

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A17		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France		Manufacturer type:
Manufacturer number: FL 256284	Production Year: 1980		Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A	Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation: out door		Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10687 - A73BM58	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Fail		
Abnormal Sound:					
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Fail			

5. TEST RESULT:

Fail

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 19.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Data of Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A17		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj: FL 256284		Lot as VJULJ 225 S4		1/1980
Manufacturer/ Proizvođač		CEM - Cie Electro- Mecanique, France				
Location/ Lokacija		Aeration tank No. 5				

4. Test Data/Podatci o ispitivanju:

- A - Test insulation resistance between spools;
- B - Test insulation resistance between spools and ground;
- C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Note*: Terminal is broken, Wires cut.

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

28. 06.1999.

Time of testing:

09²⁰ - 11²⁰

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE		N° A18	
Location:		Aeration tank N° 5	
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256275	Production Year:	1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ:	0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10687 - A73BM58		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX		ELECTRO MOTORE		
		Pass	10	Pass	10	Pass
Figure:		Pass	10	Pass	10	Pass
Corrosion:	%	Pass	10	Pass	10	Pass
Insulation resistance:		Pass	10	Pass	10	Fail
Terminals:		Pass	10	Pass	10	Fail
Abnormal Sound:		Pass	10	Pass	10	Pass
Bearings:		Pass	10	Pass	10	Pass
Shafts:		Pass	10	Pass	10	Pass
Gears:		Pass	10	Pass	10	Pass
Electricity:	A	Pass	10	Pass	10	R: 45 S: 45 T: 43
Speed:	n/min	Pass	52	Pass	1465	1465
Vibration:	µm	Pass	90	Pass	90	90
Oil temperature:	°C	Pass	42	Pass	42	42
El. mot. overheating:		Pass	10	Pass	10	10
Coupling:		Pass	10	Pass	10	10
Anchor bolts:		Pass	10	Pass	10	10

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja:

19.06.1999.

2. Data of Instrument using for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
2.2. N^o: JO 33712 DB CE A185606111
2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A18		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj:	FL 256275	Lot as	VJULJ 225 S4	1/1980
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
B - Test insulation resistance between spools and ground;
C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Note*: Terminal is broken

Tested by:

Posavac Franjo

Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 04. 07.1999. Time of testing: 14⁰⁵ - 16⁰⁵

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A19		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 266257	Production Year:	1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ:	0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10660 - A64AM28		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	20	20		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 54	S: 52	T: 54
Speed:	n/min	52	1465		
Vibration:	µm	13	13		
Oil temperature:	°C	43 (28,8)			
El. mot. overheating:			Pass		
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 19.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A19		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj:	FL 256257	Lot as	VJULJ 225 S4	1/1980
Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France					
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 30.06.1999 Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A20		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256266	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10669 - A73AM37		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	20	20		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:					
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:			Fail		
Anchor bolts:		Pass			

5. TEST RESULT:

Fail

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 19.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A20		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj: FL 256266		Lot as VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A21		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diametar: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number:	Production Year:	1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A	Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10688 - A74BM56		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:					
Corrosion:	%				
Insulation resistance:					
Terminals:					
Abnormal Sound:					
Bearings:					
Shafts:					
Gears:					
Electricity:	A		R:	S:	T:
Speed:	O/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:					
Anchor bolts:					

5. NOTE:

Turbine without electro motor

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A21		380 V	37 kW	70 A	0,87	1465
		50 Hz				
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.		
2.		
3.		

	B	MOhm
4.		
5.		
6.		

	C	MOhm
7.		
8.		
9.		

5. Note/Napomena:

There is no Motor of Aerator; No Test

Tested by:

Posavac Franjo
 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 27. 06.1999. Time of testing: 15⁴⁶ - 17⁴⁵

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A22		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France		Manufacturer type:
Manufacturer number: FL 256274	Production Year: 1980	Lot: VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz	Power: 37 kW	Current: 70 A	Cos φ: 0,87
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10677 - A63BM45	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Fail		
Abnormal Sound:		Fail			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 54	S: 52	T: 54
Speed:	n/min	52	1465		
Vibration:	µm	18	19		
Oil temperature:	°C	43 (28,8)			
El. mot. overheating:			Pass		
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A22		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj:	FL 256274	Lot as	VJULJ 225 S4	1/1980
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 30.06.1999 Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A23		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256256	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10659 - A53AM27		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	20	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:					
Bearings:					
Shafts:					
Gears:					
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:			Fail		
Anchor bolts:		Pass			

5. TEST RESULT:

Fail

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A23		380 V	37 kW	70 A	0,87	1465
		50 Hz				
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

04. 07.1999.

