INSPECTION SHEET

Date of inspection 19, June ~ 5, July, 1999

Weather Fine or Cloudy

Equipment	Induction motor 380V 37kW 4pole 256253~88, 1979 Manufacturer ;Electro Mechaniqu		
Location	Aeration tank	Facilities	Aeration turbine

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	＊1	Current	○	＊3
	Stain／Corrosion	△	＊1	Rotating speed	○	＊3
	Conductivity of stator coil	○	＊1	Others		
	Insulation resistance	○	＊1 ＊2			
	Partial discharge	○	＊3			
	Vibration	○	＊3			
	Abnormal sound	○	＊3			
	Overheat	○	＊3			
Decision	B ＊4					

＊1 The inspection is carried out for existing all motors. (Nos. 33)

＊2 All motors have more than 100MΩ of insulation resistance.

＊3 The inspection is carried out for motors of Nos. 19 which the on—load test can be performed.

＊4 These motors are not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

(Refer to INSPECTION REPORT by Contractor)

INSPECTION SHEET

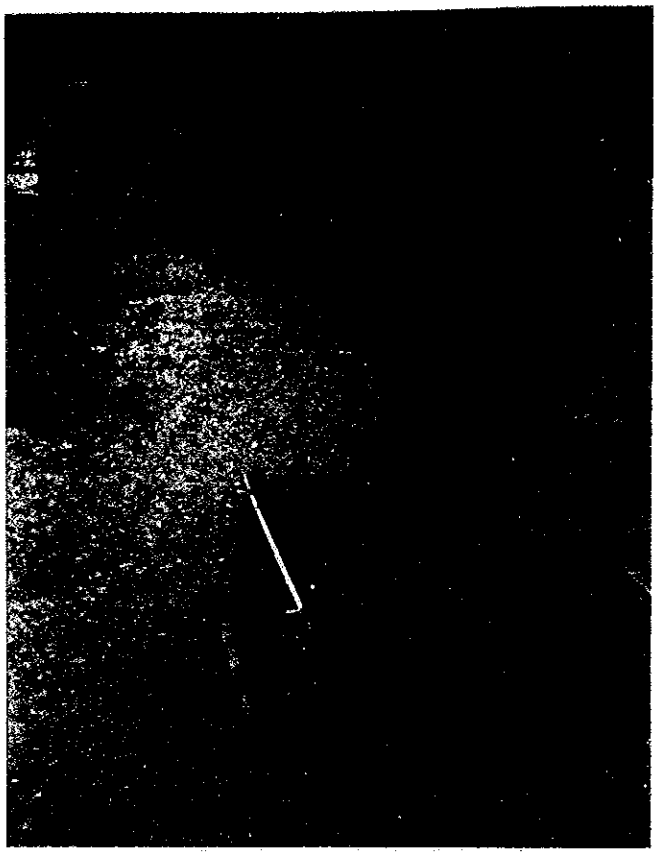
Date of inspection 31, May, 1999

Weather Fine

Equipment	Cable		
Location	Aeration Tank	Facilities	Aeration turbine

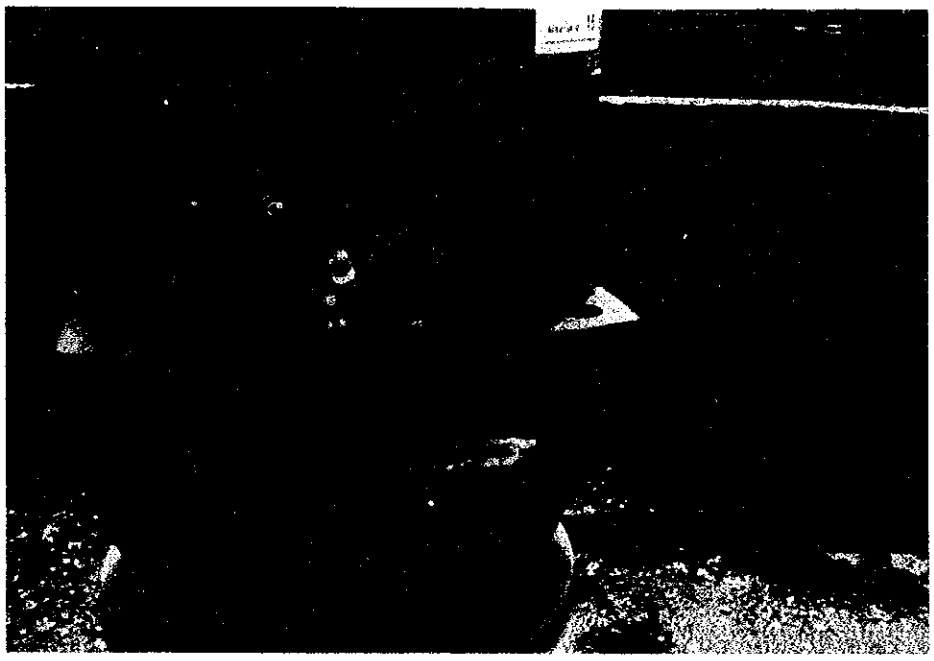
Result of inspection	
Degree of probiem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Aeration Tank	
Photo No. 5—E1	Out look of motor(37kW)



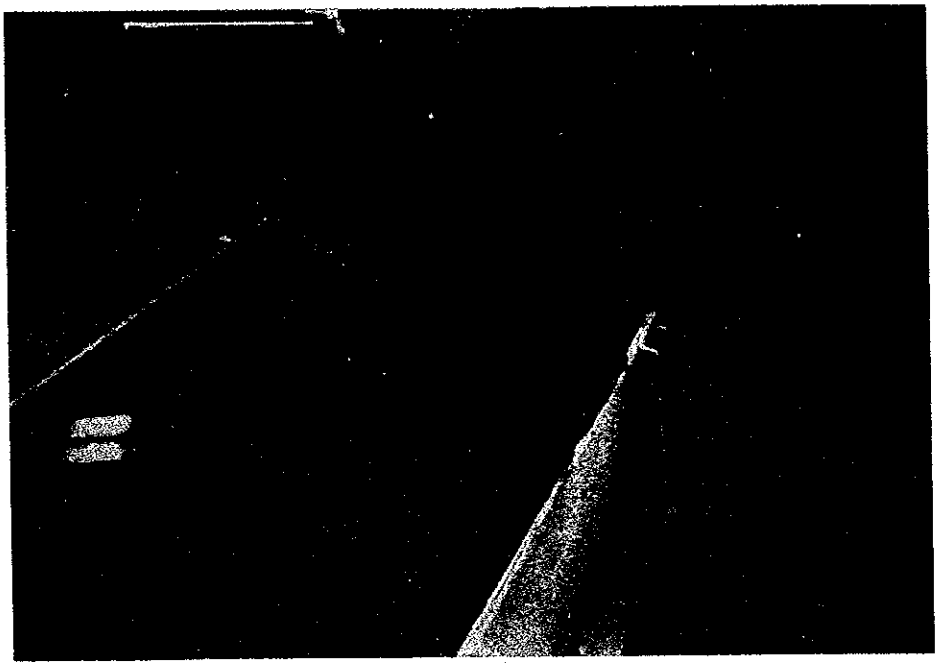
—Casing is not damag —ed.
—Cables were cut and taken away.

Location ; Aeration Tank	
Photo No. 5—E2	Terminal box of motor



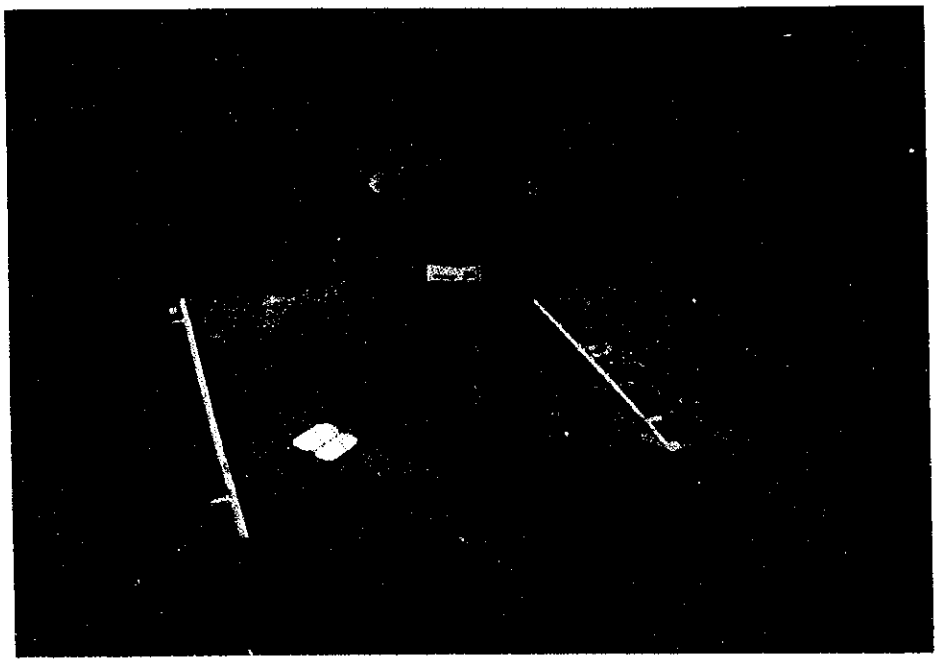
—Terminals of some motors are cracked.

Location ; Aeration Tank	
Photo No. 5—E3	No. 5 motor



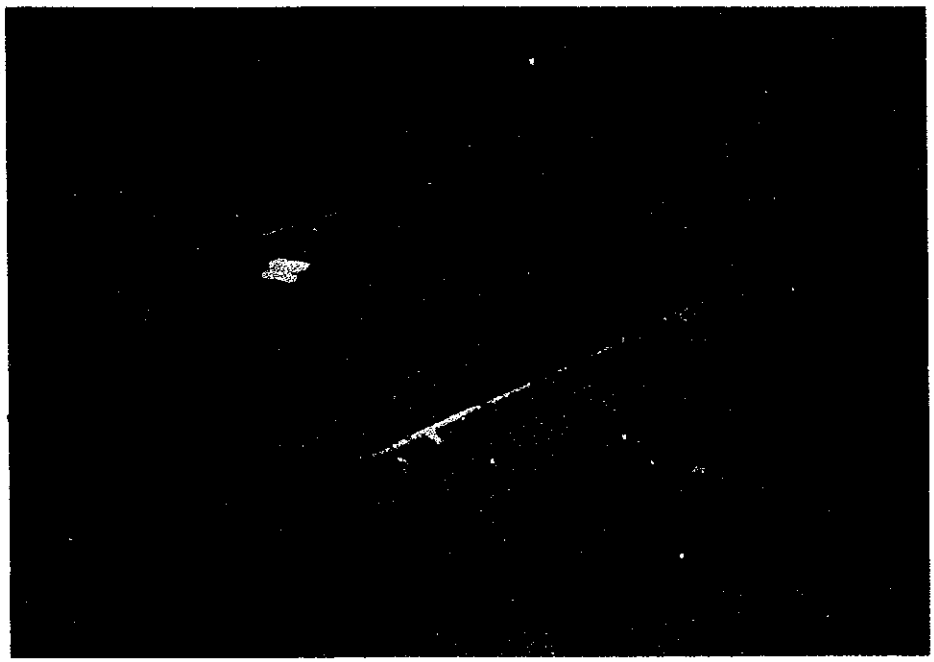
—No. 5 motor was removed and taken away.

Location ; Aeration Tank	
Photo No. 5—E4	No. 21 motor



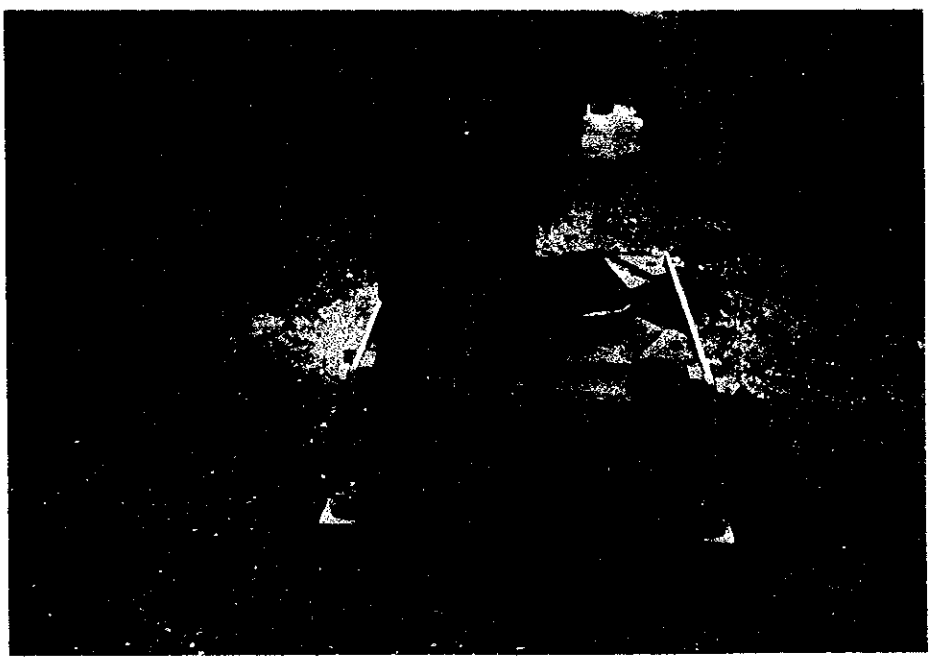
—No. 21 motor was removed and taken away.

Location ; Aeration Tank	
Photo No. 5-E5	No. 25 motor



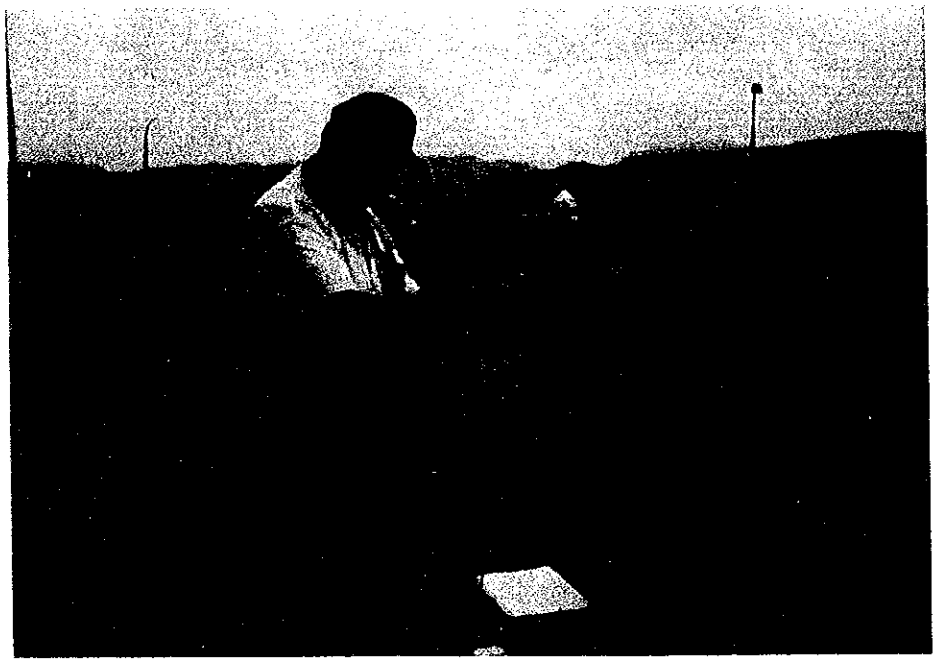
-No. 25 motor was removed and taken away.

Location ; Aeration Tank	
Photo No. 5-E6	Switch box



-All switch boxes are broken.
-Cables were cut and taken away.

Location ; Aeration Tank	
Photo No. 5−E7	Insuration resistance measuring



−Insuration resistance measuring was carried out for existing all motors. (Nos. 33)

−All motors have more than 100MΩ of insuration resistance.

