCKS SHALL BE STOPPED SUFFICIENTLY FAR FROM HORIZONTAL FLANGE BOLTING TO ALLOW FOR ACCESS TO AND REMOVAL OF BOLTING.

(3) COVERING TURBINE ASSEMBLY FLANGES

WHERE THE BLOCKS ARE BEING APPLIED TO LARGE TURBINE CYLINDERS, SPECIAL PROCEDURES SHALL BE FOLLOWED IN COVERING FLANGE NUTS, BOLT HEADS AND ADJACENT AREAS AS FOLLOWS:-

A HOLDER OF APPROXIMATELY TWO FEET IN LENGTH OF EXPANDED METAL, MATERIAL 235[illegible], 3/4 INCH MESH BY .070 INCH THICK, SHALL BE MADE TO SUPPORT THE INSULATION OVER THE FLANGE AREAS AND BOLTS AS SHOWN IN FIGURE 1.

MATL. 4660IAB INSULATING BLOCK SHALL BE SECURED IN THE EXPANDED METAL HOLDER WITH 20 GAUGE POULTRY NETTING ANCHORED TO THE EDGES OF THE EXPANDED METAL CONTAINER. MATL. 461108J PLASTIC INSULATION SHALL BE APPLIED OVER THE BLOCK AS REQUIRED IN PART II. THE EXPANDED METAL BASKET FILLED WITH INSULATION SHALL BE SECURED OVER THE PROPER FLANGE AREA TO THE ANCHOR POINTS WITH MATERIAL 7860-2 STAINLESS STEEL WIRE.

ASBESTOS PAPER MTL. 2118-1, NOT LESS THAN 1/16 INCH THICK, SHALL BE PLACED AT THE TURBINE CYLINDER JOINT, SO THAT A HORIZONTAL SEAM OR PARTING IS CREATED. SIMILAR PARTING ASBESTOS PAPER STRIPS SHALL BE PLACED BEHIND THE UPPER SURFACE OF THE BASKET ADJACENT TO THE CYLINDER CURVATURE AND BETWEEN THE BASKET SECTIONS ALONG FLANGE. THIS SHALL OCCUR ON CYLINDER COVERS AND BASES. ALL ASBESTOS PAPER PARTING STRIPS SHALL BE APPLIED AT THE TIME OF THE APPLICATION OF THE BASE INSULATION.

MATL. 4660IAB INSULATING BLOCKS OF SUITABLE SIZE SHALL BE SECURED ALONG THE CYLINDER JOINT AND SEPARATED BY THE PARTING STRIPS AS PREVIOUSLY DESCRIBED.

(4) COVERING VALVE BONNETS

INSULATION FOR THROTTLE VALVE BONNETS, INTERCEPTOR VALVE BONNETS, AND SPECIAL VALVE BONNETS SHALL BE MADE IN SECTIONS AS SHOWN IN FIGURE 2. WEIGHT PER SECTION NOT TO EXCEED APPROXIMATELY 40 POUNDS (ASSUME 24 POUNDS PER CUBIC FOOT.)

THE EXPANDED METAL SECTIONS SHALL BE FITTED TO BONNET CONTOUR AND THEREAFTER BUILT UP WITH MATERIAL 4660IAB BLOCK, POULTRY NETTING AND PLASTIC INSULATION MATERIAL 461108J TO DESIRED THICKNESS LESS 1/2 INCH.

AFTER THE INSULATION SECTIONS ARE IN PLACE, THEY SHALL BE WIRED TOGETHER CIRCUMFERENTIALLY AND THE TIE WIRES SO ARRANGED THAT AFTER THE 1/2 INCH FINISH COAT IS APPLIED, THESE TIE WIRES SHALL INDICATE THE LOCATION OF THE INSULATION SECTION JOINTS. THIS WILL FACILITATE DISMANTLING.

(5) PATCHING, FILLING AND FINISHING

PLASTIC INSULATION, MATERIAL 461108J, SHALL BE USED FOR PATCHING AND FILLING IRREGULAR AREAS AND FOR FINISHING, AS DESCRIBED IN PART II.

PART II THE APPLICATION OF PLASTIC INSULATION

GENERAL

PLASTIC INSULATION, MATERIAL 461108J, IS RECEIVED IN A DRY CONDITION AND MUST FIRST BE MIXED WITH WATER BEFORE BEING TROWELED IN PLACE.

THE PLASTIC INSULATION SHALL BE APPLIED ON TOP OF THE WATER RESISTANT INSULATING BLOCK AFTER THE 20 GAUGE POULTRY NETTING IS IN PLACE.