Time of testing:

09¹⁵ – 11¹⁵

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A24		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256267	Production Year:	1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A	Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10670 – A74BM38		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Fail		
Abnormal Sound:		Fail			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 54	S: 53	T: 54
Speed:	n/min	52	1465		
Vibration:	µm	100	100		
Oil temperature:	°C	40 (24,3)			
El. mot. overheating:			Pass		
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A24		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj: FL 256267		Lot as VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm		B	MOhm		C	MOhm
1.	W2 - U2	> 100	4.	W2 - N	> 100	7.	U1 - U2	0,00
2.	W2 - V2	> 100	5.	U2 - N	> 100	8.	V1 - V2	0,00
3.	U2 - V2	> 100	6.	V2 - N	> 100	9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 MOhm;**Pass**

Tested by:

Posavac Franjo
 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE		N° A25	
Location:		Aeration tank N° 5	
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	
Manufacturer number:	Production Year:	1980	Manufacturer type:
Voltage: 380V; 50Hz	Power: 37 kW	Current: 70 A	Lot : VJULJ 225 S4 1/1980
Service: turbine drive	Installation: out door	Cos φ: 0,87	n/min: 1465
			Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10689 - A75BM57		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass			
Corrosion:	%	10			
Insulation resistance:					
Terminals:					
Abnormal Sound:					
Bearings:					
Shafts:					
Gears:					
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:					Fail
Anchor bolts:		Pass			

5. NOTE:

Turbine without electro motor

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Data of Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A25		380 V 50 Hz	37 kW	70 A	0,87	1465
		Number/Broj:		Lot as		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

- A - Test insulation resistance between spools;
- B - Test insulation resistance between spools and ground;
- C - Test of continuous of spools;

	A	MOhm
1.		
2.		
3.		

	B	MOhm
4.		
5.		
6.		

	C	MOhm
7.		
8.		
9.		

5. Note/Napomena:

There is no Motor of Aerator; No Test

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 27. 06.1999. Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A26		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256273	Production Year:	1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A	Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10676 - A62BM44		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Fail			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 38	S: 39,5	T: 40
Speed:	n/min	52	1465		
Vibration:	µm	24	25		
Oil temperature:	°C	42			
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A26		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj: FL 256273		Lot as VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 MOhm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 30.06.1999 Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A27		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256255	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10658 - A62AM26	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:					
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:			Fail		
Anchor bolts:		Pass			

5. TEST RESULT:

Fail

Verified by:

Rosanae Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A27		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj:	FL 256255	Lot as	VJULJ 225 S4	1/1980
Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France					
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 04. 07.1999. Time of testing: 11⁴⁰ - 13⁴⁰

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A28		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256269	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10671 - A75AM39		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Fail			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 41	S: 40	T: 42
Speed:	n/min	52	1465		
Vibration:	µm	100	100		
Oil temperature:	°C	44,5 (25,3)			
El. mot. overheating:			Pass		
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A28		380 V	37 kW	70 A	0,87	1465
		50 Hz.				
		Number/Broj:	FL 256269	Lot as	VJULJ 225 S4	1/1980
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A29		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diametar: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France		Manufacturer type:
Manufacturer number: FL 256287	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10690 – A76AM50	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:					
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:			Fail		
Anchor bolts:		Fail			

5. TEST RESULT:

Fail

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A29		380 V	37 kW	70 A	0,87	1465
		50 Hz				
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo
 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 27. 06.1999. Time of testing: 13²⁰ - 15²⁰