Location ; Aeration Tank	
Photo No. 5−E8	On−load test

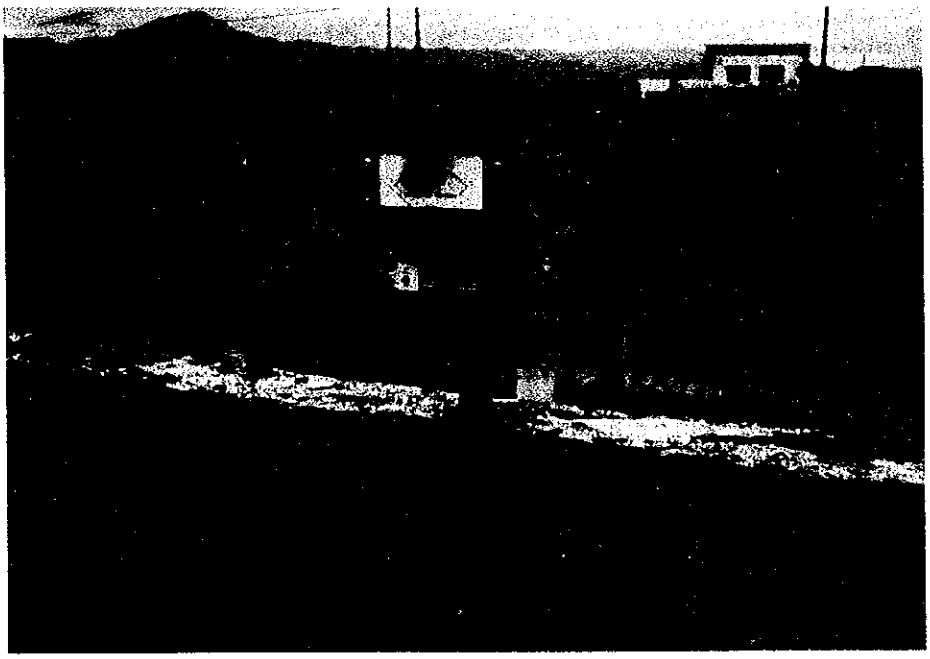
−On−load test was carried out for motors of Nos. 19.

Photo No. 5−E9	Vibration measuring

−Vibration for all motors on−load tested are normal.

Location ; Aeration Tank

Photo No. 5−E10	Dissolved oxygen meter



−All meters are broken.
−Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 1, June, 1999

Weather Fine

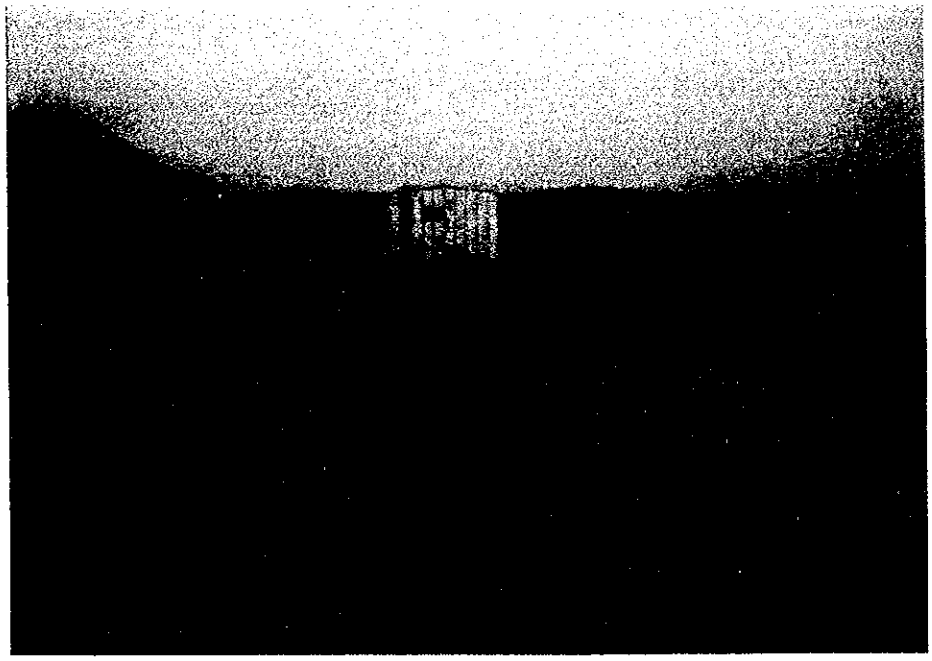
Equipment	Induction motor		
Location	Final sedimentation tank	Facilities	Mechanism

Result of inspection	
Degree of problem	There are no motors. (Nos. 4) Those motors were removed and were taken away.
Decision	A

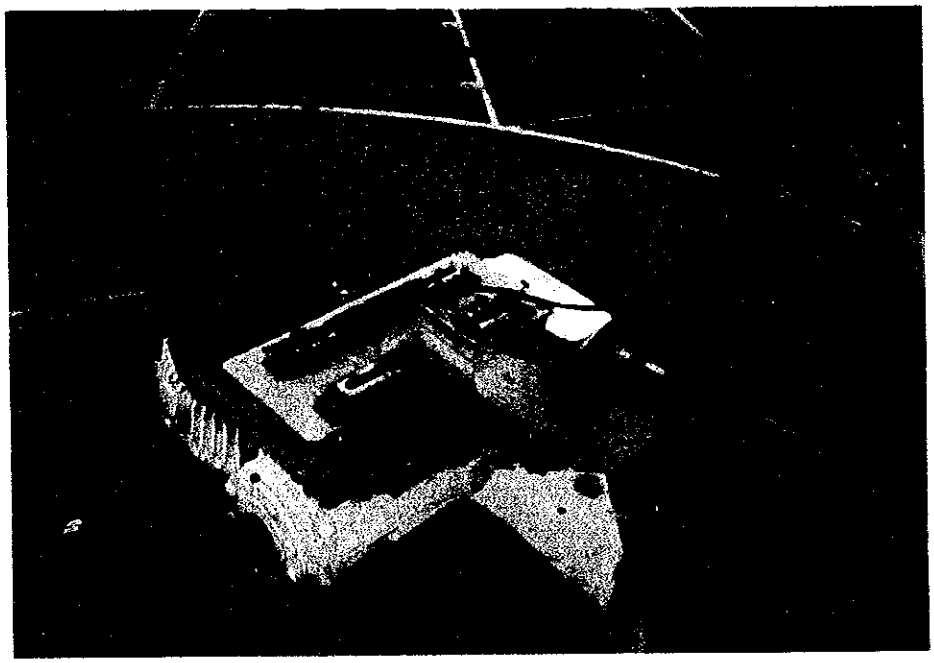
Equipment	Cable		
Location	Final sedimentation tank	Facilities	Mechanism

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Final Sedimentation Tank	
Photo No. 6−E1	Out look of Final sedimentation tank



Location ; Final Sedimentation Tank	
Photo No. 6−E2	Drive head



−Motor was removed and taken away.
−Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 3, June, 1999

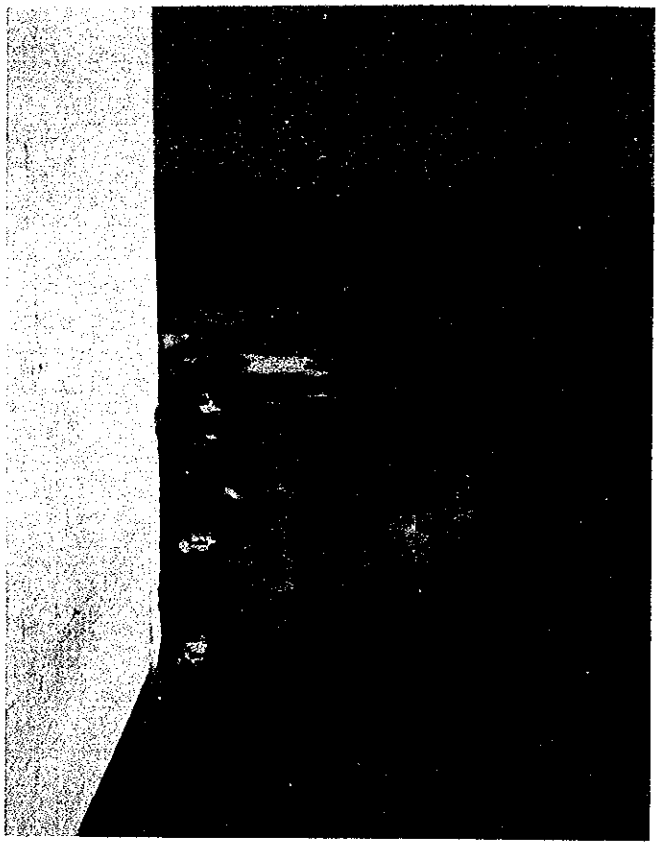
Weather Fine

Equipment	Measuring instrument		
Location	Flow metering and others	Facilities	Flow metering and others

Result of inspection	
Degree of problem	Flow metering There are no instruments. Those instruments were removed and were taken away. Aeration tank There are Dissolved Oxygen meter of Nos. 4. But they are all broken. Others Insrtnments were removed and taken away, or were broken.
Decision	A

Equipment	Cable		
Location	Flow metering and others	Facilities	Flow metering and others

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Flow Metering		
Photo No. 7—E1	Out look of flow metering	
		—Measuring instruments were removed and taken away. —Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 2, June, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Recycled sludge pumping station	Facilities	Recycling water pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS is existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 100kW 4pole 256289 1980 Manufacturer ; Electro Mechaniqu		
Location	Recycled sludge pumping station	Facilities	Recycling water pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	＊1	Current	—	＊3
	Stain／Corrosion	△		Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	○	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision		B ＊4				

＊1 CASING is no damare.

＊2 Insulation resistance measuring data;

U—V >100MΩ U—E >100MΩ

V—W 〃 V—E 〃

W—U 〃 W—E 〃

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 This motor is not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 100kW 4pole 256290 1980 Manufacturer ;Electro Mechaniqu		
Location	Recycled sludge pumping station	Facilities	Recycling water pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	＊1	Current	—	＊3
	Stain／Corrosion	△		Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	○	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision		B ＊4				

＊1 CASING is no damare.

＊2 Insulation resistance measuring data;

U—V >100MΩ U—E >100MΩ

V—W 〃 V—E 〃

W—U 〃 W—E 〃

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 This motor is not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

INSPECTION SHEET

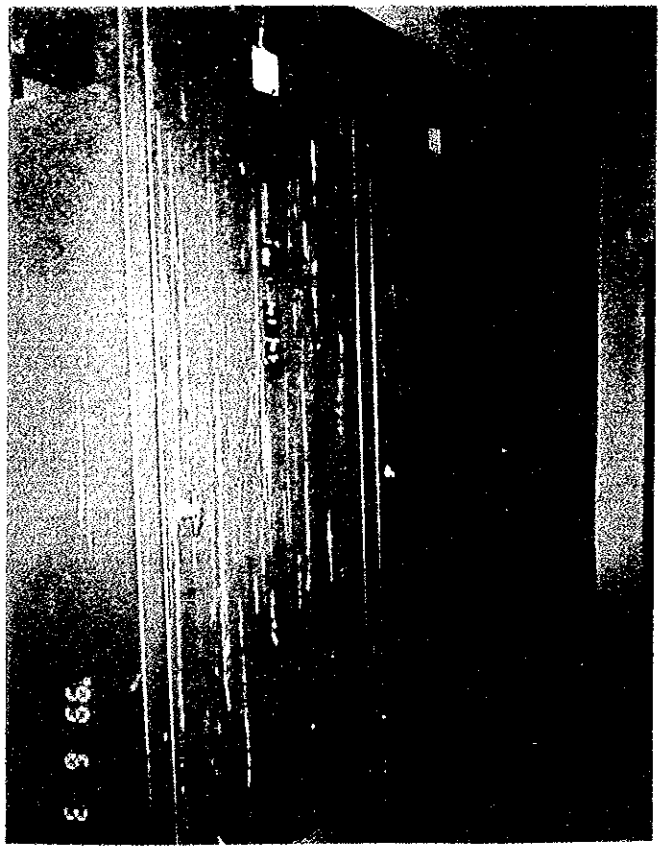
Date of inspection 2, June, 1999

Weather Fine

Equipment	Cable		
Location	Recycled sludge pumping station	Facilities	Recycling water pump

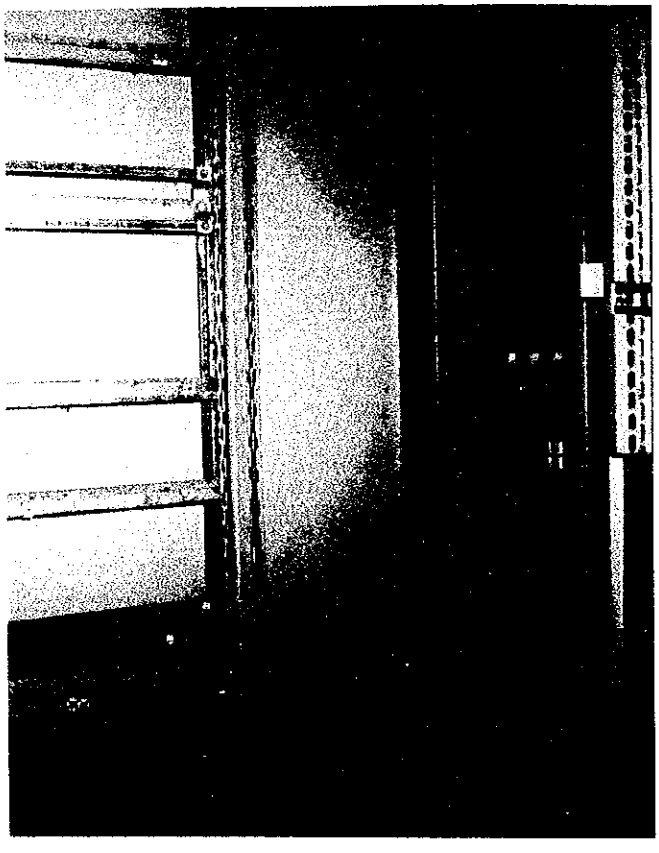
Result of inspection		
Degree of problem	There are no cables. All cables were cut and were taken away.	
Decision		A

Location ; Recycled Sludge Pumping Station	
Photo No. 8−E1	Out look of local control panel



−Stain and corrosion is progressing.

Location ; Recycled Sludge Pumping Station	
Photo No. 8−E2	Inside of local control panel

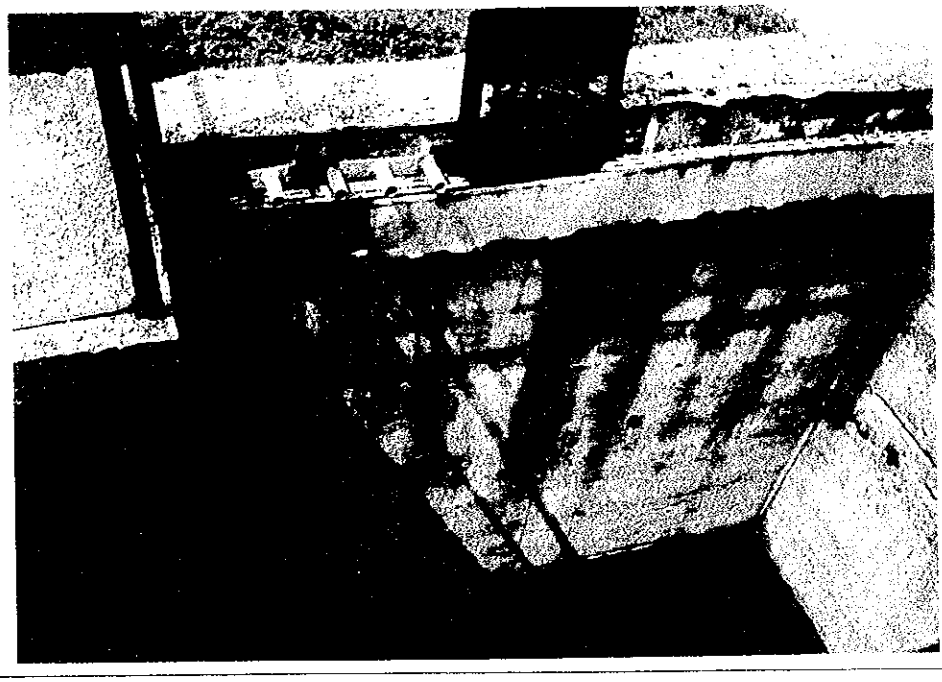


−Main instruments／parts were removed and taken away.
−All wiring and cables were cut and taken away.

