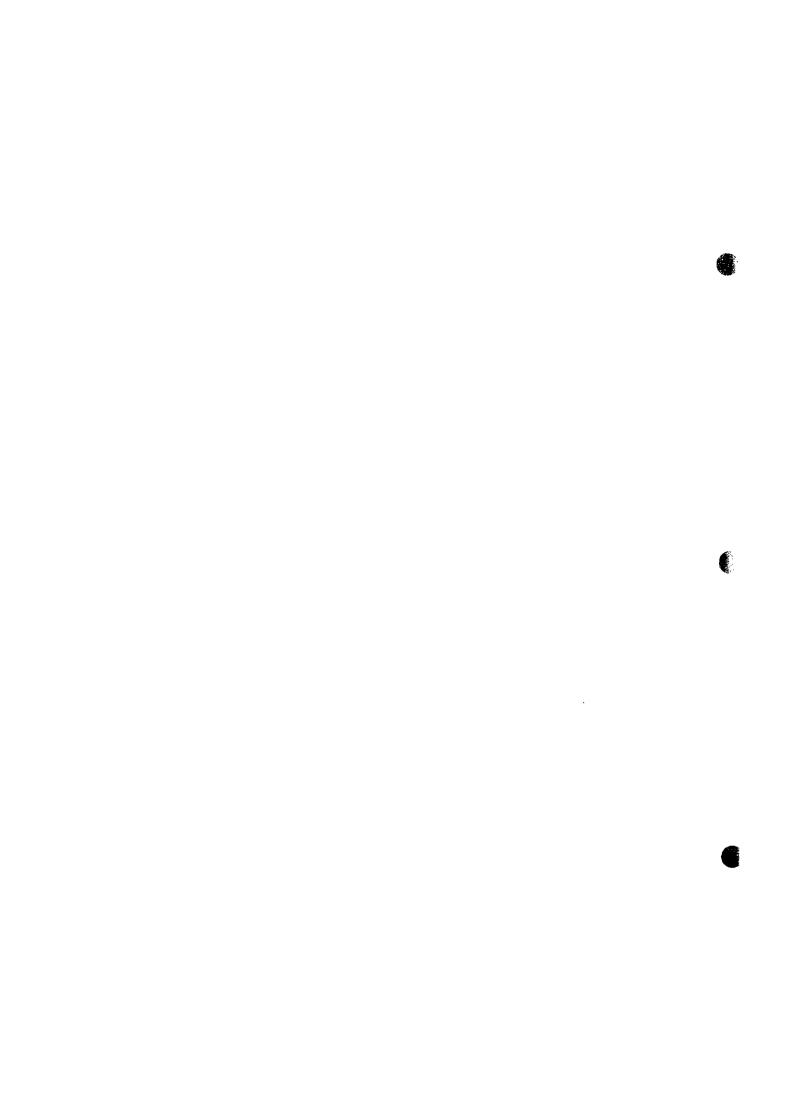
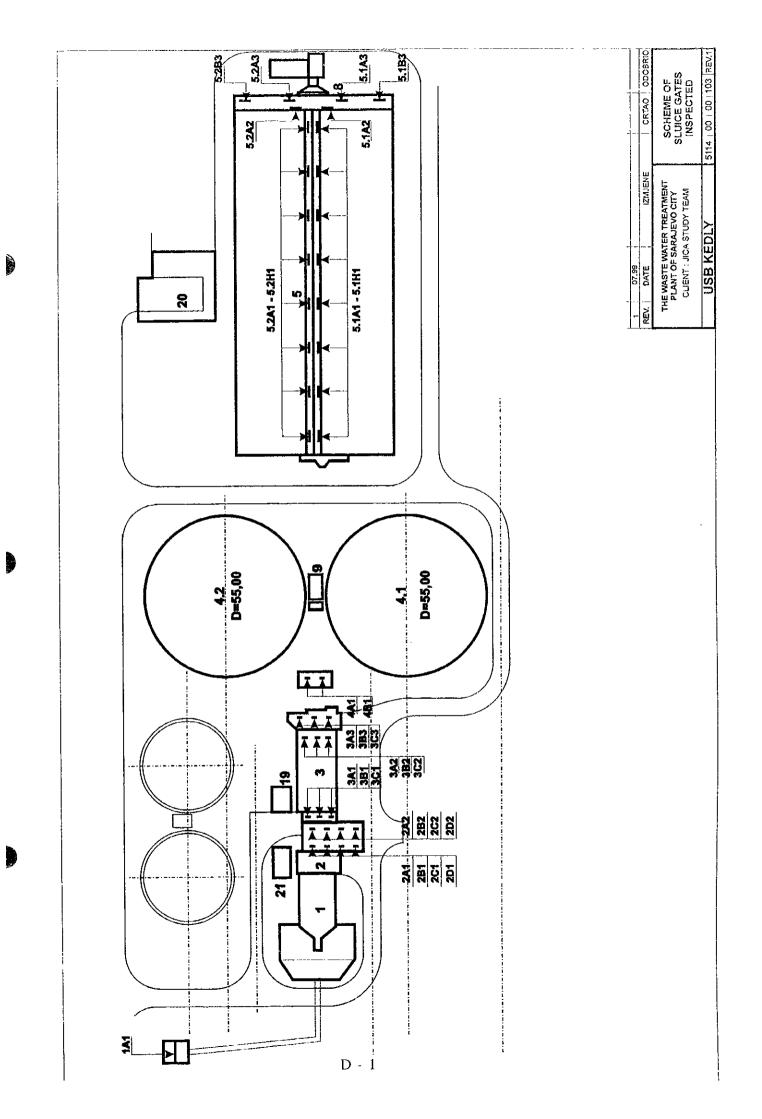
# APPENDIX D