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A30		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:		
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256272	Production Year: 1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation: out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10675 - A61BM43		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 39	S: 39,5	T: 39
Speed:	n/min	52	1465		
Vibration:	µm	8,5	12		
Oil temperature:	°C	43			
El. mot. overheating:			Pass		
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE**-KONTROLNI LIST ZA OTPOR IZOLACIJE-**1. Date of Testing/Datum ispitivanja:

20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A30		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj:	FL 256272	Lot as	VJULJ 225 S4	1/1980
Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France					
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 04. 07.1999. Time of testing: 16²⁰ – 18²⁰

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A31		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256254	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10657 – A61AM25	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 54	S: 52	T: 54
Speed:	n/min	52	1465		
Vibration:	µm	80	90		
Oil temperature:	°C	42 (26)			
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A31		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj: FL 256254		Lot as VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

- A – Test insulation resistance between spools;
- B - Test insulation resistance between spools and ground;
- C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Tested by:

Posavac Franjo

 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 05. 07.1999. Time of testing: 08¹⁵ - 10¹⁵

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A32		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256269	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10672 - A76AM40	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	20	20		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 55	S: 54	T: 55
Speed:	n/min	52	1465		
Vibration:	µm	100	100		
Oil temperature:	°C	41 (26)			
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A32		380 V	37 kW	70 A	0,87	1465
		Number/Broj: FL 256269		Lot as VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Tested by:

Posavac Franjo

Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 25. 06.1999. Time of testing: 14¹⁵ – 16¹⁵

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A33		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:		
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256288	Production Year: 1980	Lot: VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation: out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10691 – A77BM50	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 39	S: 38,5	T: 39,5
Speed:	n/min	52	1465		
Vibration:	µm	19	18		
Oil temperature:	°C	41			
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A33		380 V	37 kW	70 A	0,87	1465
		50 Hz				
	Manufacturer/ Proizvođač	Number/Broj: FL 256288 Lot as VJULJ 225 S4 1/1980 CEM - Cie Electro-Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A – Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Tested by:

Posavac Franjo
 Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 27. 06.1999. Time of testing: 08⁴⁰ - 10⁴⁰

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A34		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256271	Production Year:	1980	Lot : VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A	Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10674 - A60BM42		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 39	S: 41	T: 40
Speed:	n/min	52	1465		
Vibration:	µm	100	100		
Oil temperature:	°C	42			
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N^o: A34		380 V	37 kW	70 A	0,87	1465
		50 Hz				
	Number/Broj:	FL 256271	Lot as	VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

- A - Test insulation resistance between spools;
- B - Test insulation resistance between spools and ground;
- C - Test of continuous of spools:

	A	MΩ
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MΩ
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MΩ
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MΩ (1000 Ohm/V); C ~ 0,00 MΩ;

Pass

Tested by:

Posavac Franjo

Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing: 05. 07.1999. Time of testing: 11⁴⁰ - 13⁴⁰

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A35		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer: DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel	
Service: air supply for biological treatment	Duty: permanent	Corrosive protection: epoxi painted	
Turbine diameter: 1700,00 mm	Installation: out door	Turbine speed: 51,9 tr/min	

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer: CEM-Cie Electro-Mecanique, France	Manufacturer type:	
Manufacturer number: FL 256253	Production Year: 1980	Lot : VJULJ 225 S4 1/1980	
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A Cos φ: 0,87	n/min: 1465	
Service: turbine drive	Installation: out door	Duty: permanent	

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10656 - A50AM24	Ratio: 1465/51,9/28,528	
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Pass		
Corrosion:	%	10	10		
Insulation resistance:			Pass		
Terminals:			Pass		
Abnormal Sound:		Pass			
Bearings:		Pass	Pass		
Shafts:		Pass			
Gears:		Pass			
Electricity:	A		R: 40	S: 40	T: 40
Speed:	n/min	52	1465		
Vibration:	µm	100	100		
Oil temperature:	°C	44,5 (25,3)			
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Pass

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja:

20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
 2.2. N^o: JO 33712 DB CE A185606111
 2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o : A35		380 V	37 kW	70 A	0,87	1465
		50 Hz				
		Number/Broj:	FL 256253	Lot as	VJULJ 225 S4	1/1980
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
 B - Test insulation resistance between spools and ground;
 C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;**Pass**

Tested by:

Posavac Franjo B.Sc.