Location ; Recycled Sludge Pumping Station	
Photo No. 8−E3	Out look of motor(100kW)

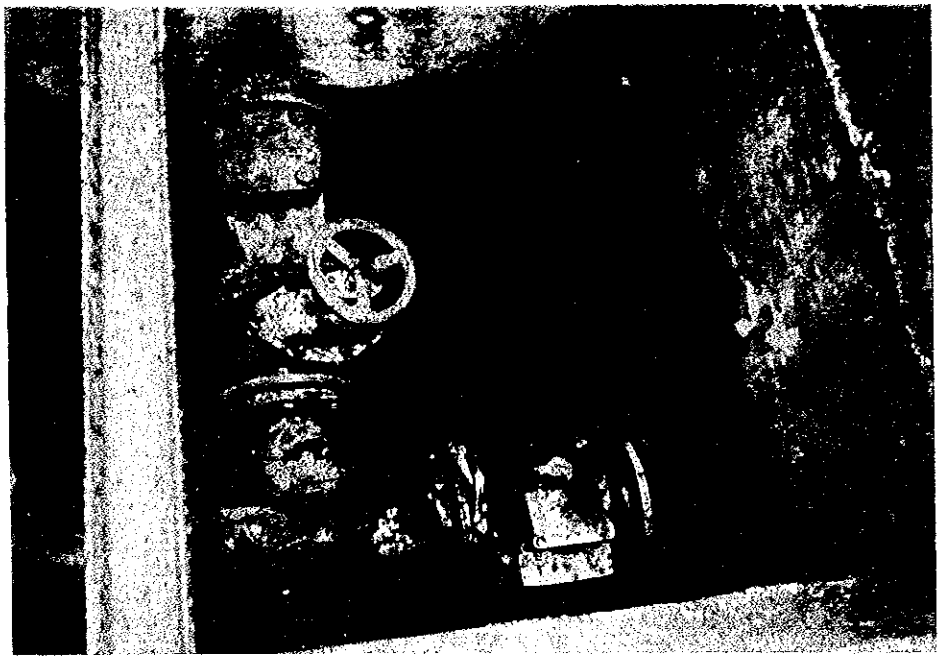
−Casings of all motoes are not damaged
−Cables were cut and taken away.

Location ; Recycled Sludge Pumping Station	
Photo No. 8−E4	Out look of level metering



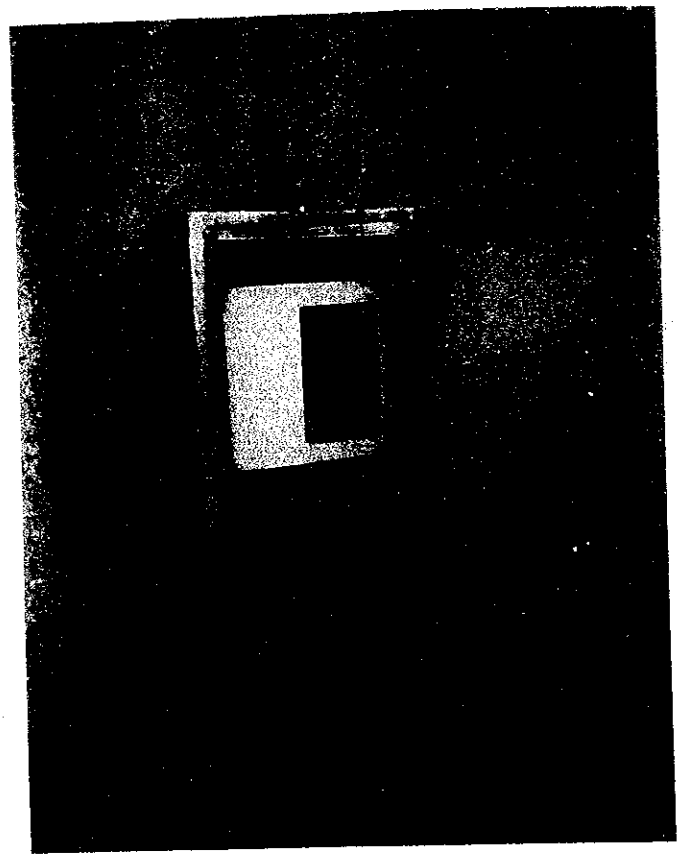
−Measuring instrument was destroied.
−Cables were cut and taken away.

Location ; Recycled Sludge Pumping Station	
Photo No. 8—E5	Flow detector for excess sludge



—This detector is corroded and broken.
—Cables were cut and taken away.

Location ; Recycled Sludge Pumping Station	
Photo No. 8—E6	Signal transmitter for above detector



—This transmitter is broken.
—Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 31, May, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Primary sludge pumping station	Facilities	Sludge pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	*1	Operation of switch	×	*4
	Stain/Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	*2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	*3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

*1 METAL ENCLOSED PANELS is existing. But stain and corrosion is progressing.

*2 ELECTRIC INSTRUMENTS/PARTS were almost removed and were taken away.

*3 ALL WIRING of panel inside was cut and was taken away.

*4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 31, May, 1999

Weather Fine

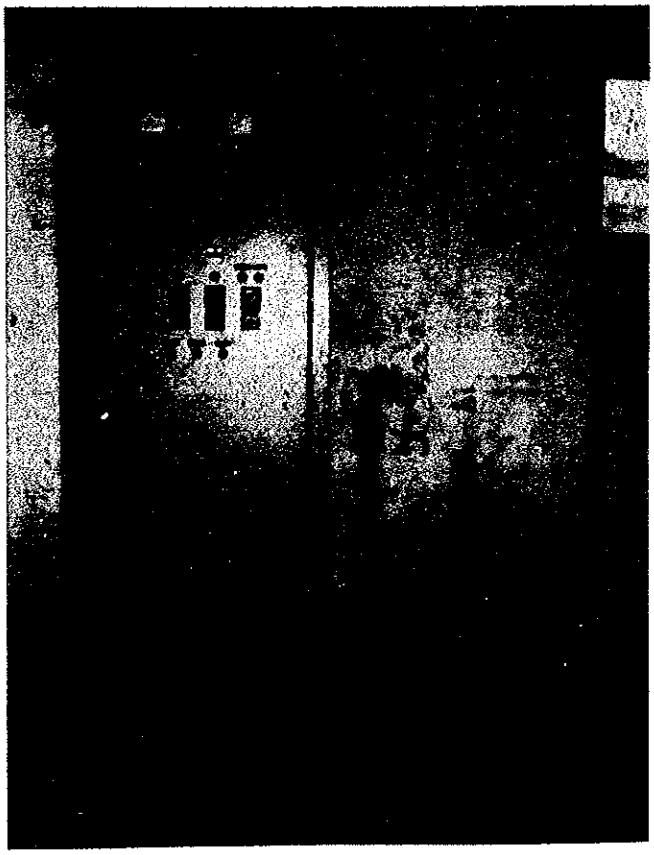
Equipment	Induction motor		
Location	Primary sludge pumping station	Facilities	Sludge pump

Result of inspection	
Degree of problem	There are no motors. (Nos. 3) Those motors were removed and were taken away.
Decision	A

Equipment	Cable		
Location	Primary sludge pumping station	Facilities	Sludge pump

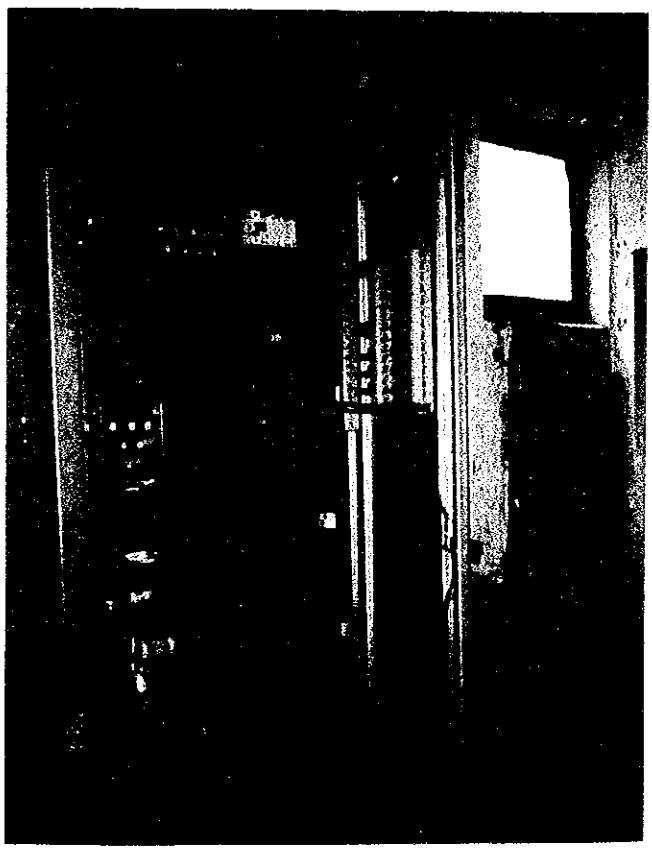
Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Primary Sludge Pumping Station	
Photo No. 9−E1	Out look of local control panel



−Stain and corrosion is progressing.

Location ; Primary Sludge Pumping Station	
Photo No. 9−E2	Inside of local control panel



−Main instruments／parts were removed and taken away.
−All wiring and cables were cut and taken away.

Location ; Primary Sludge Pumping Station	
Photo No. 9−E3	Sludge pump

−Motors were removed and taken away.
−Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 31, May, 1999

Weather Fine

Equipment	Induction motor		
Location	Sludge thickener	Facilities	Mechanism

Result of inspection		
Degree of problem	There are no motors. (Nos. 2) Those motors were removed and were taken away.	
Decision		A

Equipment	Cable		
Location	Sludge thickener	Facilities	Mechanism

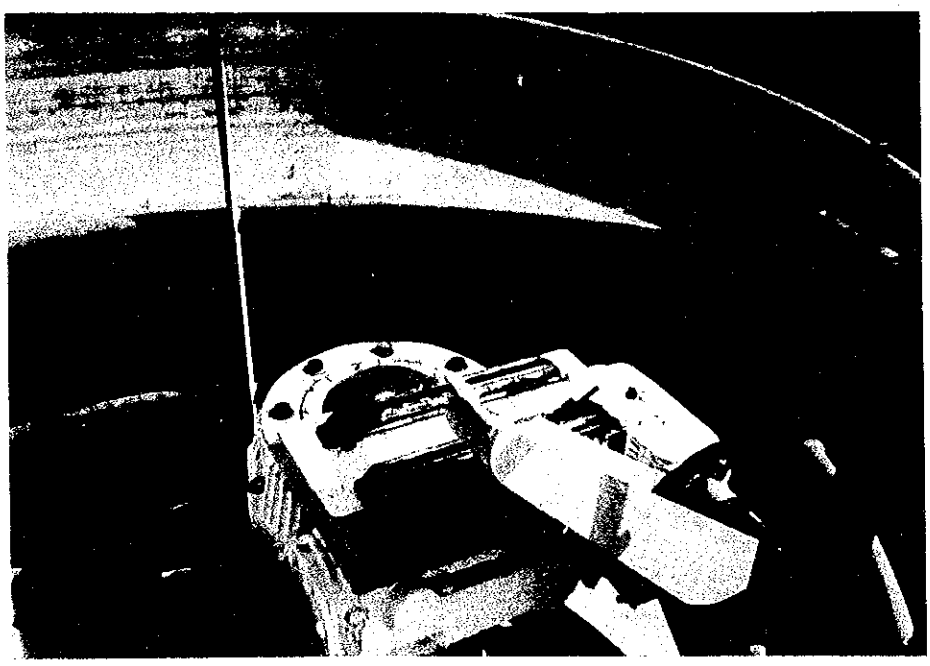
Result of inspection		
Degree of problem	There are no cables. All cables were cut and were taken away.	
Decision		A

Location ; Sludge Thickener

Photo No. 10-E1 | Out look of thickener

Location ; Sludge Thickener

Photo No. 10-E2 | Drive head



-Motor was removed and taken away.
-Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 31, May, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Thickened sludge pumping station	Facilities	Sludge pump

Result of inspection		
Degree of problem	There are no panels. Those panels were removed and were taken away.	
Decision		A

INSPECTION SHEET

Date of inspection 31, May, 1999

Weather Fine

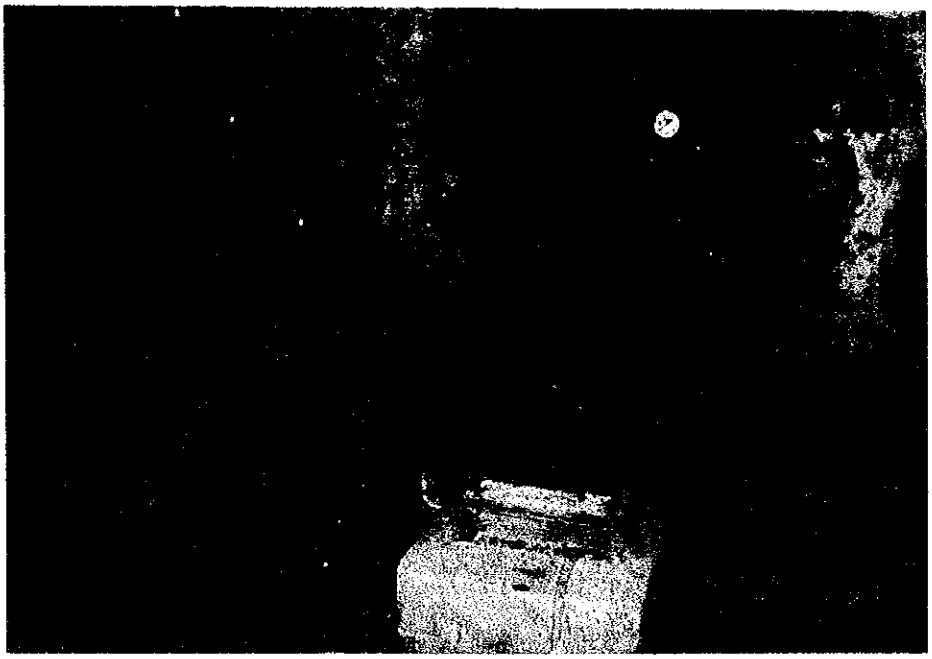
Equipment	Induction motor		
Location	Thickened sludge pumping station	Facilities	Sludge pump

Result of inspection	
Degree of problem	There are no motors. (Nos. 2) Those motors were removed and were taken away.
Decision	A

Equipment	Cable		
Location	Thickened sludge pumping station	Facilities	Sludge pump

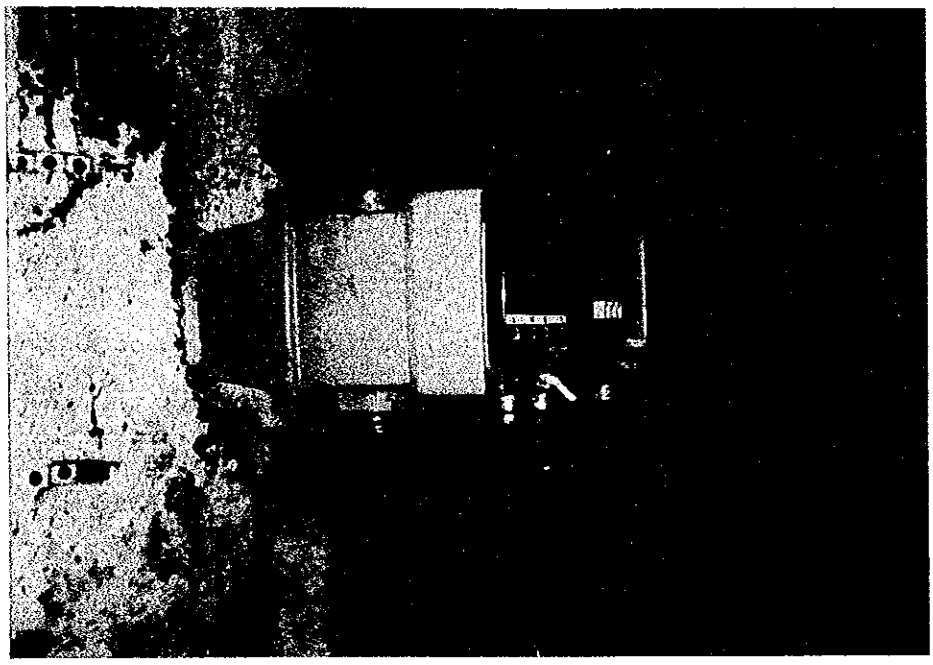
Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Thickened Sludge Pumping Station	
Photo No. 11—E1	Sludge pump



—Motosr were removed and taken away.
—Cables were cut and taken away.