# SLUICE GATE INSPECTION

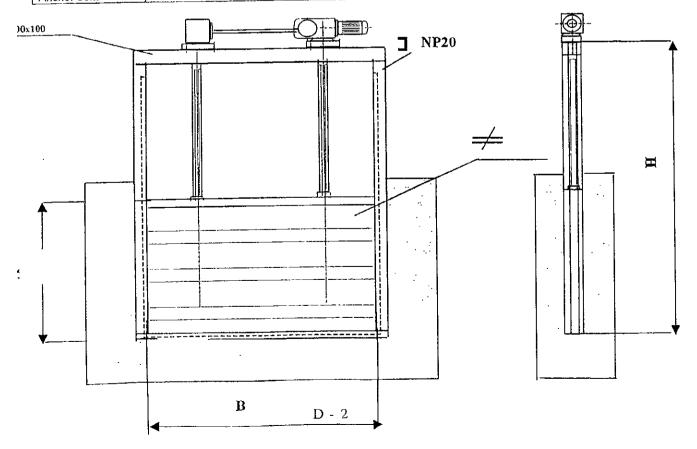




# sluice gate with motor drive $N^o 1\text{-}A1$

Location:	Main colle	ctor outlet			Date	<u> </u>	
Sluice gate type:		Sluice gate with motor drive		Manufacturer:	MIN Niš SR Yugoslavia		
Service:		Raw Waste Water inlet fermture		Type:	2 shaft		
Installation: out door					Duty:	temporar	у
Main drive		motor			Reserve drive	manual	
Dimension AxB (mm) 2000 x 2000			0		Total Height H mm	~7000	
Material frame carbon steel			Material plate		carbon steel		
Gasket	<u> </u>	rubber		Screw shaft		carbon st	teel
	MOTOR DRI	JΕ					
Electro motor		motor +	otor + gear box Ma		nufacturer:	unknown	
LIEGIO MOIO	dilvo typo.	<u> </u>		nufacturer type:	unknown		
Manufacturer	Manufacturer number				duction Year	1980	
Voltage	380V	l 50Hz	Power		KW	N/min	1465
Service:	gate d	rive	Installation		out door	Duty:	temporary

Service:	gate drive	Installation	out door	Duty	; temporary			
4. INSPECTIO	N DATA							
		GATE			ELECTRO MOTOR DRIVE			
	Present situation	Recommendation to reparation		t situation	Recommendation for reparation			
Figure	VERY BAD	CONSTRUCTION	IS BAD NO MO		NEW DRIVE			
Frame Corrosion	YES VERY 90%	NEVER WORK PR						
Plate Corrosion	YES 100% surface	RECOMMENDATI	• · · · · · · · · · · · · · · · · · · ·	SEMBLED				
Shafts	OUT OF FUNCTION	CHANGE WITH N						
Manuel drive	OUT OF FUNCTION	SLUICE GATE WI	in					
Bearings	NO	MOTOR DRIVE	ł					
Gasket	NO	_						
Painting	VERY BAD			<del></del>	<del></del>			
Anchor bolts	VERY BAD	<u> </u>			<u> </u>			

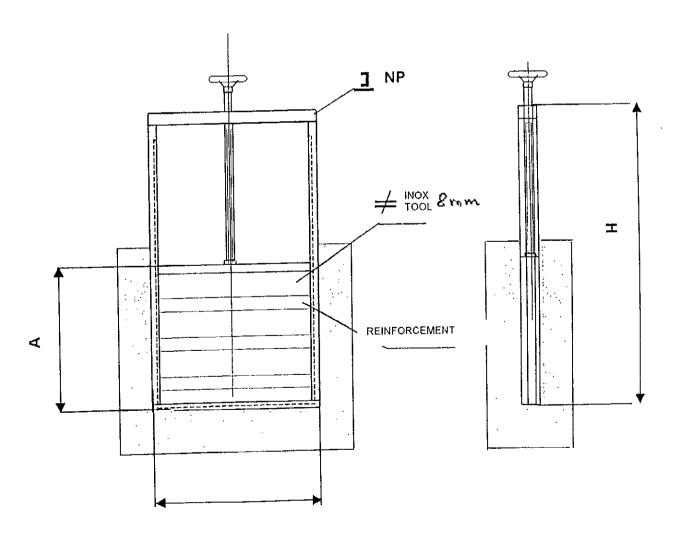


## SLUICE GATE WITH MANUAL DRIVE Nº2-A1

Lagation	10	creen chamber inlet		ate		04.07.1999
Location: Sluice gate type		Sluice gate with manual drive	Manufacturer:			TION HYDRAULIQUE AMUS FRANCE
Service:		Waste Water inlet in screen chamber	Type:		1A	
		VVasio VVaice in a series	No		22154 1	22154 1A
Ladallations		out door	Duty:		tempora	ary
Installation:		Manual by screw	Reserve drive		no	
Main drive Dimension AxB		1600 x 1600			~3700	
(mm)		the stock since posted	Material plate		INOX st	leel
Material frame	е	carbon steel-zinc coated	Screw shaft		INOX s	leel
Gasket		rubber				

