

CHECK LIST - TRANSFORMERS ONLY

292

Date Of Inspection: 1-29-76 (check list) 12/16-17/76
(sampled)

Company Identification:

Westinghouse Electric Corporation
Sharon Transformer Division
469 Sharpsville Avenue
Sharon, Pa. 16146 Telephone: 412/981-1611

Responsible Officials:

William Brennan, Works Engineering Manager
William Seifert, Manager, Plant Facilities Coordination

Parent Company or headquarters:

Westinghouse Electric Corporation
Westinghouse Building, Gateway Center
Pittsburgh, Pennsylvania 15222

Inspection Team:

Frank Petrone, Engineering Technician
John Katka, Engineering Technician
U. S. Environmental Protection Agency
Wheeling Field Office
11th & Chapline Streets
Wheeling, West Virginia 26003

Disposition of Wastes:

Receiving waters (for direct discharge): Shenango River
Municipal treatment system: (including receiving waters)
Sharon Municipal Treatment Plant - Shenango River
Landfill: - (PCB Material only)
Chemtrol Incorporated
P. O. Box 200
Model City, NY 14107 Telephone: 716/754-8231

Incineration: N/A

Other: N/A

Filling or impregnating fluids used: Inerteen #1042

Receipt, Transfer & Storage:

How received: tank cars

Where received (how far from use area): 1/4 miles

How unloaded into storage tanks: Pump & air pressure
at top of tank car - pumped from bottom

Received from: Monsanto Industrial Chemicals Company

Shipping office: Dept. 6313

Savgel, Illinois 62201

Sales office: 260 Springdale Drive
Akron, Ohio 44313

Yes

No

NPC00026531

753868

	Yes	No
<u>Are tank cars cleaned after unloading?</u> N/A (Monsanto responsible for this.)		
Drip pans under hose or pipe connections to tank car or trucks?	X	
Unloading area paved and diked?	X	
Collection sump?		X
How are sumps emptied and to where? N/A		
Unloading area roofed?		X
<u>How are samples taken?</u> Via "thief" on rod lowered into tank car prior to unloading.		
<u>Where is excess sample disposed of?</u> to Works Lab drum used		
<u>What disposition is made of samples after testing?</u> for excess which Chemtrol disposes of		
Storage tank area is <u>not paved</u> and <u>is diked</u> . Sump Collection?		X
Receipt, Transfer, & Storage - Con't.		
<u>Are raw filling fluids stored open to the atmosphere: or under inert gas or under specially dried atmosphere or vacuum?</u>		X (vented w flapper valve)
<u>If vacuum, how is vacuum obtained?</u> N/A		
<u>Where does vacuum system exhaust to?</u> N/A		
<u>Is exhaust equipped with vapor condensers?</u> N/A		
<u>If so, where does condensate go?</u> N/A		
<u>Where is vacuum pump cooling water obtained?</u> N/A		
<u>Where does vacuum pump cooling water go?</u> N/A		
<u>Is vacuum pump equipped with drip pans?</u> N/A		
<u>How is contaminated vacuum pump oil disposed of?</u> N/A		
<u>If stored under special atmosphere:</u> N/A		
<u>What is it (nitrogen, dry air, etc.)?</u>		
<u>What pressure maintained on tank?</u>		
<u>Where does tank vent to?</u>		
<u>Is vent equipped with vapor condenser?</u>		
<u>If so, where does condensate go?</u>		
Are transfer pumps in the storage area provided with drip pans?	X	
<u>In all cases where drip pans are used, what disposition is made of accumulated drips?</u> Put in drums & sent to Chem-trol.		
<u>General observations:</u>		
Company provides workers with special cream prior to handling.		
<u>Housekeeping:</u> Workers extremely careful in clean-up.		
Towels disposed of into drums going to Chem-trol		