Location ; Thickened Sludge Pumping Station	
Photo No. 11—E1	Flow detector



—This detector is broken.
—Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 1, June, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Boiler house	Facilities	Circulation pump Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision	A					

＊1 METAL ENCLOSED PANELS is existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 1, June, 1999

Weather Fine

Equipment	Induction motor		
Location	Boiler house	Facilities	Circulation pump

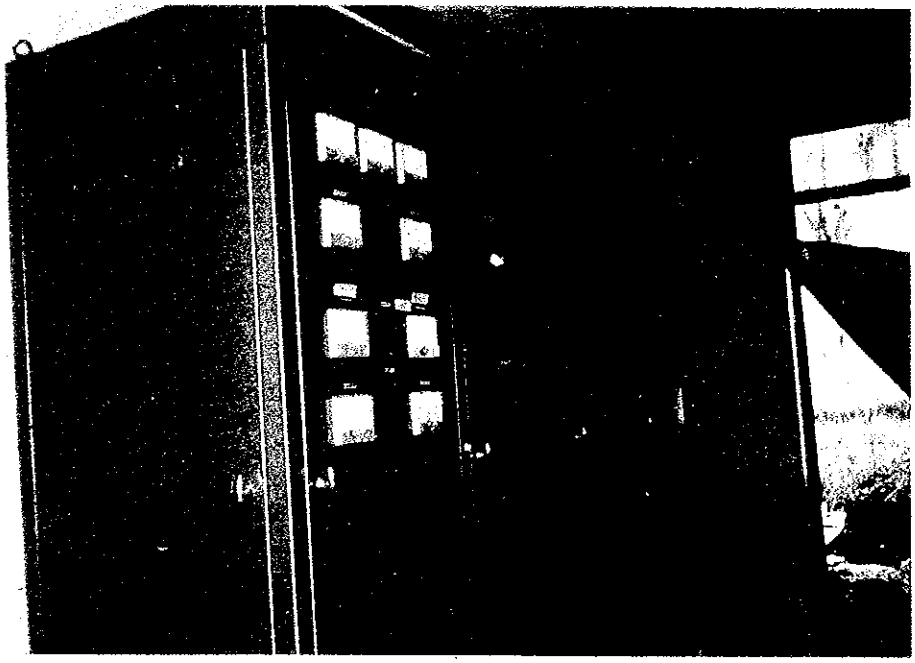
Result of inspection	
Degree of problem	There are no motors. (Nos. 3) Those motors were removed and were taken away.
Decision	A

Equipment	Cable		
Location	Boiler house	Facilities	Circulation pump

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Boiler House

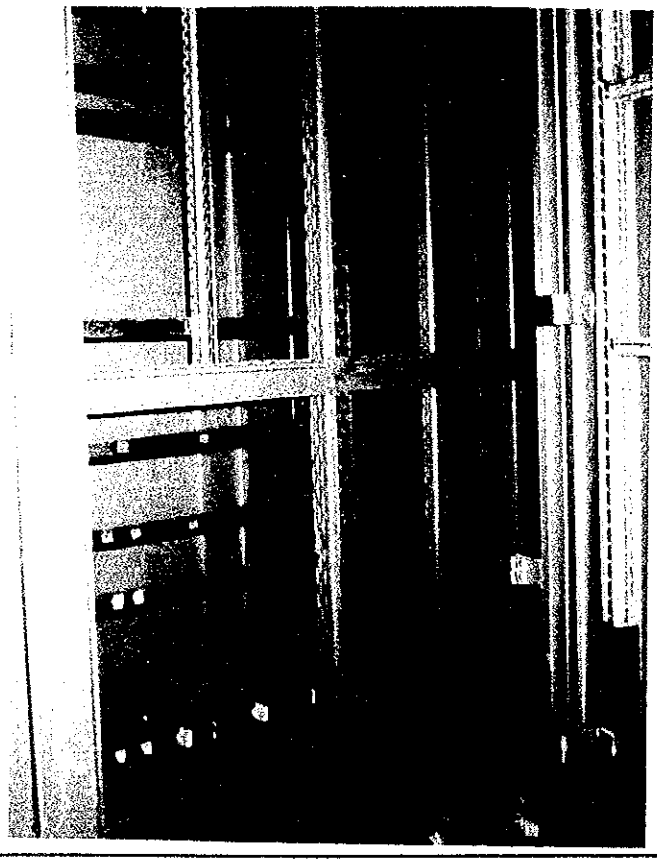
Photo No. 13−E1 | Out look of local control panel



−Stain and corrosion is progressing.

Location ; Boiler House

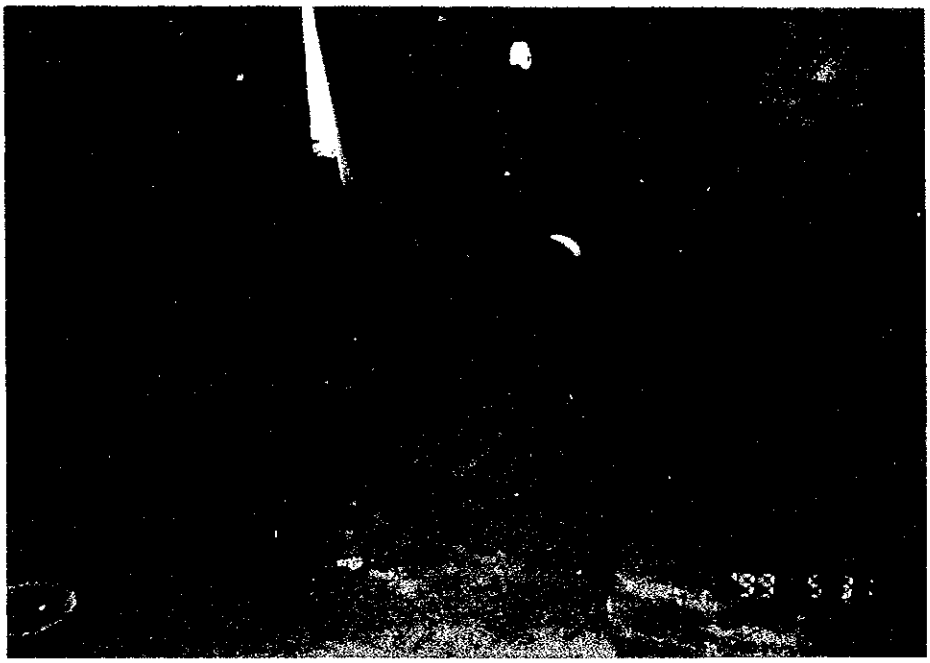
Photo No. 13−E2 | Inside of local control panel



−Main instruments/parts were removed and taken away.

−All wiring and cables were cut and taken away.

Location ; Boiler House	
Photo No. 13-E3	Sludge recycling pump



-Motors were removed and taken away.
-Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 37kW 6pole 413545 Manufacturer ;Electro Mechaniqu		
Location	Compressor station I	Facilities	Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	△		Current	—	＊3
	Stain／Corrosion	×	＊1	Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	△	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision	A ＊4					

＊1 Rust is much progressing in TERMINAL BOX, and TERMINAL BOLTs are corroded.

＊2 Together with U, V and W — E 10MΩ
(To loosen the terminal bolt is impossible due to corrosion.)

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 About 20 years passed from the time when this motor was supplied. It is considered that repair of casing and terminal box is difficult. So, renewal is recommendable.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 37kW 6pole 413546 Manufacturer ;Electro Mechaniqu		
Location	Compressor station I	Facilities	Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	△		Current	—	＊3
	Stain／Corrosion	×	＊1	Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	△	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision	A ＊4					

＊1 Rust is much progressing in TERMINAL BOX, and TERMINAL BOLTs are corroded.

＊2 Together with U, V and W − E 3MΩ
(To loosen the terminal bolt is impossible due to corrosion.)

＊3 Mechanical load facility exists, but is not arranged. So, on−load test can not be performed.

＊4 About 20 years passed from the time when this motor was supplied. It is considered that repair of casing and terminal box is difficult. So, renewal is recommendable.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 37kW 6pole 413547 Manufacturer ;Electro Mechaniqu		
Location	Compressor station I	Facilities	Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	△		Current	—	＊3
	Stain／Corrosion	×	＊1	Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	△	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision	A ＊4					

＊1 Inside of TERMINAL BOX and TERMINAL BOLTs are corroded.

＊2 Together with U, V and W — E 5MΩ
(To loosen the terminal bolt is impossible due to corrosion.)

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 About 20 years passed from the time when this motor was supplied. It is considered that repair of casing and terminal box is difficult. So, renewal is recommendable.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 30kW 4pole 413414 Manufacturer ;Electro Mechaniqu		
Location	Compressor station I	Facilities	Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	△		Current	—	＊3
	Stain／Corrosion	×	＊1	Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	△	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision	A ＊4					

＊1 Rust is much progressing in TERMINAL BOX.

＊2 Together with U, V and W − E 10MΩ

(To loosen the terminal bolt is impossible due to corrosion.)

＊3 Mechanical load facility exists, but is not arranged. So, on−load test can not be performed.

＊4 About 20 years passed from the time when this motor was supplied. It is considered that repair of casing and terminal box is difficult. So, renewal is recommendable.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 30kW 4pole 413415 Manufacturer ;Electro Mechaniqu		
Location	Compressor station I	Facilities	Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	＊1	Current	—	＊3
	Stain／Corrosion	△		Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	○	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision	B ＊4					

＊1 CASING is no damare.

＊2 Insulation resistance measuring data;

U—V	>100MΩ	U—E	>100MΩ
V—W	〃	V—E	〃
W—U	〃	W—E	〃

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 This motor is not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

INSPECTION SHEET

Date of inspection 22, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 30kW 4pole 413416 Manufacturer ;Electro Mechaniqu		
Location	Compressor station I	Facilities	Compressor

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	＊1	Current	—	＊3
	Stain／Corrosion	△		Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	○	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision	B ＊4					

＊1 CASING is no damare.

＊2 Insulation resistance measuring data;

U—V	>100MΩ	U—E	>100MΩ
V—W	〃	V—E	〃
W—U	〃	W—E	〃

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 This motor is not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

INSPECTION SHEET

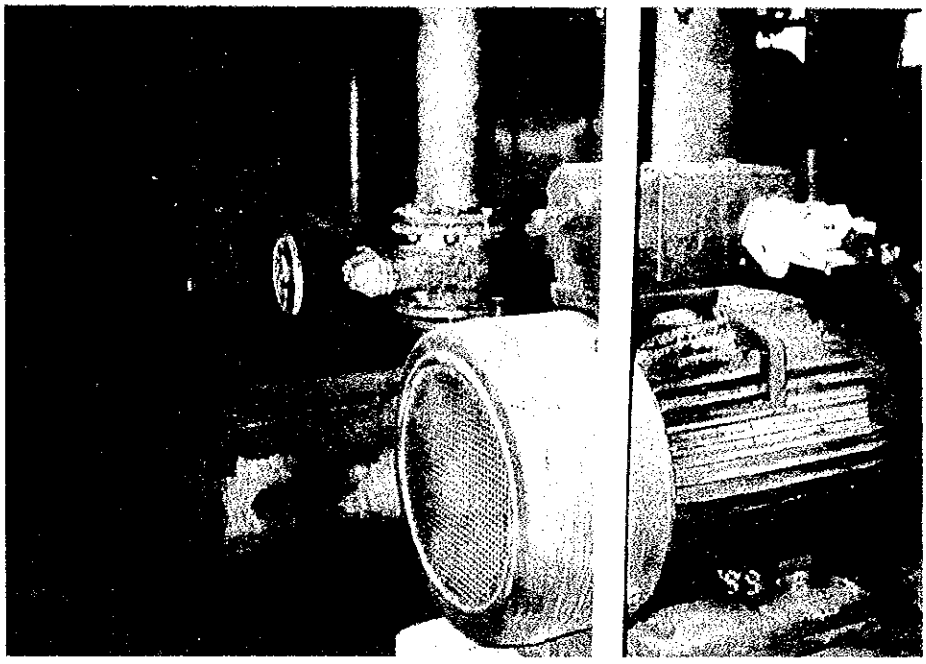
Date of inspection 4, June, 1999

Weather Fine

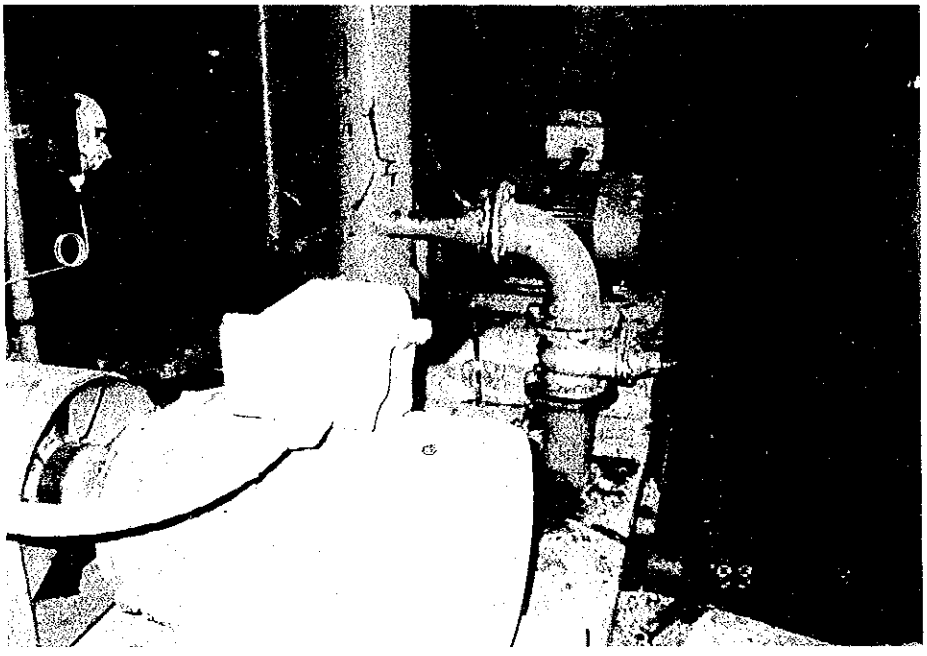
Equipment	Cable		
Location	Compressor station I	Facilities	Compressor

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Compressor Station I	
Photo No. 14−E1	Out look of motor(37kW)



Location ; Compressor Station I	
Photo No. 14−E2	Out look of motor(30kW)