4 INSPECTION DATA

resent situation K	Recommendation for reparation  CLEANING, SAND	Present situation	Recommendation for, reparation
K		014	
ES 40% O K N FUNCTION K O	BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING
11 11 10		NEW GASKET	NEW GASKET



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THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

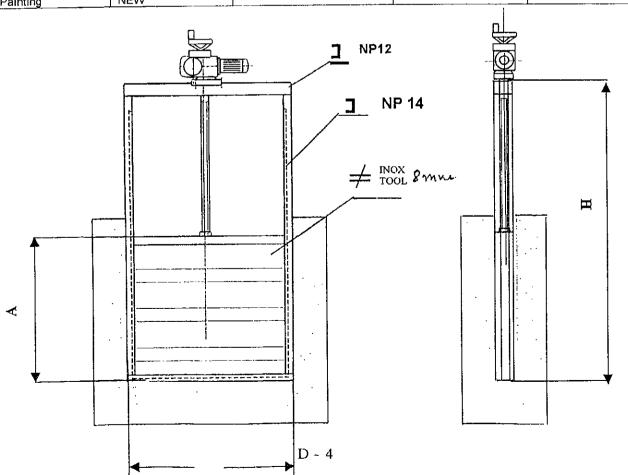
## SLUICE GATE WITH MOTOR DRIVE

## Nº2-B1

Location:	Screen char	nber Inle	t		Date		L	
Sluice gate type		Sluice gate with motor drive		Manufacturer:			TON HYDRAULIQUE MUS FRANCE	
Service: Waste Water in		Vater inle	t in screen cham	ber	Type:		1C (1 sh	aft)
OCIVIOO.	closure				No		22157 10	)
Installation:	in door	in door		Duty:		temporar	у	
Main drive	motor			Reserve drive		manuel		
Dimension AxB (mm)	1850 x	1850 x 1600			Total Height H mm		~3450	
Material frame	carbon	carbon steel-zinc coated		Material plate		INOX steel		
Gasket	guma				Screw shaft		INOX steel	
ELECTRO MO	TOR DRIVE							
Electro motor d		motor +	gear box	ear box Manufacturer:		nufacturer: AUMA		•
	• •			Ma	nufacturer type:	ufacturer type: SA 26 A		
Manufacturer number			Pro	oduction Year		1980		
Voltage	380V 50	 )Hz	Power		F	(W	N/min	
Closing torque			Opening tor	que				
Service:	gate driv	/e	Installation		out door		Duty:	temporary

Service: | yate of

	G	ATE	ELECTRO MOTOR DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND BLASTING AND NEW CORROSION	NO MOTOR	NEW DRIVE	
Frame Corrosion	NO				
Plate Corrosion	NO				
Shafts	OK	PROTECTION			
Manuel drive	OUT OF FUNCTION	] NEW GASKET		1	
Bearings	OK	]			
Gasket	NO	_			
Painting	NEW				

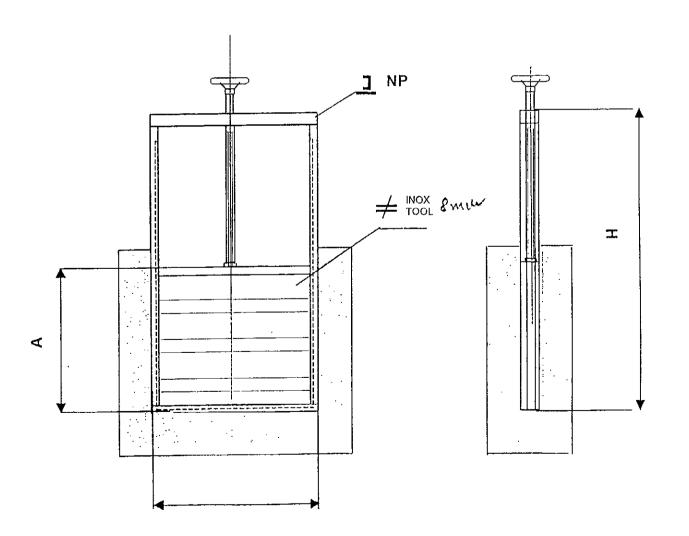


## SLUICE GATE WITH MANUAL DRIVE Nº2-C1

Location:	Screen chamber inlet		Da	te		04.07.1999
Sluice gate type	Sluice gate with manual drive	Manufacture	er:	1		TION HYDRAULIQUE AMUS FRANCE
Service:	Waste Water inlet in screen chamber	Type:			1A	
OCTVICE.				22155 1A		
Installation:	out door	Dufy:		temporary		
Main drive	Manual by screw	Reserve drive		no		
Dimension AxB (mm)		Total Height H mm		~3700		
Material frame	carbon steel-zinc coated	Material pla	te		INOX st	teel
Gasket	rubber	Screw shaft			INOX st	eel