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	Yes	No
<u>Filling or Fluid Purification:</u>		
Are pumps & filters equipped with drip pans or diked with snags? (fluid used as is - no filtering process done)	X	
If filter aid blending tank surrounded by paved, diked area?		
N/A		
How is spent filter aid taken off the filter?		N/A
How is spent filter aid packaged for disposal?		N/A
Is spent filter aid handled by employees?		N/A
What is disposition of spent filter aids?		N/A
If regenerated on site, where does regeneration process exhaust to?		N/A
Is exhaust equipped with vapor condensor?		N/A
If so, where does condensate go?		N/A
Is purified fluid sampled?		N/A
How are samples taken?		N/A
What is done with excess sample?		N/A
If fluid does not meet requirements, what happens?		N/A
What disposition is made of samples after testing?		N/A
How are miscellaneous floor spills of fluid cleaned up?		
Spread Speed-Dri and sweeping		
What happens to the sweepings?		put into drums & sent to Chem-trol
What happens to rags, wiping cloths, etc?		Same as sweepings
What happens to workers clothing, gloves, etc?		
Workers are not permitted to wear gloves.		
Individuals are responsible for their own clothing laundering. Company does not make any special provisions.		
<u>General observations:</u>		
Workers handling of PCHs: Co. provides special creams prior to handling.		
Housekeeping: Workers extremely careful in clean-up. Towels disposed of into drums going to Chem-trol		
<u>Transformer Impregnation - Submersion or Flood Filling Process:</u>		
Is impregnation tank cleaned before each filling? (Impregnation is done in transformer itself)		X
What is done with any filling fluid removed from the tank in cleaning it?		N/A
What is done with any rags used in the cleaning?		N/A
What is done with worker's clothing worn in cleaning?		N/A
Are PCH vapors given off in preheating the tank prior to loading with capacitors?		N/A
Where is tank vented to during preheating?		N/A

Transformer Impregnation (con't)

How is vacuum obtained? [Reciprocating pump]
Where does vacuum system exhaust to? Atmosphere
Is exhaust equipped with vapor condensor?
 (15" diameter, 30" long muffler type cylinder)
If so, what happens to condensate?
 Condensate collected at bottom of snubber & drained off
 through a valve into a bucket.
What oil is used in vacuum pump and how much?
 Lubricating oil only is used. 1/2 pint reservoir capacity
 on drip feed into cylinder. (10-12 qts. used yearly)
What happens to contaminated oil?
 Condensate shipped to Chem-trol in drums.

After transformers have been flooded, where is
impregnation tank drained to? Not drained
Are drainings sampled? how? N/A
What happens to excess sample? N/A
What happens if drained fluid is defective:
to the fluid? N/A
to the transformers? N/A
What happens if drained fluid is good? N/A
Is vacuum pump equipped with drip pans?
Is tank surrounded by paved, diked areas? With sumps?
What disposition is made of contents of sumps & drip pans?
 At time of cleaning contents considered contaminated material
 and are sent to Chem-trol via drums.

After impregnation tank is drained, are capacitors allowed to
drip in tank, or taken out? N/A
If the capacitors are taken out for dripping, are drip pans
provided? N/A
What is done with the contents of the drip pans? N/A
Is the area where newly filled capacitors allowed to drip
adequately ventilated? How? N/A
Where does the ventilation system exhaust to? N/A
Is the exhaust equipped with vapor condensor and if so,
what happens to the condensate? N/A

How are transformers transferred to the sealing area?
 Generally by conveyer or by crane
Are drip pans provided? Not needed
What disposition of contents? N/A

How are spills or overflows of PCBs collected in the
sealing area?
 Area has no floor drains - spillage is absorbed with Spedi-Dri
 and swept up and deposited into drums shipped to Chem-trol.
After sealing, how are transformers cleaned of residual
fluid on the outside?
 When necessary they are wiped down and cloths deposited into
 drums shipped to Chem-trol.

Yes

No

X

X
X

If by solvent or vapor decreasing, how is solvent reclaimed?