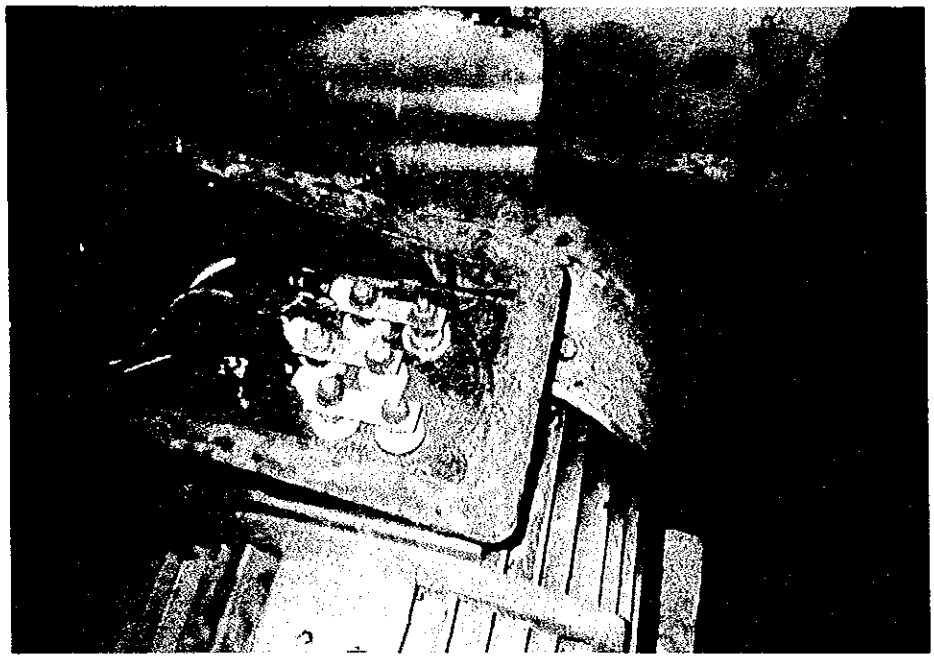


Location ; Compressor Station I

Photo No. 14−E3 | Inspection for terminal box

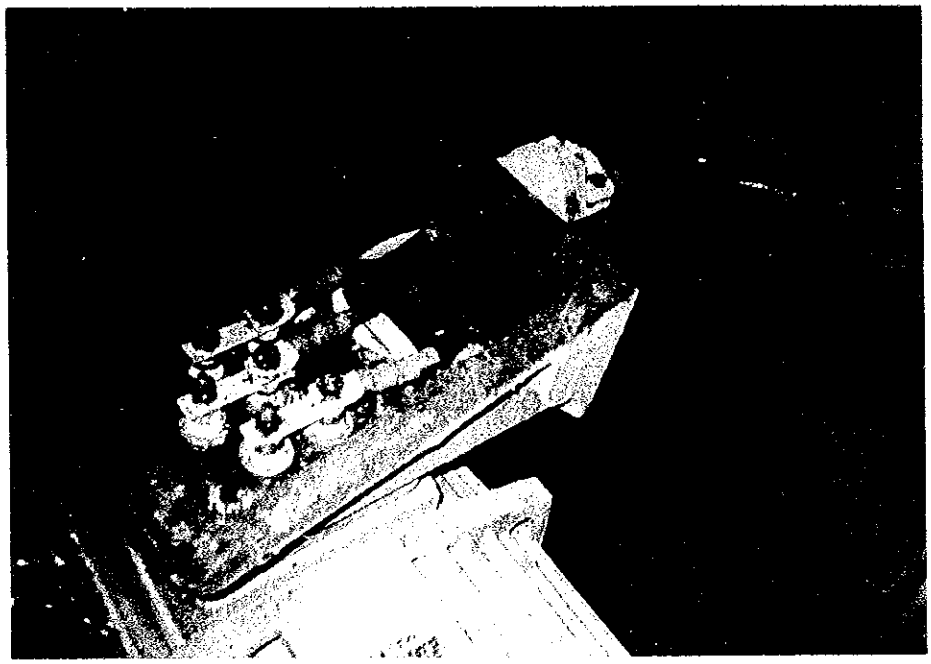
Location ; Compressor Station I

Photo No. 14−E4 | Inside of terminal box(37kW Motor)



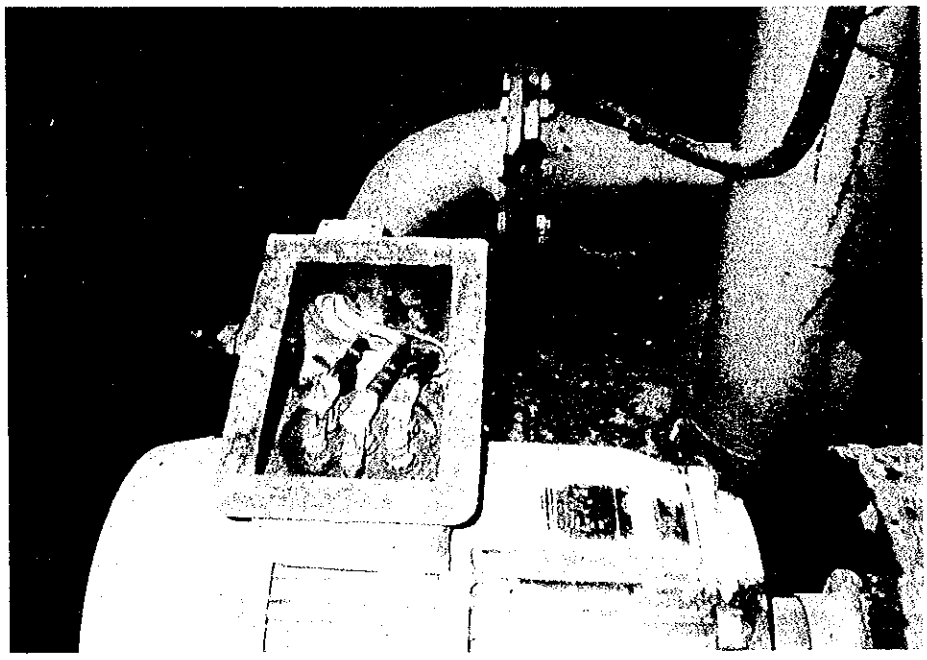
−Rust is much progressing in TERMINAL BOX, and TERMINAL BOLTs are corroded.

Location ; Compressor Station I	
Photo No. 14−E5	Inside of terminal box(37kW Motor)



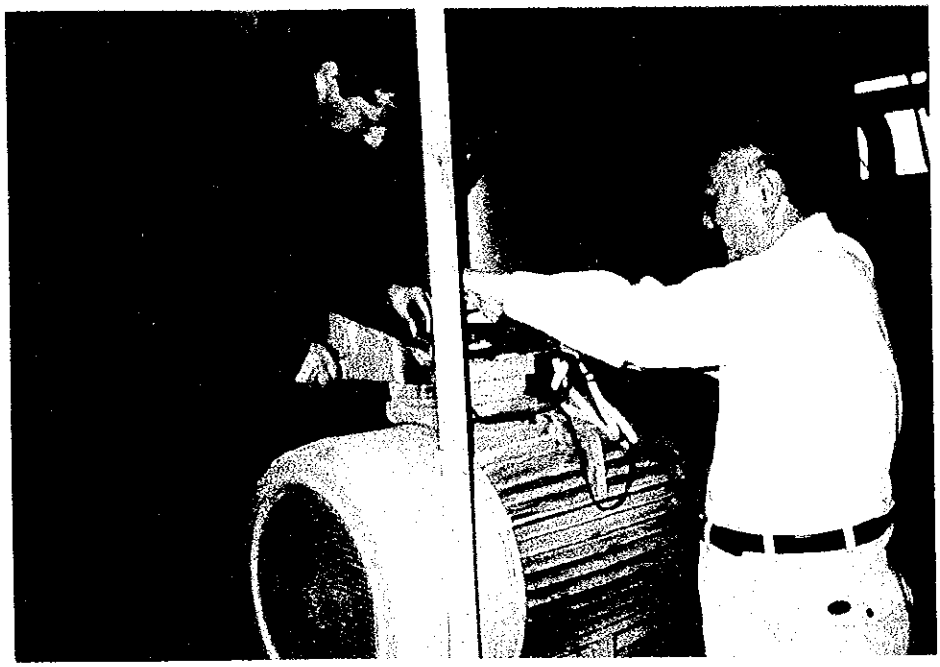
−Rust is much progressing in TERMINAL BOX, and TERMINAL BOLTs are corroded.

Location ; Compressor Station I	
Photo No. 14−E6	Inside of terminal box(30kW Motor)



−Rust is much progressing in TERMINAL BOX.

Location ; Compressor Station I	
Photo No. 14—E7	Insuration resistance measuring



—The insulation resistance is reducing for many motors.

INSPECTION SHEET

Date of inspection 1, June, 1999

Weather Fine

Equipment	Induction motor		
Location	Homogenized sludge holding tank	Facilities	Mechanism

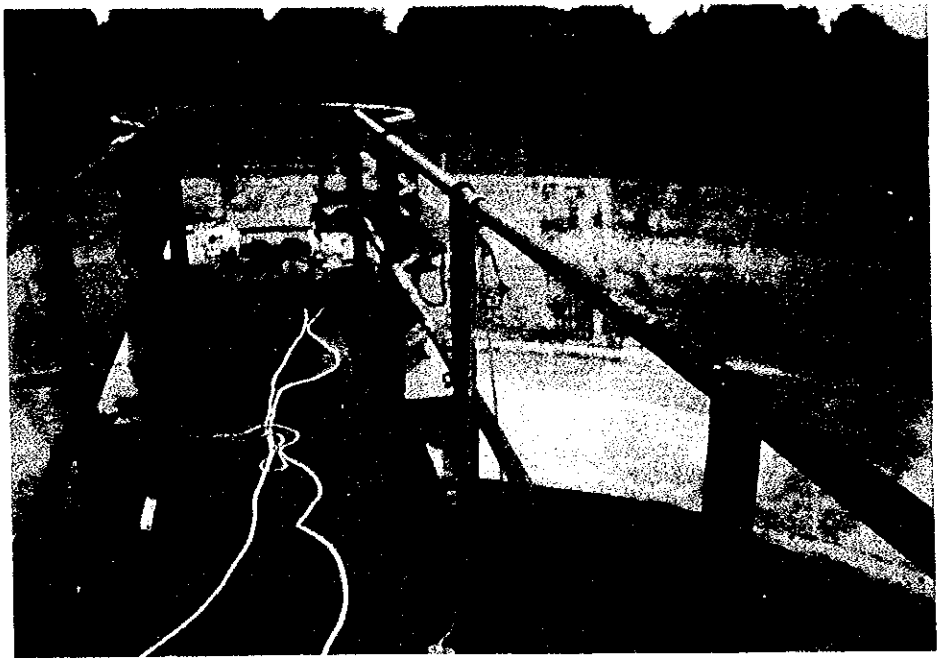
Result of inspection	
Degree of problem	There is no motor. (Nos. 1) That motor was removed and was taken away.
Decision	A

Equipment	Cable		
Location	Homogenized sludge holding tank	Facilities	Mechanism

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

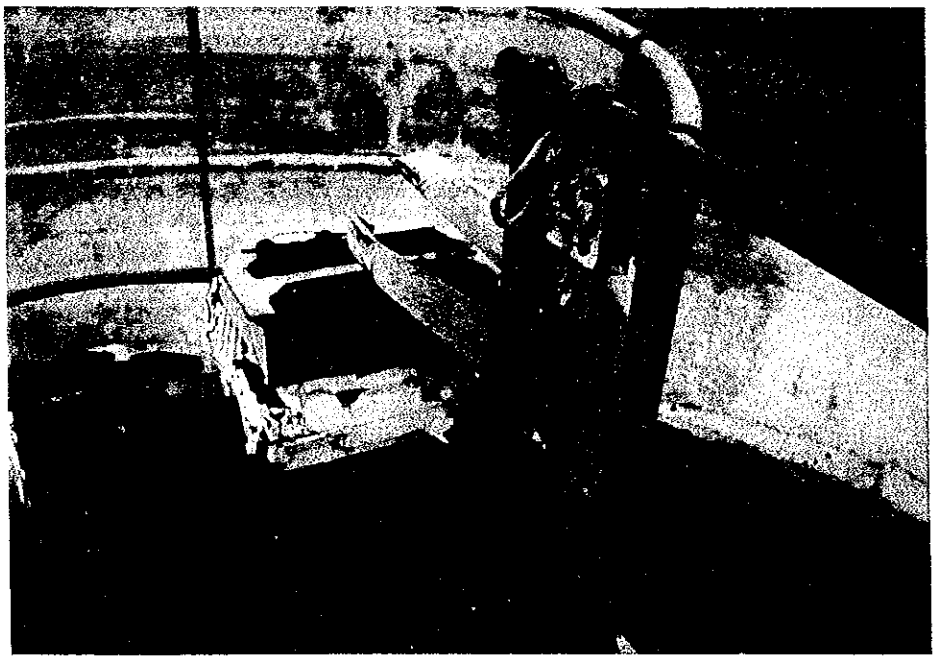
Location ; Homogenized Sludge Holding Tank

Photo No. 16−E1 | Out look of tank



Location ; Homogenized Sludge Holding Tank

Photo No. 16−E2 | Drive head



−Motor was removed and taken away.
−Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 28, May, 1999

Weather Fine

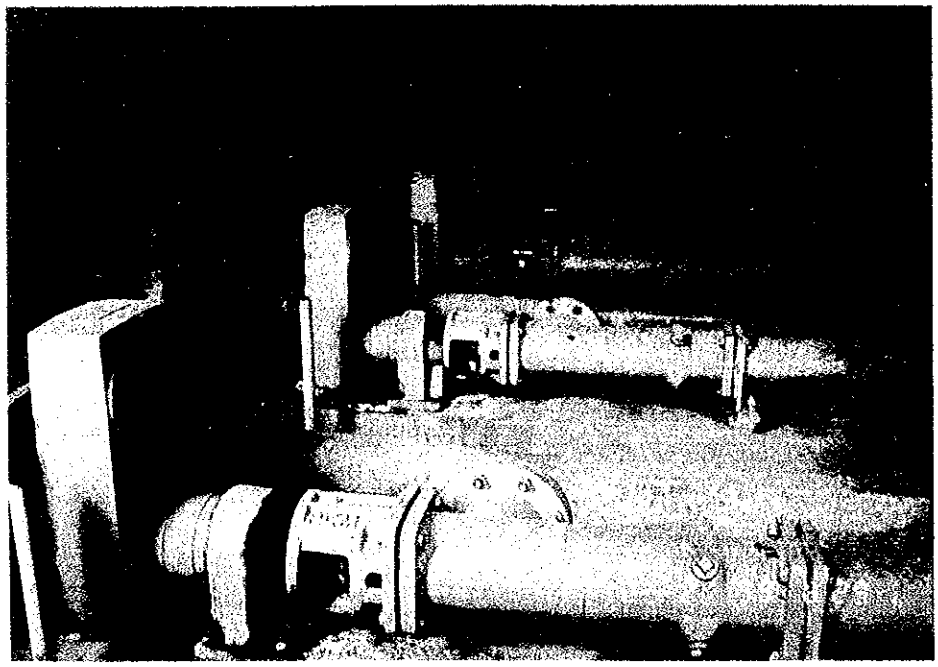
Equipment	Induction motor		
Location	Sludge pumping station	Facilities	Sludge pump

Result of inspection	
Degree of problem	There are no motors. (Nos. 5) Those motors were removed and were taken away.
Decision	A

Equipment	Cable		
Location	Sludge pumping station	Facilities	Slugde pump

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Sludge Pumping Station	
Photo No. 17−E1	Sludge pump



−Motors were removed and taken away.
−Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 28, May, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Sludge dehydration	Facilities	Press Sludge pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS is existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 28, May, 1999

Weather Fine

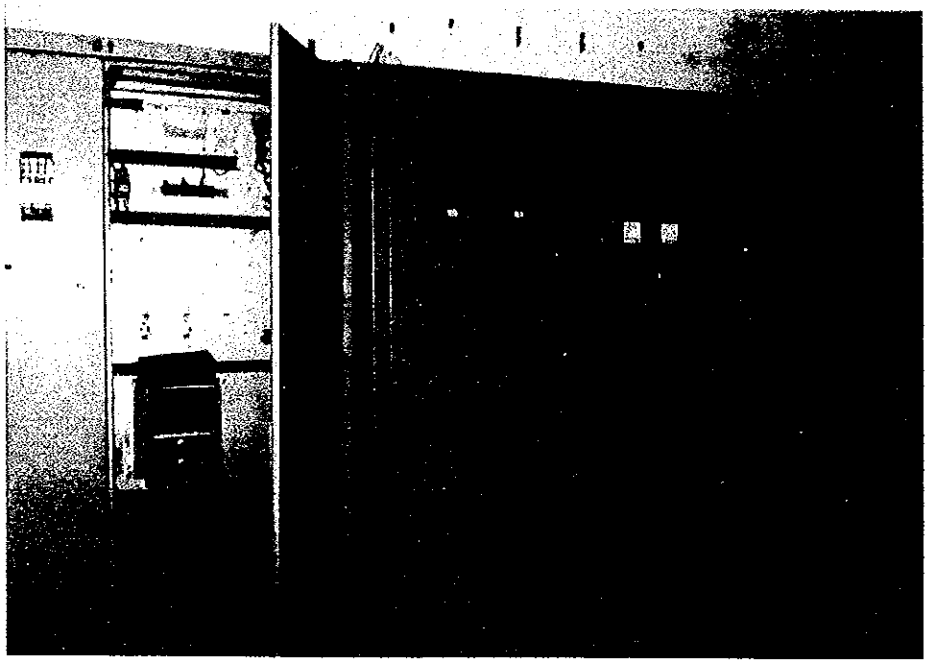
Equipment	Induction motor		
Location	Sludge dehydration	Facilities	Press