4. INSPECTION DATA

4, INSPECTION		GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND	OK	CLEANING AND	
FrameCorrosion	YES 40%	BLASTING AND NEW		GREASING	
Plate Corrosion	NO	CORROSION			
Shafts	OK	PROTECTION		t	
Manuel drive	IN FUNCTION	NEW GASKET	!	ļ	
Bearings	OK				
Gasket	NO				
Peinting	NEW	<u> </u>			

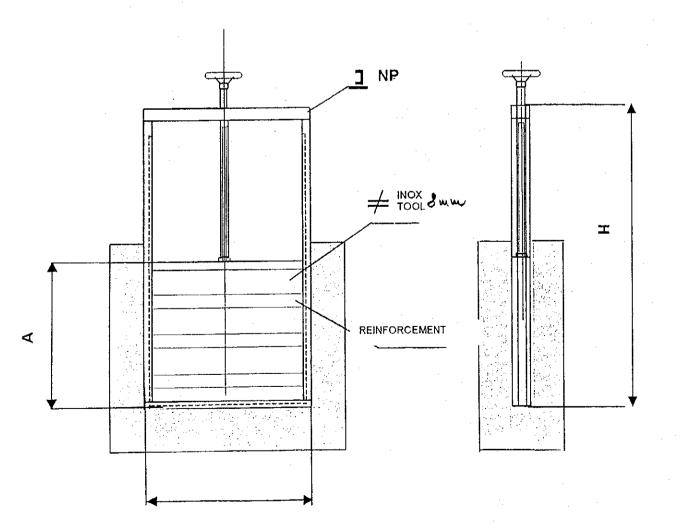


# SLUICE GATE WITH MANUAL DRIVE N°2-D1

Location:	Screen chamber inlet	Da Da	ite 04.07.1999
Sluice gate type		Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water inlet in screen chamber	Type:	1A
00,7100.		No	22156 1A
Installation:	out door	Duty:	temporary
Main drive	Manual by screw	Reserve drive	no
Dimension AxB (mm)		Total Height H n	nm ~3700
Material frame	carbon steel-zinc coated	Material plate	INOX steel
Gasket	rubber	Screw shaft	INOX steel

4. INSPECTION DATA

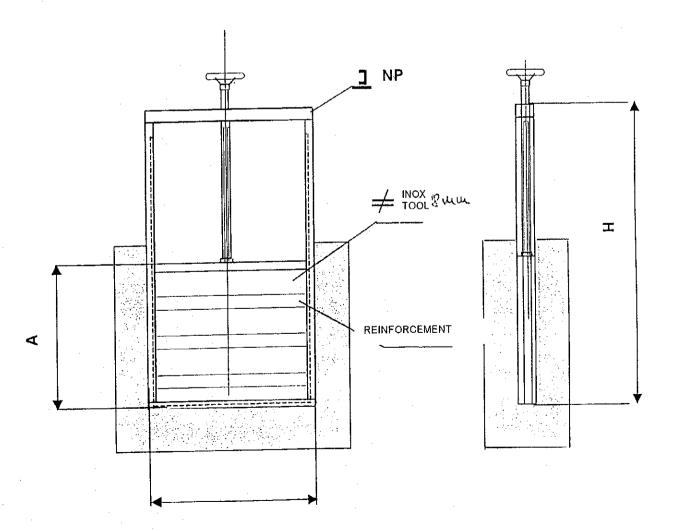
4. INOTESTIC		GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	ОК	CLEANING, SAND	OK	CLEANING AND	
FrameCorrosion	YES 40%	BLASTING AND NEW CORROSION PROTECTION		GREASING	
Plate Corrosion	NO				
Shafts	OK				
Manuel drive	IN FUNCTION	NEW GASKET			
Bearings	OK		1		
Gasket	NO				
Peinting	NEW				



## SLUICE GATE WITH MANUAL DRIVE Nº2-A2

Location:	Screen chamber outlet	Da		04.07.1999	
Sluice gate type:		Manufacturer:		CTION HYDRAULIQUE RAMUS FRANCE	
Service:	Waste Water outlet from screen	Type:	1D		
Service.	chamber	No	22150	22150 1D	
Installation:	out door	Duty:	tempor	ary	
Main drive	Manual by screw	Reserve drive	no		
Dimension AxB	1600 x 1600	Total Height H r	nm ~3700		
(mm)	carbon steel-zinc coated	Material plate	INOX s	steel	
Material frame Gasket	rubber	Screw shaft	INOX s	steel	

4. INSPECTIO		GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket	OK YES 40% NO OK IN FUNCTION OK NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	ОК	CLEANING AND GREASING	