N/A

How is filling fluid residue from the solvent recycle system collected?

N/A

How is it disposed of?

N/A

If by washing with water or detergent solution, how are contaminated washings disposed of?

N/A

Are capacitors rinsed after washing?

N/A

If so, is rinse water reused?

N/A

How is contaminated rinse water disposed of?

N/A

What happens to solid waste contaminated with filling fluid? Especially what happens to wiping rags and workers' clothing?

Wiping rags put in drums with paper towels, Spedi-Dri etc., and sent to Chem-trol.

Workers clothing is their own responsibility and if quantity is of insignificant amount on apparel the company assumes no liability, but if the amount is significant quite likely the apparel would be replaced by the company.

If solvent cleaned, how is filling fluid residue from the solvent collected?

N/A

How is it disposed of?

N/A

General observations:

Use of protective clothing, gloves, etc.: No gloves used.

Workers' handling of fluids:

Company provides special cream for workers prior to handling.

Housekeeping: Workers extremely careful of cleanup,

Towels disposed of into drums going to Chem-trol

Other

Note in particular whether walls and ceilings are coated with filling fluid in the vicinity of the impregnation tank and drip area.

Observe workers who come in contact with filling fluid for chloroform or pigment discoloration.

Past company experience has been that if an individual encounters an allergic reaction, he is transferred to another area not in direct contact with PCB materials.

If oil-water separator is used to separate filling fluid from water, what is done with oil layer? With the water layer?

N/A

Yes

No

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Rejected components are put into 55 gallon drums, sealed and held in paved yard area - no dike. Truckload lots of drums consist of 40 barrels each.

NPC00026537

753874

Check List -- Capacitors

OFFICIAL USE
ONLY

Yes No

Date of Inspection

5/11/76

Company Identification *WESTINGHOUSE CORP.*

Plant (name, address, telephone) *126 S 2ND ST. PHILA, PA*

Parent company or headquarters (name, address, telephone)

PHILA. 3RD FL. (BUREAU OFFICE)

Responsible Officials

Plant (name, title) *LEO KUBAL, PLANT SUPERINTENDENT*

Parent company or headquarters (name, title)

Inspection Team

Federal (name, title, division, organization) *U.S. DEPT. OF JUSTICE*

State (name, title, division, organization) *PA. DEPT. OF ENVIRONMENTAL AFFAIRS*

Municipal (name, title, division, organization) *PHILA. PA. 19106*

Other (name, title, division, organization)

Disposition of Wastes

Receiving waters (for direct discharge) *N/A*

Municipal treatment system (including receiving waters) *N/A*

Landfill (name, address) *N/A*

Incineration (name, address) *MONSANTO CORP., SHLEST, ILL. 61106*

Other (such as disposal) *N/A*

Filling or impregnating fluids used *INCEPTEK*

Receipt, Transfer, and Storage

How received (tank cars, trucks, drums) *7 55 GAL DRUMS*

Where received (how far from use area) *AT THE FILLING AREA*

How unloaded into storage tanks *N/A*

MATERIAL IS PUMPED INTO TRANSFERMER WHEN NEEDED

Are tank cars cleaned after unloading? *N/A*

How?

What happens to flushings or contaminated cleaning solutions?

RETURNED TO MONSANTO IN SEALED METAL CONTAINERS

Drip pans under hose or pipe connections to tank car or trucks? *N/A*

Transfer hose or pipes drained where? *INTO PANS & RETURNED FOR DISPOSAL*

Unloading area paved and diked? Collection sump? *N/A*

How are sumps emptied and to where? *N/A*

Unloading area roofed? *N/A*

How are samples taken? *N/A*

Where is excess sample disposed of?

What disposition is made of samples after testing?

Storage tank area paved and diked? Collection sump?

NPC00026538

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OFFICIAL USE Yes No

Receipt, Transfer, and Storage -- cont.

Are raw filling fluids stored open to the atmosphere or under inert gas or under specially dried atmosphere or vacuum?