Result of inspection	
Degree of problem	There are no motors. (Nos. 5 for Press machine) (Nos. 2 for Dosing machine) Those motors were removed and were taken away.
Decision	A

Equipment	Cable		
Location	Sludge dehydration	Facilities	Press

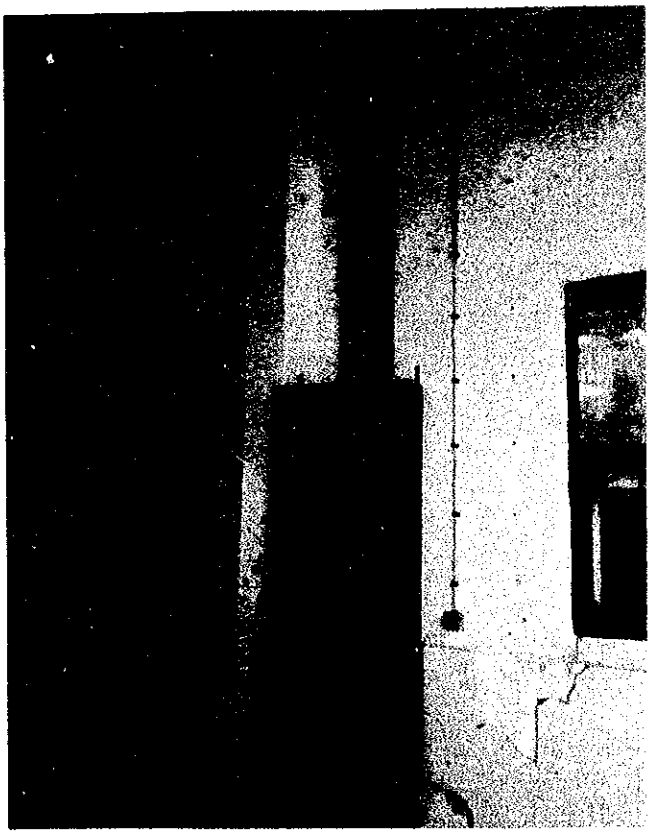
Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Sludge Dehydration	
Photo No. 18—E1	Out lookof local control panel



—Stain and corrosion is progressing.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

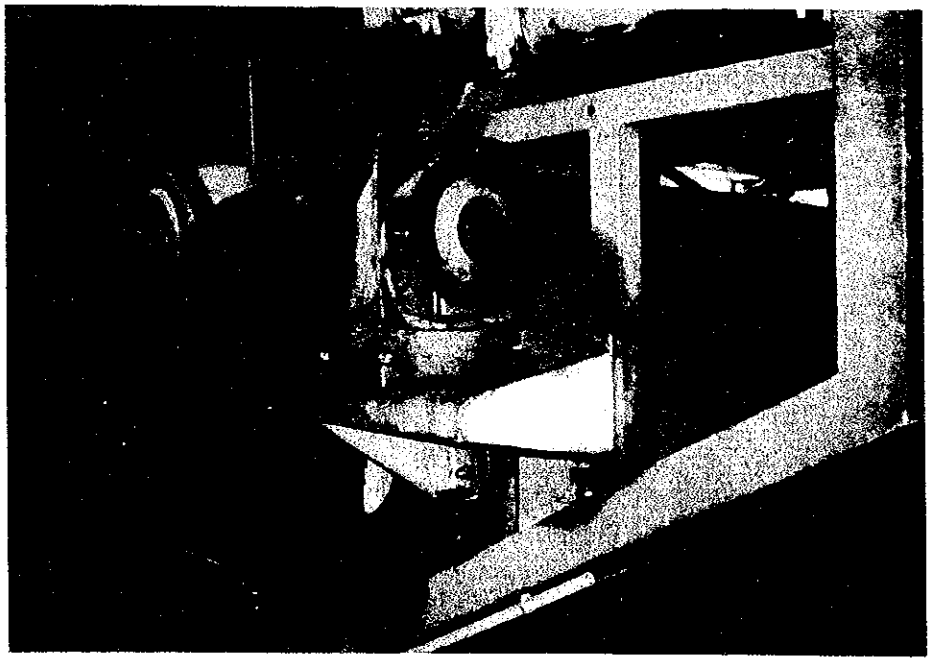
Location ; Sludge Dehydration	
Photo No. 18—E2	Out lookof local control panel



—Stain and corrosion is progressing.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Sludge Dehydration	
Photo No. 18—E3	Out look of dehydrater

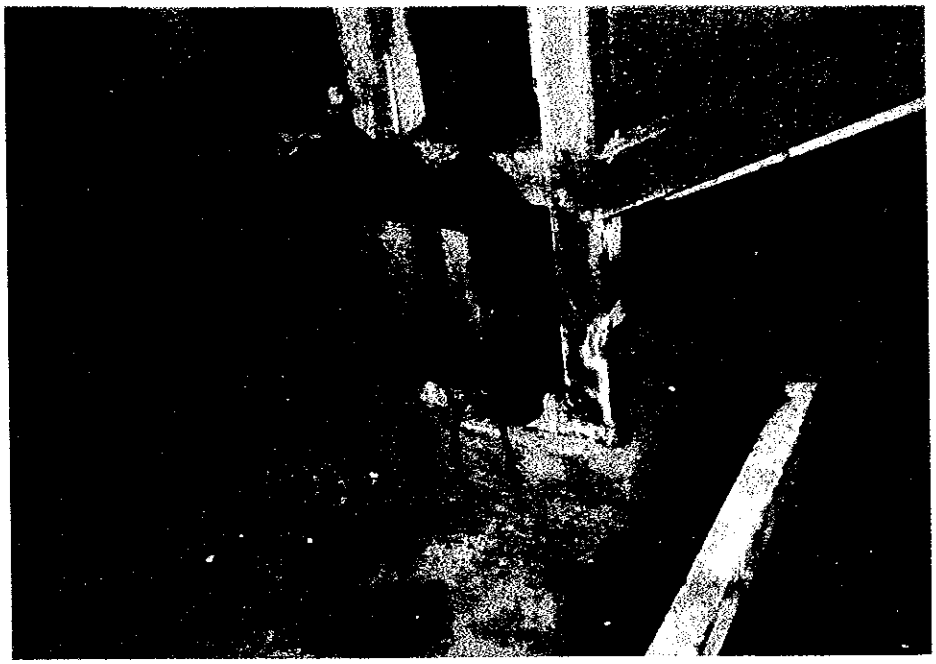
Location ; Sludge Dehydration	
Photo No. 18—E4	Dehydrater



—Motor was removed and taken away.
—Cables were cut and taken away.

Location ; Sludge Dehydration

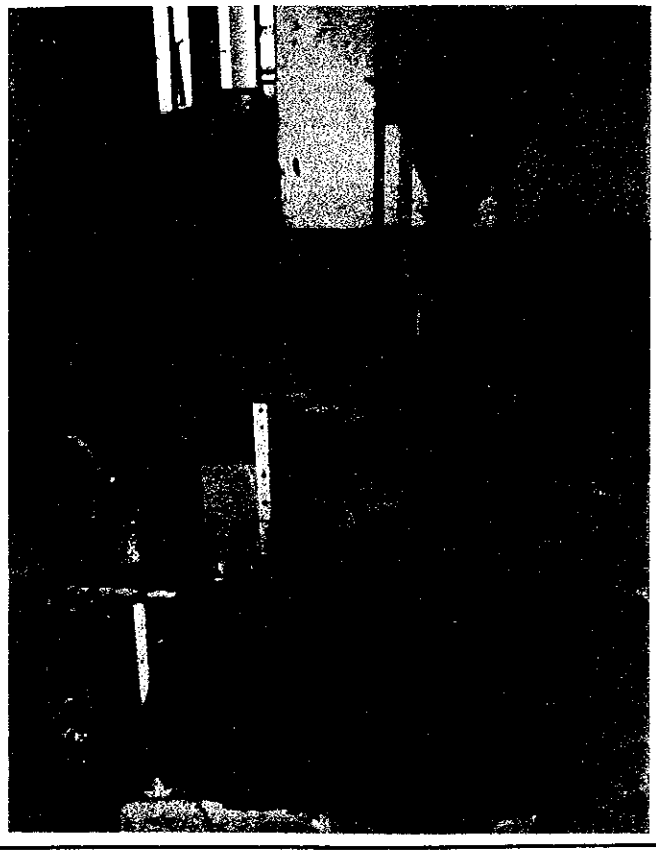
Photo No. 18—E5 | Dehydrater



—Cables were cut and taken away.

Location ; Sludge Dehydration

Photo No. 18—E6 | Dosing machine



—Motor was removed and taken away.
—Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 2, June, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Compressor station Ⅱ	Facilities	Blower

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision	A					

＊1 METAL ENCLOSED PANELS is existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 2, June, 1999

Weather Fine

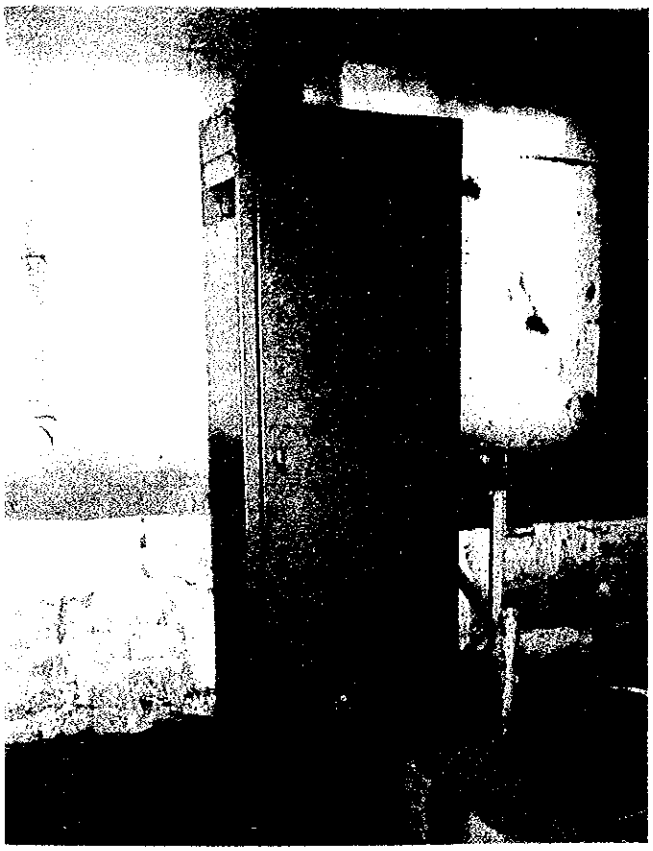
Equipment	Induction motor		
Location	Compressor station Ⅱ	Facilities	Blower

Result of inspection	
Degree of problem	There are no motors. (Nos. 3) Those motors were removed and were taken away.
Decision	A

Equipment	Cable		
Location	Compressor station Ⅱ	Facilities	Blower

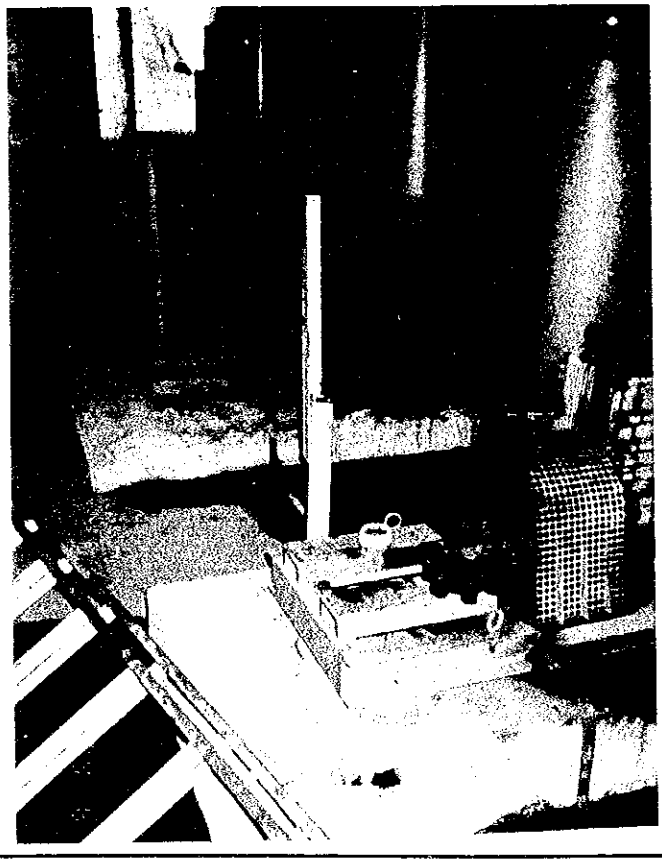
Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Compressor Station II	
Photo No. 19−E1	Out look of local control panel



−Stain and corrosion is progressing.
−Main instruments/parts were removed and taken away.
−All wiring and cables were cut and taken away.

Location ; Compressor Station II	
Photo No. 19−E2	Compressor



−Motors were removed and taken away.
−Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 10, June, 1999

Weather Fine

Equipment	Generator 400V 640kW 6pole 148321/1, 1980 Manufacturer ; UNELEC		
Location	Poewe station	Facilities	Engine generator

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	X	✻1	Currenr	X	✻3
	Stain/Corrosion	X		Frequency on stable condition	X	
	Conductivity of rotor/stator coil	—	✻2			
	Insulation resistance	—		on load fluctuate condition (with water resistance load)		
	Partial discharge	—				
	Vibration	—		Others	—	
	Abnormal sound	—				
	Overheat	—				
Decision		A				

✻1 EXITOR UNIT was destroied as such as recover is impossible.

✻2 TERMINAL BOX was destroied. So electric measuring is impossible.

✻3 As mentioned to above, operation is impossible.

INSPECTION SHEET

Date of inspection 10, June, 1999

Weather Fine

Equipment	Generator 400V 640kW 6pole 148321/2, 1980 Manufacturer ; UNELEC		
Location	Poewe station	Facilities	Engine generator

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	X	＊1	Currenr	X	＊3
	Stain/Corrosion	X		Frequency	X	
	Conductivity of rotor/stator coil	—	＊2	on stable condition		
	Insulation resistance	—		on load fluctuate condition		
	Partial discharge	—		(with water resistance load)		
	Vibration	—		Others	—	
	Abnormal sound	—				
	Overheat	—				
Decision		A				

＊1 EXITOR UNIT was destroied as such as recover is impossible.

＊2 TERMINAL BOX was destroied. So electric measuring is impossible.

＊3 As mentioned to above, operation is impossible.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

Equipment	Generator control panel		
Location	Poewr station	Facilities	Engine generator

Result of inspection						
	Physicai inspection			Functionai inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS were broken.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

Equipment	HT switch gear		
Location	Power station	Facilities	Electric facilities

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS were broken.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

Equipment	LT power distribution/motor control panel		
Location	Power station	Facilities	Electric facilities

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain/Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS were broken.