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THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

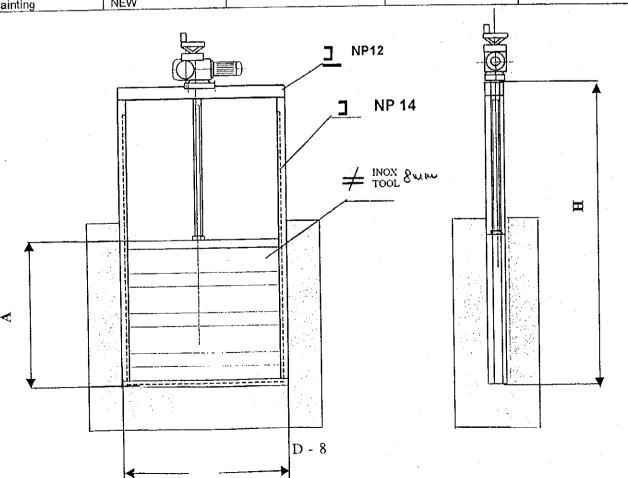
INSPECTION SHEET

## SLUICE GATE WITH MOTOR DRIVE N°2-B2

	117	<b>-</b> ~ ~	
Location:	Screen chamber outlet	Date	
Sluice gate typ	de la	Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water outlet from screen	Type:	1F (1 shaft)
Service.	chamber	No	22161 1F
Installation:	in door	Duly:	temporary
Main drive	motor	Reserve drive	manuel
Dimension Ax		Total Height H	mm ~3450
(mm)		Material plate	INOX steel
Material frame	carbon steel-zinc coated	Corou choff	INOX steel

i carbon s	n steel-zinc coateu			10,000,000	idional plate		
guma				Screw shaft		INOX ste	<u>el</u>
DRIVE							
Electro motor drive type:		motor + gear box Mar		Manufacturer:		AUMA	
.yr	*	·		Manufacturer type:		SA 26 A	
Manufacturer number		Production Year			1980		
380V 50	Hz	Power			KW	N/min	
<u> </u>		Opening toro	ue				
gate drive	е	Installation		out door		Duty:	temporary
	guma DRIVE type: er 380V 50	guma DRIVE type: motor + g	DRIVE lype: motor + gear box  er  380V 50Hz Power  Opening toro	guma  DRIVE  type: motor + gear box Ma  Ma  er Pro  380V 50Hz Power  Opening torque	guma Screw shaft  DRIVE  type: motor + gear box Manufacturer:  Manufacturer type er Production Year  380V 50Hz Power Opening torque	guma   Screw shaft     DRIVE     type:   motor + gear box   Manufacturer:     Manufacturer type:     Production Year     380V 50Hz   Power   KW     Opening torque	guma   Screw shaft   INOX ste

4. INSPECTION	GATE		ELECTRO MOTOR DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND	NO MOTOR	NEW DRIVE	
Frame Corrosion	NO	BLASTING AND NEW			
Plate Corrosion	NO	CORROSION			
Shafts	OK	PROTECTION	İ		
Manuel drive	OUT OF FUNCTION	☐ NEW GASKET			
Bearings	OK				
Gasket	NO				
Painting	NEW				



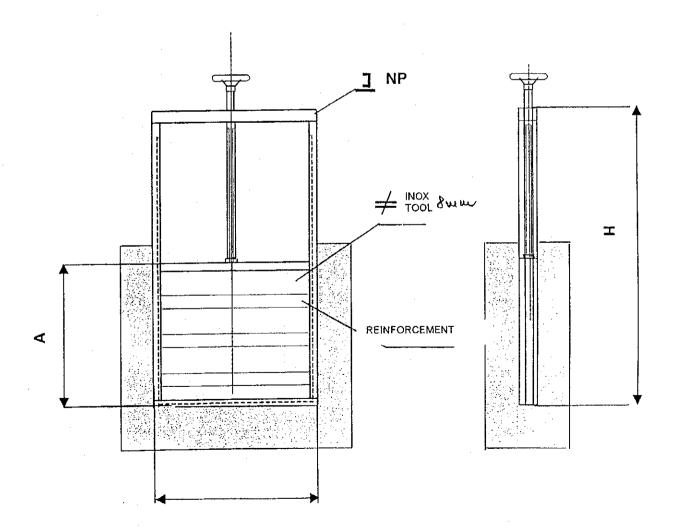
#### SLUICE GATE WITH MANUAL DRIVE

## Nº2-C2

Location:	Screen chamber outlet		ite	04.07.1999	
Sluice gate typ		Manufacturer:	1	STRUCTION HYDRAULIQUE ENT RAMUS FRANCE	
Service:	Waste Water outlet from screen	Type:	1	D	
<b></b>	chamber	No 22		22159 1D	
Installation:	out door	Dutý:		temporary	
Main drive	Manual by screw	Reserve drive	n	no	
Dimension AxE (mm)	ension AxB 1600 x 1600 Total Height H mm		nm ~	~3700	
Material frame	carbon steel-zinc coated	Material plate		NOX steel	
Gasket	rubber	Screw shaft		INOX steel	