SEALING CAPS USED

If vacuum, how is vacuum obtained? N/A

Where does vacuum system exhaust to? N/A

Is exhaust equipped with vapor condenser? N/A

If so, where does condensate go? N/A

Where is vacuum pump cooling water obtained? NO EXHAUST LINE

Where does vacuum pump cooling water go? N/A

Is vacuum pump equipped with drip pans? YES

How is contaminated vacuum pump oil disposed of?

WORKING DRYING METHOD AS MENTIONED PREVIOUSLY

If stored under special atmosphere: N/A

What is it (nitrogen, dry air, etc.)?

What pressure maintained on tank?

Where does tank vent to?

Is vent equipped with vapor condenser?

If so, where does condensate go?

Are transfer pumps in the storage area provided with drip pans?

YES

In all cases where drip pans are used, what disposition is made of accumulated drips? BACK TO MONITOR

General Observations

Workers handling of fluids

Housekeeping

Other

RAGS, TOWEL, "CLO-AXIS" CONTAMINATED WITH TWENTY-FOUR PLACED IN CANISTER WITH 10 POUNDS

Filling or Impregnating Fluid Purification

Are pumps and filters equipped with drip pans or diked, with sumps? EQUIPPED WITH DRI PAN

If filter aid blending tank surrounded by paved, diked area? N/A

How is spent filter aid taken off the filter?

How is spent filter aid packaged for disposal?

Is spent filter aid handled by employees? How?

What is disposition of spent filter aid?

If regenerated on site, where does regeneration process exhaust to?

Is exhaust equipped with vapor condenser?

If so, where does condensate go?

OFFICIAL USE
ONLY

Yes No

Purification -- cont.

Is purified fluid sampled? *N/A*
How are samples taken? *N/A*
What is done with excess sample? *N/A*
If fluid does not meet requirements, what happens? *N/A*
What disposition is made of samples after testing? *N/A*

How are miscellaneous floor spills of fluid cleaned up? *See notes*
What happens to the sweepings? *See notes*
What happens to rags, wiping cloths, etc.? *See notes*
What happens to workers' clothing, gloves, etc.? *See notes*

General Observations (*MENTIONED EARLIER*)

Workers handling of PCBs
Housekeeping
Other

Capacitor Impregnation-Submersion or Flood Filling Process *N/A*

Is impregnation tank cleaned before each filling?
What is done with any filling fluid removed from the tank in cleaning it?
What is done with any rags used in the cleaning?
What is done with workers' clothing worn in cleaning?

Are PCB vapors given off in preheating the tank prior to loading with capacitors?
Where is tank vented to during preheating?

How is vacuum obtained?
Where does vacuum system exhaust to?
Is exhaust equipped with vapor condenser?
If so, what happens to condensate?
Is vacuum pump equipped with drip pans?
What oil is used in vacuum pump and how much?
What happens to contaminated oil:

After capacitors have been flooded, where is impregnation tank drained to?

Are drainings sampled? How?
What happens to excess sample?
What happens to sample after testing?
What happens if drained fluid is defective:
to the fluid?
to the capacitors?
What happens if drained fluid is good?
Are pumps equipped with drip pans?

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OFFICIAL USE
ONLY

Yes

Are tanks surrounded by paved, diked areas? With sumps?
What disposition is made of contents of sumps and drip pan?

After impregnation tank is drained, are capacitors allowed to
drip in tank, or taken out?

If the capacitors are taken out for dripping, are drip pans
provided?

What is done with the contents of the drip pans?

Is the area where newly filled capacitors allowed to drip
adequately ventilated? How?

Where does ventilation system exhaust to?

Is the exhaust equipped with vapor condenser and, if so, what
happens to the condensate?

How are capacitors transferred to the sealing area?

Are drip pans provided?

What disposition of contents?

How are spills or overflows of PCBs collected in the sealing
area?

After sealing, how are capacitors cleaned of residual fluid on
the outside?