＊2 ELECTRIC INSTRUMENTS/PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

Equipment	Local control panel		
Location	Power station	Facilities	Aeration turbine

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS were broken. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

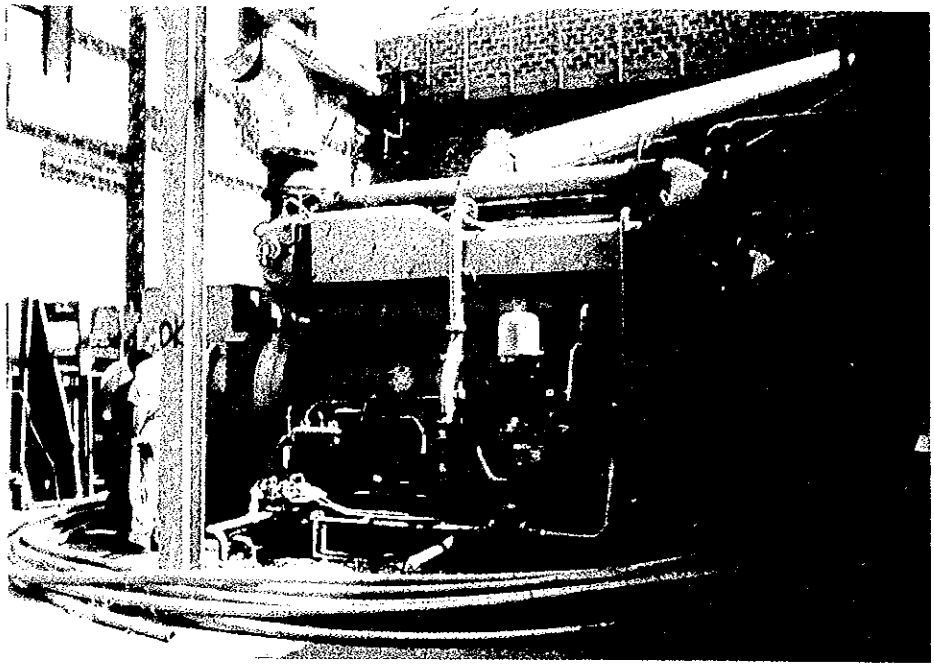
Equipment	10/0.4kV Transformer		
Location	Power station	Facilities	Electric facilities

Result of inspection	
Degree of problem	There are no transformers. (1600kVA×Nos. 2, 1000kVA×Nos. 2) Those transformers were removed and were taken away.
Decision	A

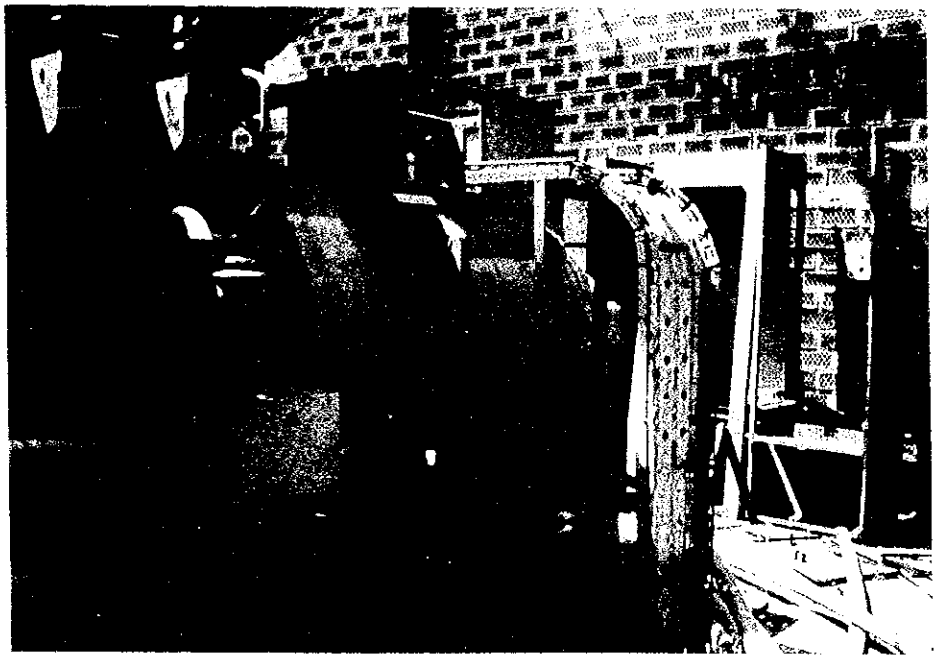
Equipment	Cable		
Location	Power station	Facilities	Electric facilities

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Power Station	
Photo No. 20—E1	Out look of engine generator

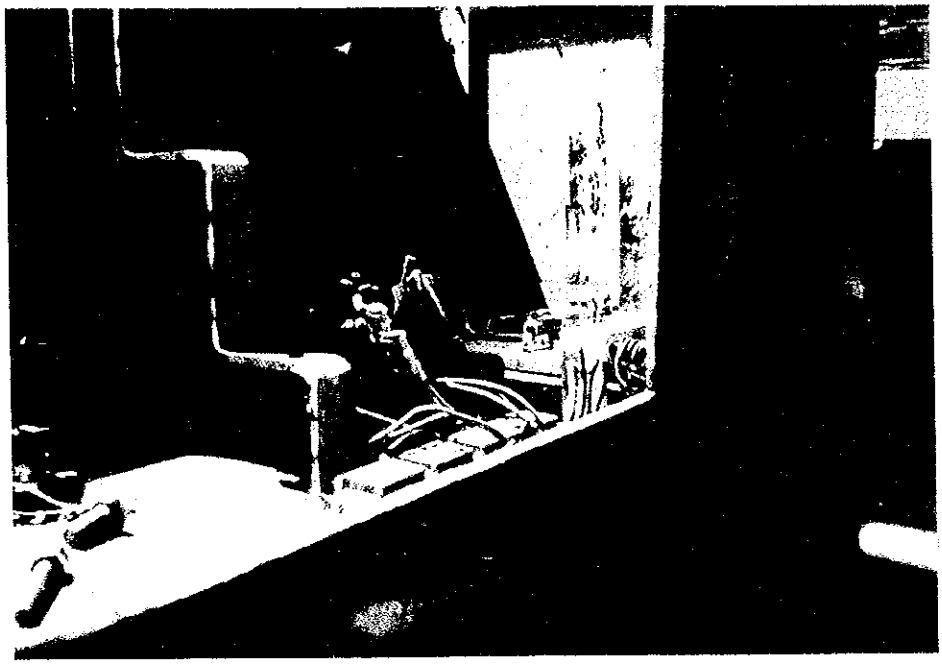


Location ; Power Station	
Photo No. 20—E2	Out look of generator



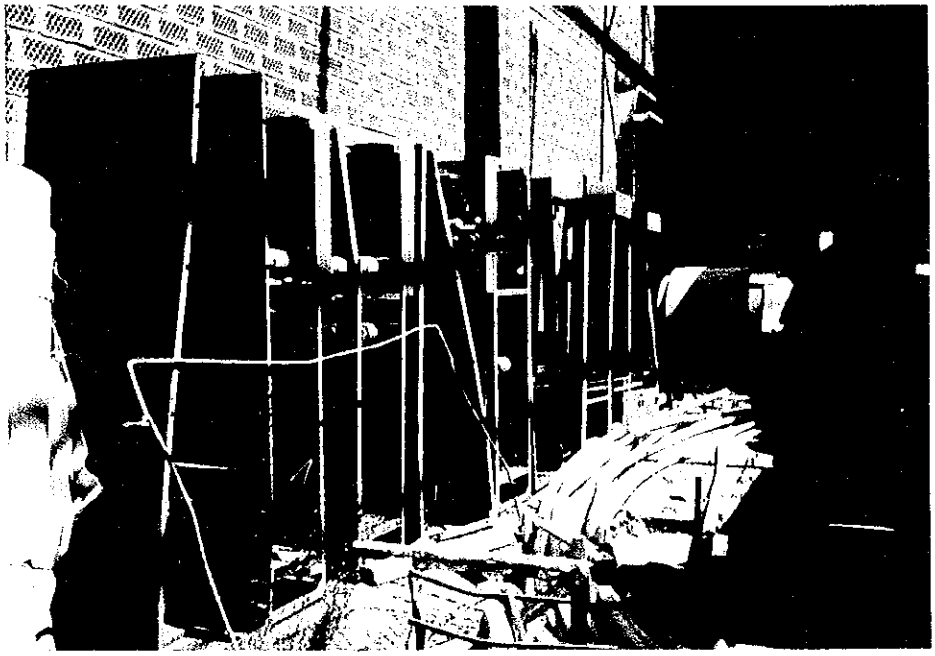
—Cables were cut and taken away.

Location ; Power Station	
Photo No. 20—E3	Excitor unit



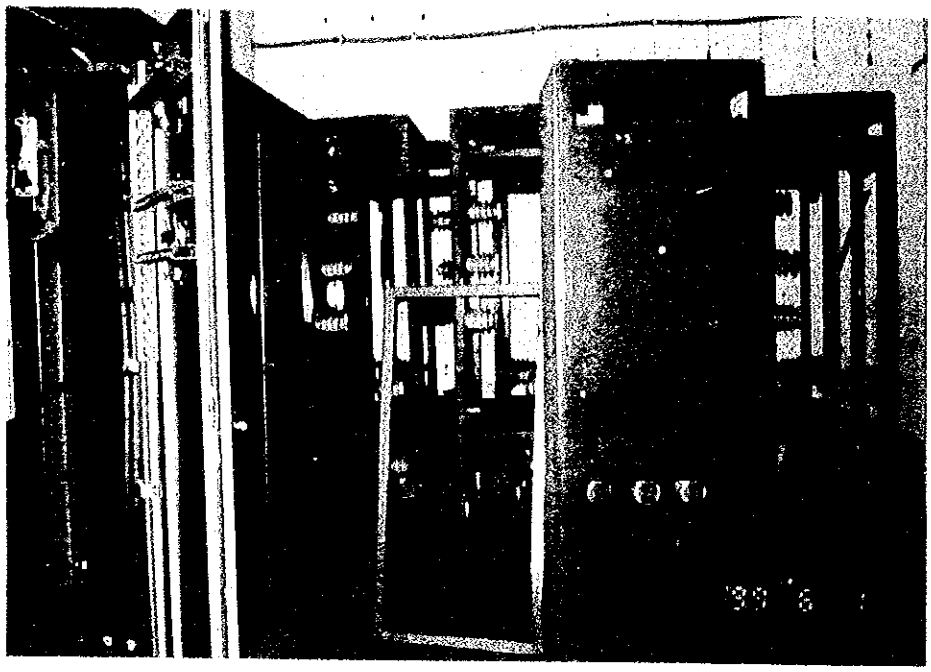
—These units of both generators were destroied.
—Main instruments/parts were removed and taken away.
—All wiring was cut and taken away.

Location ; Power Station	
Photo No. 20—E4	Generator control panel



—Metal enclosed panels were broken.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Power Station	
Photo No. 20—E5	HT switchgear and Local control panel

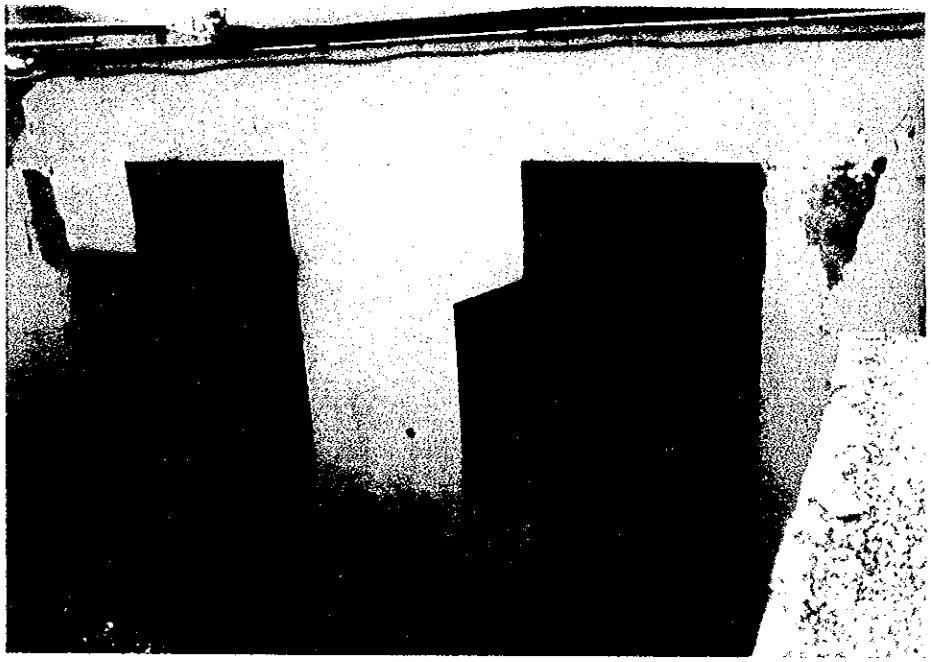


—Metal enclosed panels were broken.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Power Station	
Photo No. 20—E6	LT power distribution/motot control panel

—Stain and corrosion is progressing.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Power Station	
Photo No. 20—E7	Transformer room



—Transformer was removed and taken away.
—Cables were cut and taken away.

Location ; Power Station	
Photo No. 20—E8	Inside of transformer room

—Transformer was removed and taken away.
—Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 28, May, 1999

Weather Fine

Equipment	HT switch gear		
Location	Substation	Facilities	Electric facilities

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
		○				
Decision		A				

＊1 METAL ENCLOSED PANELS were broken.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 28, May, 1999

Weather Fine

Equipment	LT power distribution/motor control panel		
Location	Substation	Facilities	Electric facilities

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain/Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS are existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS/PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 28, May, 1999

Weather Fine

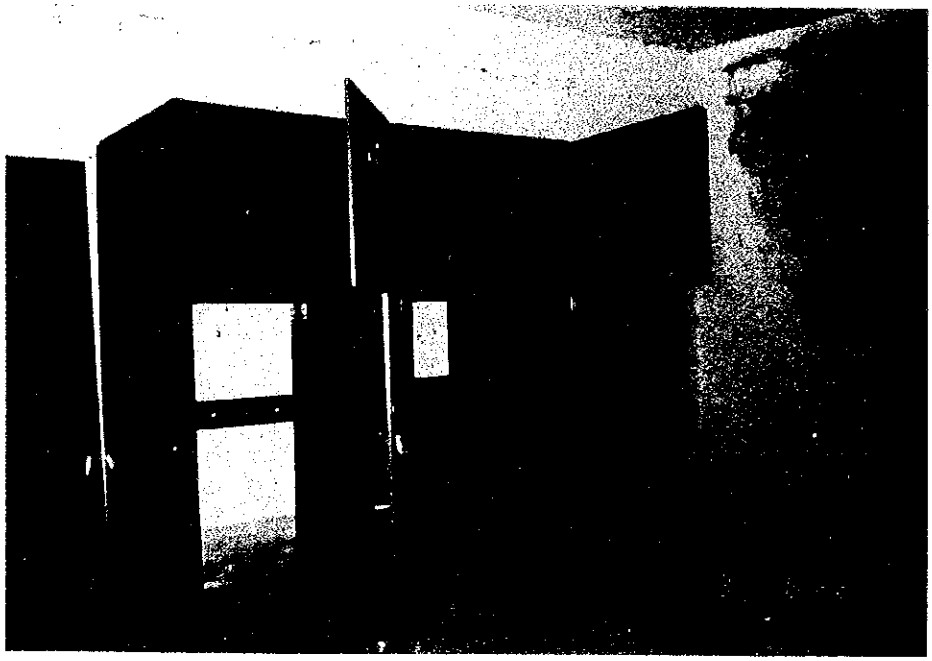
Equipment	10/0.4kV Transformer		
Location	Substation	Facilities	Electric facilities

Result of inspection	
Degree of problem	There is no transformer. (1600kVAXNos. 1) That transformer was removed and was taken away.
Decision	A

Equipment	Cable		
Location	Substation	Facilities	Electric facilities

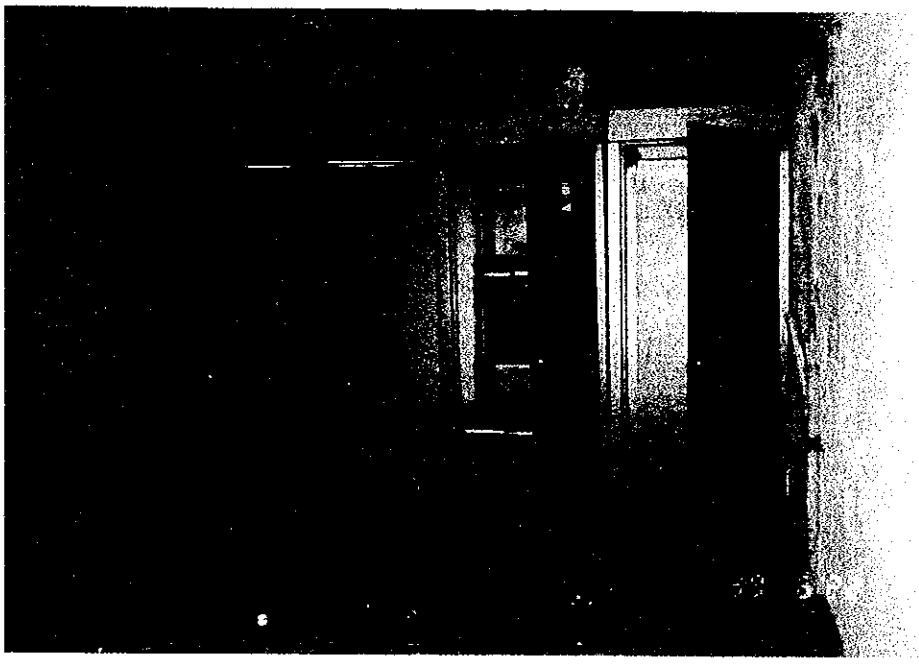
Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