OPERATIONS:-

(1) MIXING.
(2) APPLICATION OF THE FIRST COAT.
(3) APPLICATION OF THE REINFORCING WIRE MESH.
(4) APPLICATION OF ADDITIONAL COATS.
(5) APPLICATION OF LAST COAT.

(1) MIXING

MIX THE LOOSE INSULATING CEMENT WITH WATER IN THE PROPORTIONS OF NINE TO TEN GALLONS OF WATER TO A FIFTY POUND BAG OF LOOSE DRY CEMENT (OR NOT MORE THAN 2 LBS. OF WATER TO 1 LB. OF CEMENT). MIX WITH HANDS OR A SUITABLE TOOL. THE WET CEMENT SHOULD CONTAIN ONLY ENOUGH WATER TO PRODUCE A MIXTURE THAT WILL CLOD AND STICK TO THE SURFACE BEING COVERED. EXCESS WATER RETARDS THE DRYING AND CAUSES SHRINKING AND CRACKING.

(2) APPLICATION OF FIRST COAT

TROWEL A LAYER 1 TO 1-1/2 INCHES THICK OF MATERIAL 461108J OVER THE POULTRY NETTING.

(3) APPLICATION OF REINFORCING WIRE MESH

IF THE PLASTIC INSULATION IS OVER 1-1/2 INCHES THICK, 20 GAGE POULTRY NETTING SHALL BE APPLIED OVER THE FIRST INCH OF PLASTIC INSULATION AND ANCHORED TO THE ANCHOR POINTS.

(4) APPLICATION OF ADDITIONAL COATS

ADDITIONAL LAYERS OF THE PLASTIC INSULATION MAY BE APPLIED ON TOP OF THE FIRST COAT AFTER THE POULTRY NETTING IS IN PLACE, AND AFTER THE FIRST LAYER IS DRY. INTERMEDIATE LAYERS OF POULTRY NETTING SHALL BE APPLIED EVERY ONE INCH OF INSULATION WHERE SEVERE VIBRATION IS ENCOUNTERED OR WHERE APPLICATION WARRANTS, UNTIL THE DESIRED INSULATION THICKNESS IS ATTAINED. THE FIRST AND SUBSEQUENT LAYERS MAY BE DRIED BY MEANS OF HOT AIR BLOWERS.

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PROCESS SPECIFICATION

APPLICATION OF BLOCK AND PLASTIC INSULATION

(3) APPLICATION OF LAST COAT

TROWEL THE LAST COAT IN PLACE TO GET A SMOOTH FINISH. IF NECESSARY, ADD MORE WATER IN ORDER THAT THE FINAL COAT BE APPLIED SMOOTHLY. WATER PROOFING MAY BE APPLIED WHERE DESIRED, BUT NOT UNTIL THE INSULATION IS THOROUGHLY DRY.

THROTTLE, INTERCEPTOR AND SPECIAL VALVE BONNET INSULATION

INSULATION SECTIONS NOT TO EXCEED 40 LBS.

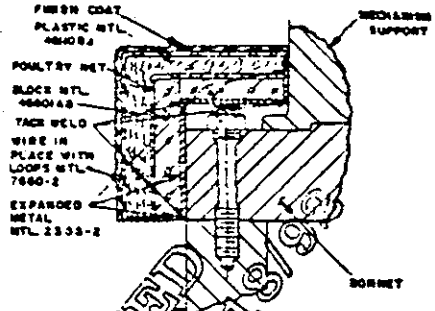

FIG. 2

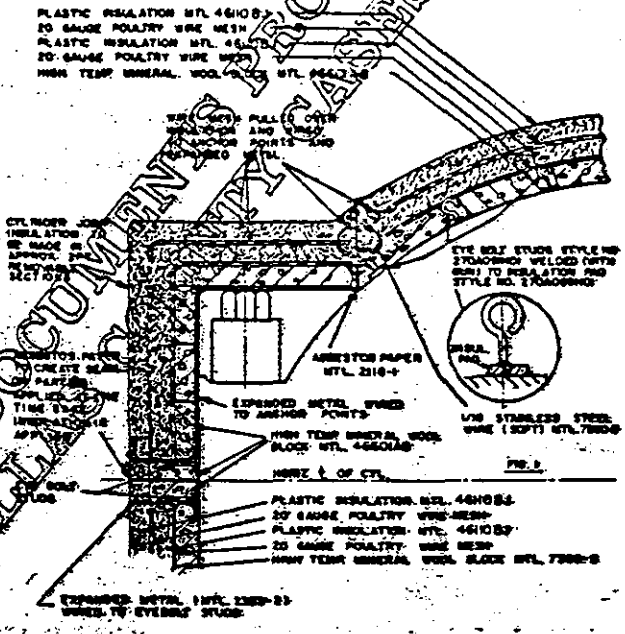

FIG. 3

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