If by solvent or vapor degreasing, how is solvent reclaimed?

How is filling fluid residue from the solvent recycle system
collected?

How is it disposed of?

If by washing with water or detergent solution, how are
contaminated washings disposed of?

Are capacitors rinsed after washing?

If so, is rinse water reused?

How is contaminated rinse water disposed of?

What happens to solid waste contaminated with filling fluid?

Especially, what happens to wiping rags and workers' clothing?

If solvent cleaned, how is filling fluid residue from the
solvent system collected?

How is it disposed of?

General Observations N/A

Use of protective clothing, gloves, etc.

Workers' handling of fluids

Housekeeping

Other

Note in particular whether walls and ceilings are coated with filling
fluid in the vicinity of the impregnation tank and drip area.

NPC00026541

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Observe workers who come in contact with filling fluid for chlorosene or pigment discoloration.

964
OFFICIAL USE

If oil-water separator is used to separate filling fluid from water, what is done with oil layer? With the water layer?

Large Capacitor Impregnation/Transformer filling -- Direct Filling process

Is area around filling operation paved and diked? *YES 11/19/67*

How are spills cleaned up? *SEE 11/19/67*

What disposition is made of contaminated solid waste? *RETURNED TO MANUFACTURER*

How is vacuum pulled on the capacitor or transformer?

If by vacuum pump; where does pump exhaust to?

Is exhaust equipped with vapor condenser?

Where does condensate go?

Where does pump cooling water go?

How is contaminated vacuum pump oil disposed of?

If by steam jet, how is steam condensed?

What disposition is made of condensate?

How is filling line drained?

INTC CONTAINER, RINSED W/SOLVENT & ALL SENT TO MANUFACTURER

Laboratory N/A

No. of employees

Quality control

Types of tests performed and amount of sample used

(a) dielectric constant and loss tangent

(b) electrical breakdown

(c) distillation range

(d) density (specific gravity)

(e) others

*FLUID ITSELF IS NOT TESTED
BUT TRANSFORMER IS FILLED & TESTED.*

RED N/A

Types of equipment used, test performed and amount of samples used?

Samples to be taken: N/A

Soil scrapings in tank car unloading area

Vacuum pump cooling water

Oil-water separators (water layer)

Spent detergent solutions

Contaminated rinse water, etc.

Plant effluent a) direct discharge

b) to municipality

Steam jet condensate

General

How are defective capacitors or transformers disposed of? *SENT TO MANUFACTURER*

Is filling fluid recovered?

Is rejected unit storage area paved and diked?

*CENTRAL REACTION SERVICES
MOORE CITY, N.Y. 14101
716-754-8231*

NPC00026542

753879

LISTING OF TYPES AND MANUFACTURERS OF PDS
CAPACITORS AND TRANSFORMERS

OFFICIAL USE ONLY

<u>Name</u>	<u>Manufacturer</u>	<u>Capacitor</u>	<u>Transformer</u>
Arcclor	Mousanto	X	X
Asbestol	--	--	X
Askarel	--	X	--
Asbestol	American Corporation	--	X
Chloroxol	Allis Chalmers	--	X
Diactor	Sangamo Electric	--	--
Dykano	Cornell Dubilier	--	--
Elemex	McGraw Edison	--	--
Hyvol	Aerovox	--	--
Inertlen	Westinghouse Electric	--	X
Fencior	Caffaro (Italy)	--	--
Clophen	Bayer (Germany)	--	--
Kennechlor	Kennechlor (Japan)	--	--
No-Flamol	Wagner Electric	--	X
Phenoclor	Prodelec (France)	--	--
Pyranol	General Electric	--	X
Pyrolene	Prodelec (France)	--	--
PK	Caffaro (Italy)	--	--
Saf-T-Kuhl	Kuhlman Electric	--	X
Santotherm	Mitsubishi (Japan)	--	--
Soval	--	--	X

NPC00026543

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