Location ; Substation	
Photo No. 21—E1	HT switch gear



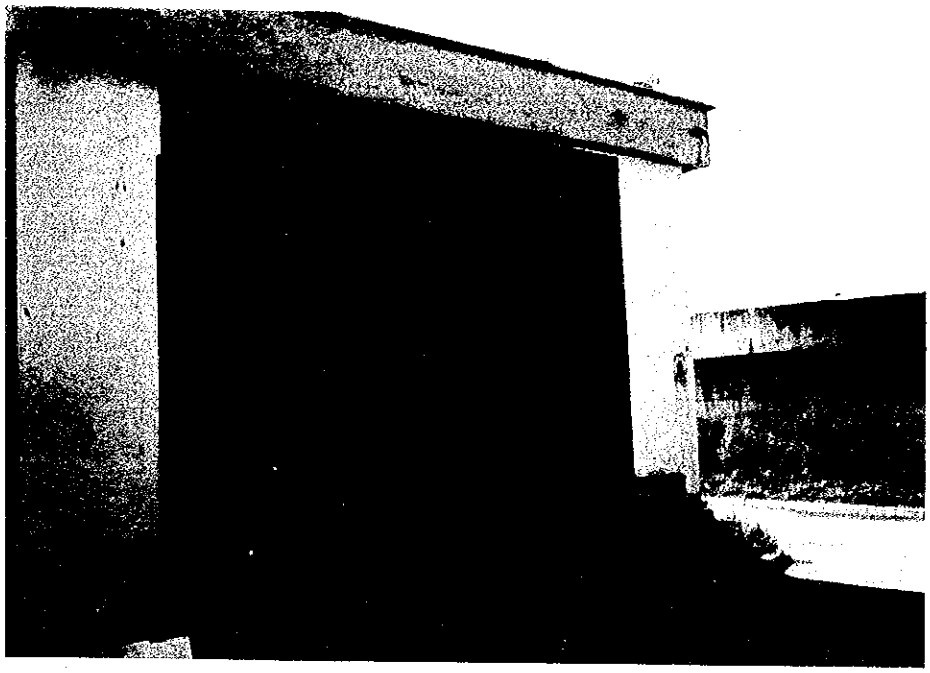
—Metal enclosed panels were broken.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Substation	
Photo No. 21—E2	LT power distribution/motot control panel



—Stain and corrosion is progressing.
—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Substation	
Photo No. 21—E3	Transformer room



—Transformer was removed and taken away.
—Cables were cut and taken away.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

Equipment	Main control panel with mimic graphic		
Location	Administration	Facilities	Control facilities

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision	A					

＊1 METAL ENCLOSED PANELS are existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 27, May, 1999

Weather Fine

Equipment	Operator console		
Location	Administration	Facilities	Control facilities

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS are existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of Inspection 27, May, 1999

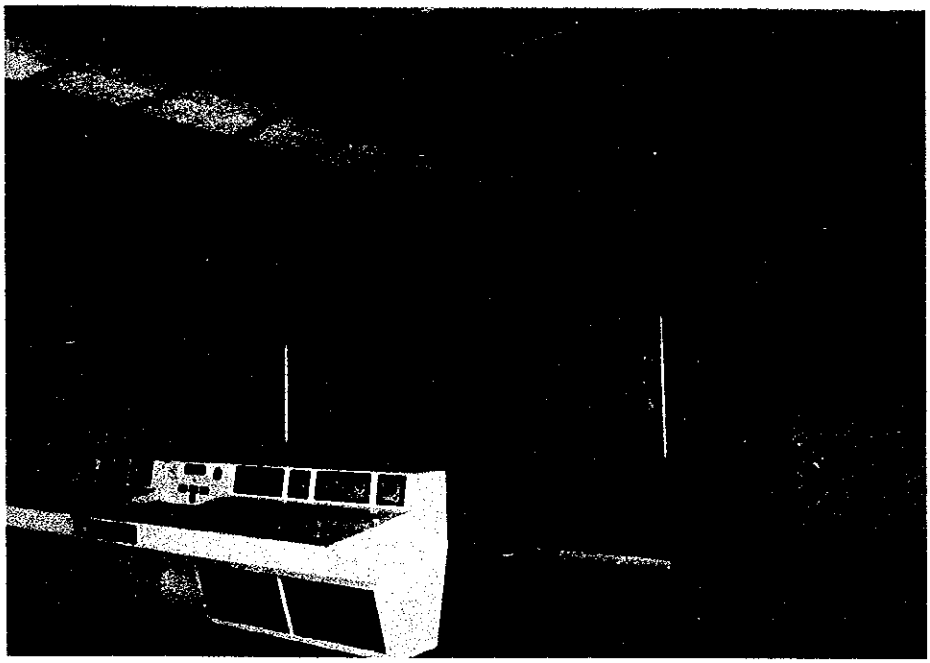
Weather Fine

Equipment	Cable		
Location	Administration	Facilities	Control facilities

Result of inspection	
Degree of problem	There are no cables. All cables were cut and were taken away.
Decision	A

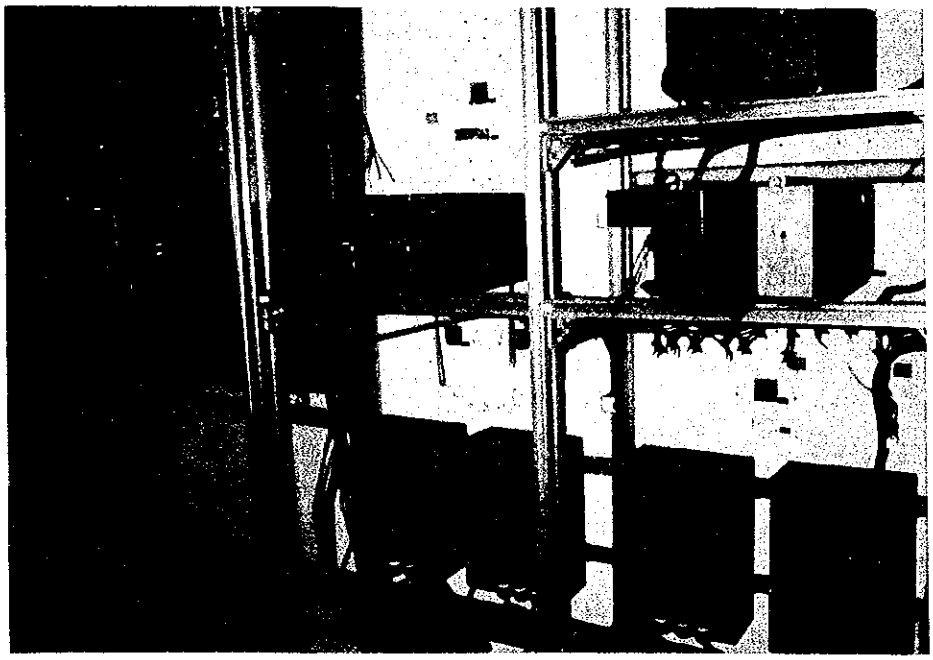
Location ; Administration

Photo No. 23—E1 | Out look of main control panel and operator console



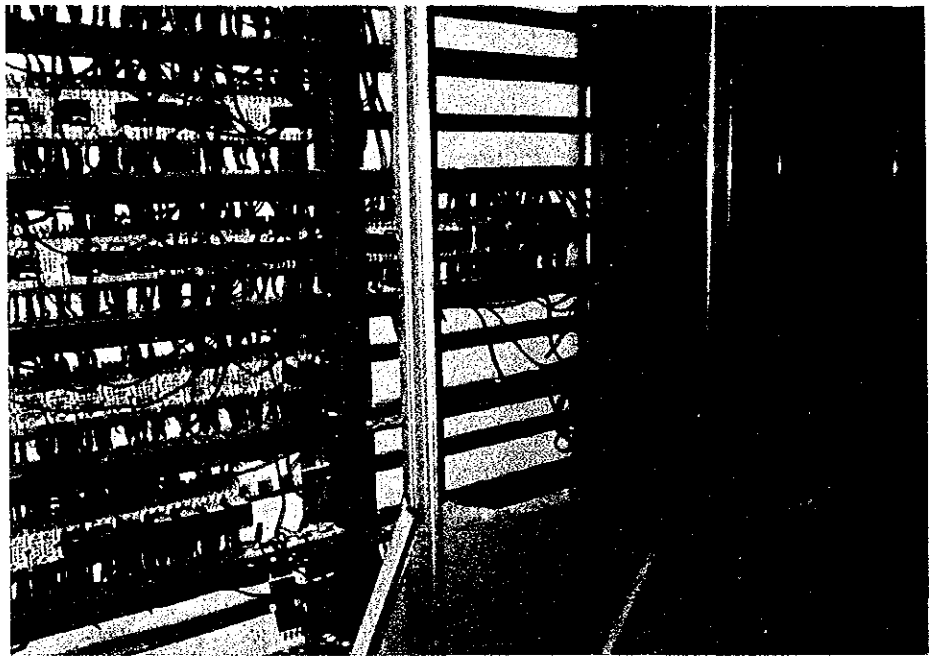
Location ; Administration

Photo No. 23—E2 | Inside of main control panel



—Main instruments/parts were removed and taken away.
—All wiring and cables were cut and taken away.

Location ; Administration	
Photo No. 23−E3	Inside of main control panel



−Main instruments/parts were removed and taken away.
−All wiring and cables were cut and taken away.

Location ; Administration	
Photo No. 23−E4	Inside of operator console

−Main instruments/parts were removed and taken away.
−All wiring and cables were cut and taken away.

INSPECTION SHEET

Date of inspection 3, June, 1999

Weather Fine

Equipment	Local control panel Manufacturer ;Fector Diaman		
Location	Service water pumping station	Facilities	Pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	×	＊1	Operation of switch	×	＊4
	Stain／Corrosion	×		Function of indicater	×	
	Looseness of instrument	×	＊2	Accuracy of meter	×	
	Looseness of terminals	×		Charging of power	×	
	Arrangement of wire	×	＊3	Sequence control function	×	
	Discoloration of wire	×				
	Insulation resistance	×				
Decision		A				

＊1 METAL ENCLOSED PANELS is existing. But stain and corrosion is progressing.

＊2 ELECTRIC INSTRUMENTS／PARTS were almost removed and were taken away.

＊3 ALL WIRING of panel inside was cut and was taken away.

＊4 NO FUNCTION to be carried out is existing.

INSPECTION SHEET

Date of inspection 23, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 37kW 2pole 965686, 1981 Manufacturer ;RADE KOCAR		
Location	Service water pumping station	Facilities	Pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	＊1	Current	—	＊3
	Stain／Corrosion	△		Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	○	＊2			
	Partial discharge	—	＊3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision		B ＊4				

＊1 CASING is no damare.

＊2 Insulation resistance measuring data;

U—V	>100MΩ	U—E	>100MΩ
V—W	〃	V—E	〃
W—U	〃	W—E	〃

＊3 Mechanical load facility exists, but is not arranged. So, on—load test can not be performed.

＊4 This motor is not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

INSPECTION SHEET

Date of inspection 23, June, 1999

Weather Cloudy

Equipment	Induction motor 380V 37kW 2pole 985918, 1981 Manufacturer ;RADE KOCAR		
Location	Service water pumping station	Facilities	Pump

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	○	*1	Current	—	*3
	Stain/Corrosion	△		Rotating speed	—	
	Conductivity of stator coil	○		Others	—	
	Insulation resistance	○	*2			
	Partial discharge	—	*3			
	Vibration	—				
	Abnormal sound	—				
	Overheat	—				
Decision		B *4				

*1 CASING is no damare.

*2 Insulation resistance measuring data;

U−V	>100MΩ	U−E	>100MΩ
V−W	〃	V−E	〃
W−U	〃	W−E	〃

*3 Mechanical load facility exists, but is not arranged. So, on−load test can not be performed.

*4 This motor is not operated for 7 years from 1992. So, OVERHAUL including change of bearing shall be applied.

INSPECTION SHEET

Date of inspection 3, June, 1999

Weather Fine

Equipment	Induction motor		
Location	Service water pumping station	Facilities	Pump

Result of inspection		
Degree of problem	There are no motor. (Nos. 2 of small capacity) Those motors were removed and were taken away.	
Decision		A

Equipment	Cable		
Location	Service water pumping station	Facilities	Pump

Result of inspection		
Degree of problem	There are no cables. All cables were cut and were taken away.	
Decision		A

Location ; Service Water Pumping Station	
Photo No. 24−E1	Out look of local control panel

−Stain and corrosion is progressing.
−Main instruments／parts were removed and taken away.
−All wiring and cables were cut and taken away.

Location ; Service Water Pumping Station	
Photo No. 24−E2	Motor(37kW)

−Motors(Nos. 2) for water pump were removed and taken away.
−Cables for all motors were cut and taken away.

INSPECTION SHEET

Date of inspection 29, May, 1999

Weather Fine

Equipment	Lighting fixture and pole		
Location	Outdoor Lighting	Facilities	Lighting

Result of inspection						
	Physical inspection			Functional inspection		
Degree of problem	Figure	△	＊1	Lighting up	△	＊2
	Stain／Corrosion	△	＊1			
Decision	B					

＊1 Some fixtures and poles were damaged. Stain and rust are yielded on all poles.

＊2 Lighting condition was checked in night. Some fixtures are out of order.

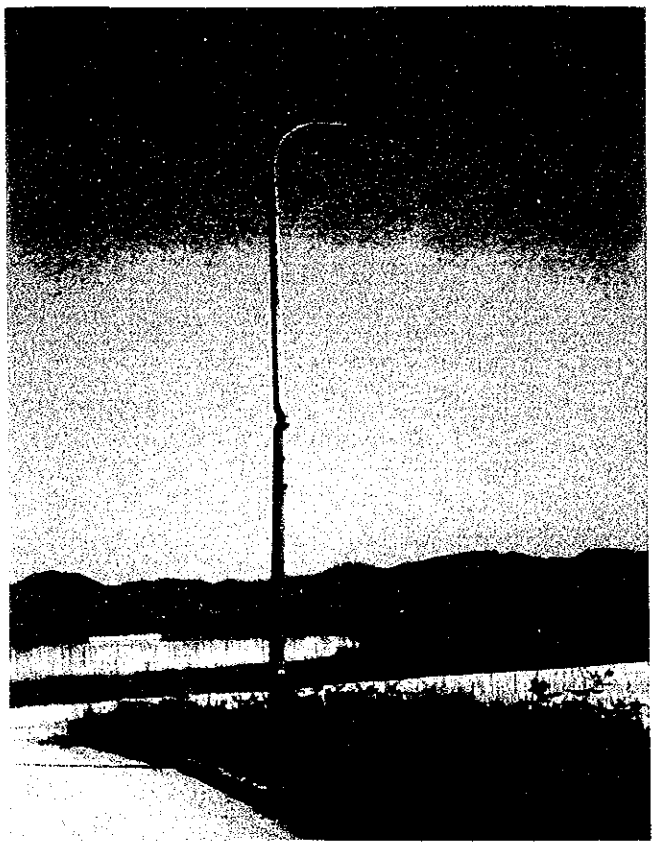
Location ; Outdoor Lighting

Photo No. 26-E1 | Out look of Lighting

-Some fixtures are out of order.

Location ; Outdoor Lighting

Photo No. 26-E2 | Lighting fixture and pole



-Some fixtures and poles are damaged.
-Stain and rust are yielded on all poles.