A INSPECTION DATA

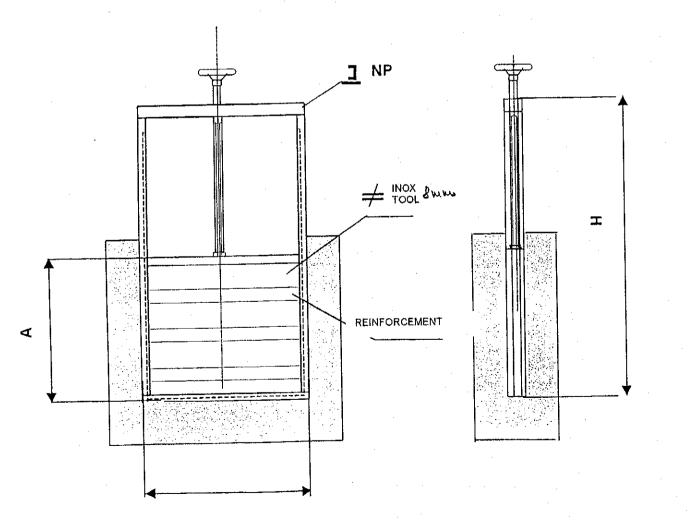
	GATE		DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	OK	CLEANING, SAND	OK	CLEANING AND
FrameCorrosion	YES 40%	BLASTING AND NEW		GREASING
Plate Corrosion	NO	CORROSION		
Shafts	OK	PROTECTION		
Manuel drive	IN FUNCTION	NEW GASKET		1
Bearings	OK			
Gasket	NO			
Peinting	NEW			



## SLUICE GATE WITH MANUAL DRIVE N°2-D2

Landina	Screen chamber outlet		Date		04.07.1999
Location: Sluice gate typ		Manufacture			TION HYDRAULIQUE AMUS FRANCE
Service:	Waste Water outlet from scree chamber	n Type: No		1D 22158 1	
Installation: Main drive	out door Manual by screw		Reserve drive		ary
Dimension Axl (mm)		Total Height  Material plat		~3700 INOX s	la el
Material frame Gasket	carbon steel-zinc coated rubber		Screw shaft		leel

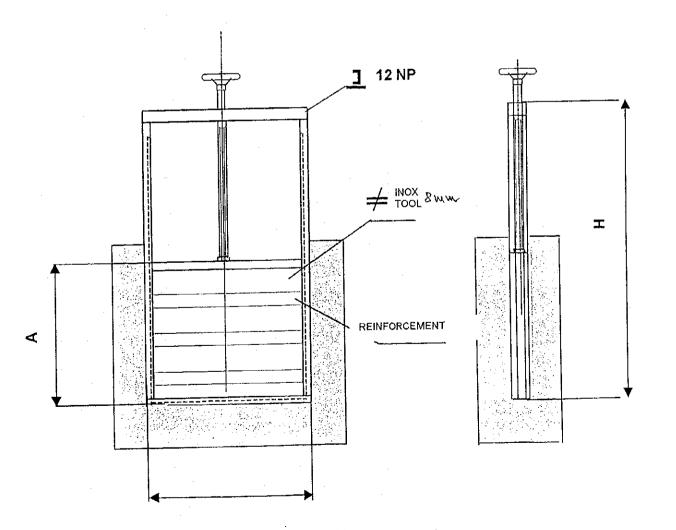
4. INSPECTION	ON DATA		L DDIVE		
		GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND BLASTING AND NEW	ОК	CLEANING AND GREASING	
FrameCorrosion	YES 40%				
Plate Corrosion	NO	CORROSION			
Shafts	OK	PROTECTION			
Manuel drive	IN FUNCTION	NEW GASKET			
Bearings	OK			· ·	
Gasket	NO				
Peinting	NEW				



## USB K Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE Nº3-A1

1 13 1	Grit chamber inlet	Da		05.07.1999	
Location: Sluice gate type	111 manual delica	Manufacturer:		CTION HYDRAULIQUE RAMUS FRANCE	
~ <del>~</del>	Waste Water inlet in grit chamber	Type:	2A		
Service:	VVaste vvator mot in g.i. c.	No	22162	22162 2A	
Itallation:	out door	Duty:	tempor	ary	
Installation: Main drive	Manual by screw	Reserve drive	no		
Dimension AxE		Total Height H r	nm   ~3300		
(mm)		Material plate	INOX	steel	
Material frame		Screw shaft	INOX		
Gasket	rubber	Sciew Share	INOX	7,001	

4. INSPECTION	DN DATA	GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 60% NO OK IN FUNCTION OK NO NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING	