AERATION TURBINE TEST LOAD INSPECTION SHEET

1. GENERAL

Date of testing:

Time of testing:

2. INSTRUMENT USED FOR MEASUREMENT (See Attachment)

3. EQUIPMENT TESTED DATA

AERATION TURBINE	N° A36		
Location:	Aeration tank N° 5		
Aeration turbine type: Fixed position surface aerator	Manufacturer:	DEGREMONT	Materials (Shaft/Rotor): carbon steel/carbon steel
Service: air supply for biological treatment	Duty:	permanent	Corrosive protection: epoxi painted
Turbine diameter: 1700,00 mm	Installation:	out door	Turbine speed: 51,9 tr/min

Elektro Motore:			
Electromotore type: Induction motor	Manufacturer:	CEM-Cie Electro-Mecanique, France	Manufacturer type:
Manufacturer number: FL 256270	Production Year:	1980	Lot: VJULJ 225 S4 1/1980
Voltage: 380V; 50Hz Power: 37 kW	Current: 70 A	Cos φ: 0,87	n/min: 1465
Service: turbine drive	Installation:	out door	Duty: permanent

Coupling:		
Coupling type: Periflex	Manufacturer: TEXROPE France	Manufacturer type:

Gear Box:		
Gear box type: 2 step vertical shaft	Manufacturer: Hansen Patent France	Manufacturer type: NE 36 AN
Manufacturer number: E 10673 - A77AM41		Ratio: 1465/51,9/28,528
Service: turbine drive	Installation: out door	Duty: permanent

4. TEST DATA

Description	Unit	GEAR BOX	ELECTRO MOTORE		
Figure:		Pass	Fail		
Corrosion:	%	25	35		
Insulation resistance:			Pass		
Terminals:			Fail		
Abnormal Sound:					
Bearings:					
Shafts:					
Gears:					
Electricity:	A		R:	S:	T:
Speed:	n/min				
Vibration:	µm				
Oil temperature:	°C				
El. mot. overheating:					
Coupling:			Pass		
Anchor bolts:		Pass			

5. TEST RESULT:

Fail

Verified by:

Posavac Franjo

Posavac Franjo B.Sc.

INSPECTION SHEET FOR INSULATION RESISTANCE

-KONTROLNI LIST ZA OTPOR IZOLACIJE-

1. Date of Testing/Datum ispitivanja: 20.06.1999.

2. Instrument used for measurement/Podatci o instrumentu za ispitivanje:

2.1. Type/Tip: Instalation Tester LEM
2.2. N^o: JO 33712 DB CE A185606111
2.3. Producer/Proizvođač: NORMA, Austria

3. Equipment tested/Podatci o testiranoj opremi:

Equipment/ Oprema	Induction motor/ Indukcioni motor	Voltage/ Napon:	Power/ Snaga:	Current/ Struja:	cos φ	n/min
Aerator N ^o :		380 V	37 kW	70 A	0,87	1465
A36		Number/Broj: FL 256270		Lot as VJULJ 225 S4 1/1980		
	Manufacturer/ Proizvođač	CEM - Cie Electro- Mecanique, France				
Location/ Lokacija	Aeration tank No. 5					

4. Test Data/Podatci o ispitivanju:

A - Test insulation resistance between spools;
B - Test insulation resistance between spools and ground;
C - Test of continuous of spools:

	A	MOhm
1.	W2 - U2	> 100
2.	W2 - V2	> 100
3.	U2 - V2	> 100

	B	MOhm
4.	W2 - N	> 100
5.	U2 - N	> 100
6.	V2 - N	> 100

	C	MOhm
7.	U1 - U2	0,00
8.	V1 - V2	0,00
9.	W1 - W2	0,00

5. Test Result/Rezultati testa: A and B: > 0,38 MOhm (1000 Ohm/V); C ~ 0,00 Mohm;

Pass

Note*: Terminal is broken

Tested by:

Posavec Franjo

Posavac Franjo B.Sc.