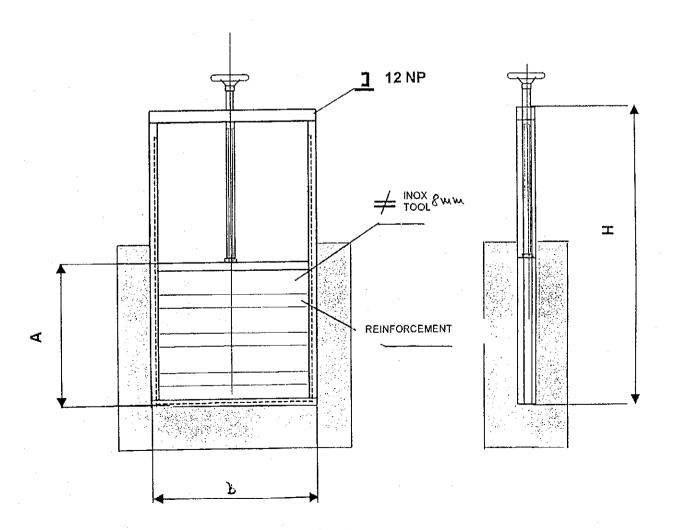


## USB KEDLY JICA STUDY TEAM Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE Nº3-C1

Location:	Grit chamber inlet	Da	nte 05.07.1999
Sluice gate type:		Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water inlet in grit chamber	Type:	2A
Oct vice.		No	22164 2A
Installation:	out door	Duty:	temporary
Main drive	Manual by screw	Reserve drive	no
Dimension AxB (mm)	900 x 1600	Total Height H	nm ~3300
Material frame	carbon steel-zinc coated	Material plate	INOX steel
Gasket	rubber	Screw shaft	INOX steel

4 INSPECTION DATA

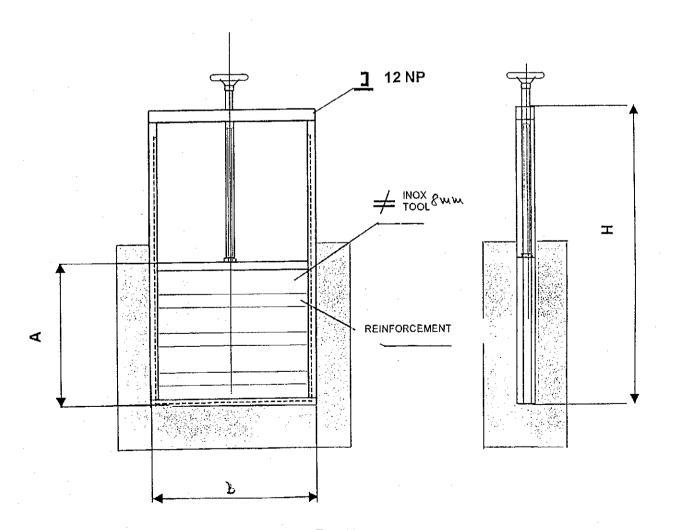
4. INSPECTION	GATE		DRIVE	
· · · · · · · · · · · · · · · · · · ·	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	OK	CLEANING, SAND	OK	CLEANING AND
FrameCorrosion	YES 50%	BLASTING AND NEW	ļ ·	GREASING
Plate Corrosion	NO	CORROSION	ţ	
Shafts	OK	PROTECTION	į.	
Manuel drive	IN FUNCTION	NEW GASKET		
Bearings	OK			
Gasket	NO			
Peinting	NEW			



#### SLUICE GATE WITH MANUAL DRIVE Nº3-C1

Location: G	rit chamber inlet	Da	05.07.1999		
Sluice gate type:	Sluice gate with manual drive	Manufacturer:		TION HYDRAULIQUE RAMUS FRANCE	
Service:	Waste Water inlet in grit chamber	Type:	2A		
Oct vice.		No	22164	22164 2A	
Installation:	out door	Duty:	tempor	temporary	
Main drive	Manual by screw	Reserve drive	no		
Dimension AxB (mm)	900 x 1600	Total Height H	nm ~3300		
Material frame	carbon steel-zinc coated	Material plate	INOX s	teel	
Gasket	rubber	Screw shaft	INOX s	teel	

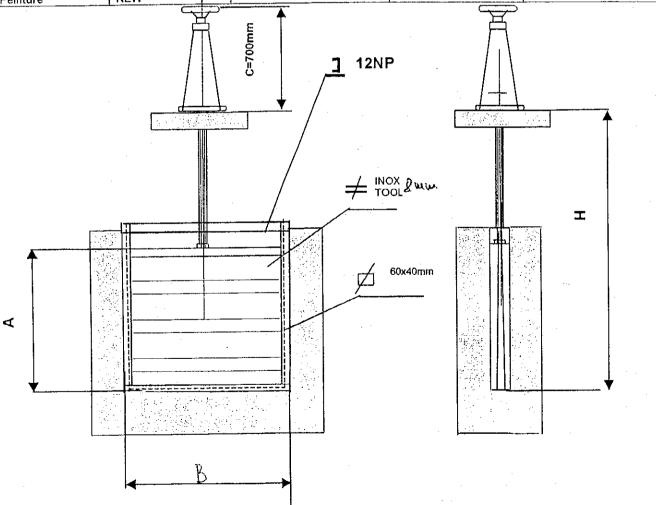
4. INSPECTION	GATE		DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND	ОК	CLEANING AND	
FrameCorrosion	YES 50%	BLASTING AND NEW		GREASING	
Plate Corrosion	NO	CORROSION	ţ.		
Shafts	OK	PROTECTION	ŧ		
Manuel drive	IN FUNCTION	NEW GASKET			
Bearings	OK				
Gasket	NO				
Peinting	NEW				



Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### **INSPECTION SHEET** SLUICE GATE WITH MANUAL DRIVE Nº3-A2 Grit chamber outlet (floating mat. channel) Date 04.07,1999 Location: CONSTRUCTION HYDRAULIQUE Sluice gate with manual drive Manufacturer: Sluice gate type: LAURENT RAMUS FRANCE Waste Water outlet from grit chamber Type: 5A (1 shaft) Service: 22168 5A No Duty: temporary Installation: out door Reserve drive no Manual by gear box Main drive Total Height H mm ~1900 700 x 600 Dimension AxB (mm) Material plate **INOX** steel Material frame carbon steel-zinc coated Screw shaft **INOX** steel rubber Gasket 4. INSPECTION DATA

DRIVE GATE Present situation Recommendation for Recommendation for Present situation reparation reparation CLEANING AND CLEANING, SAND OK OK Figure BLASTING AND NEW GREASING rameCorrosion NO CORROSION Plate Corrosion NO **PROTECTION** OK Shafts NEW GASKET Manuel drive OUT OF FUNCTION Bearings ОK NO Gasket NEW Peinture



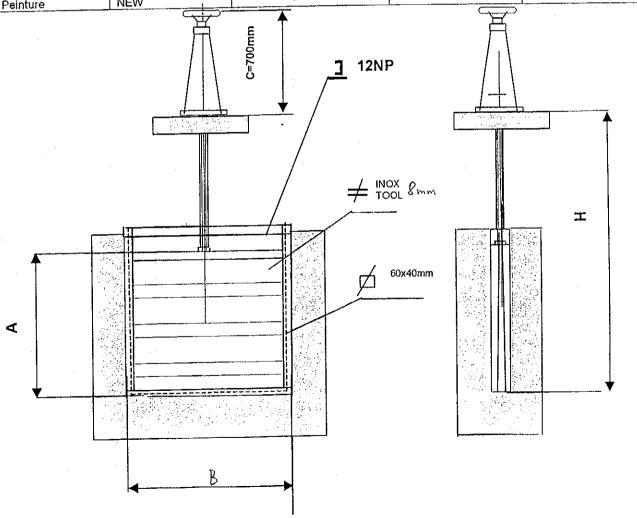
Gasket

rubber

Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE N°3-B2 Grit chamber outlet (floating mat, channel) Date 04.07.1999 Location: CONSTRUCTION HYDRAULIQUE Manufacturer: Sluice gate with manual drive Sluice gate type: LAURENT RAMUS FRANCE 5A (1 shaft) Waste Water outlet from grit chamber Type: Service: 22169 5A No temporary Duty: out door Installation: Reserve drive no Manual by gear box Main drive ~1900 Total Height H mm 700 x 600 Dimension AxB (mm) **INOX** steel Material plate carbon steel-zinc coated Material frame **INOX** steel Screw shaft

4. INSPECTIO	GATE		DRIVE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation		
Figure	ОК	CLEANING, SAND	ОК	CLEANING AND GREASING		
FrameCorrosion	NO	BLASTING AND NEW	1	GREAGING		
Plate Corrosion	NO	CORROSION				
Shafts	OK	PROTECTION				
Manuel drive	OUT OF FUNCTION	NEW GASKET	!			
Bearings	OK	_]				
Gasket	NO		ļ			
Peinture	NEW !	<u> </u>	<u> </u>			



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Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

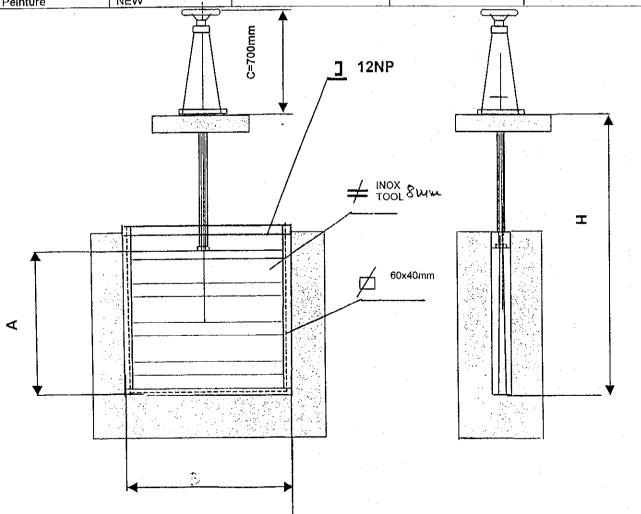
#### 'NSPECTION SHEET

## SLUICE GATE WITH MANUAL DRIVE Nº3-C2

Location:	Grit chamber outlet (floating mat. cha			1 - 1,1-1,1	
Sluice gate type	: Sluice gate with manual drive	Manufacture	er:	CONSTRUCTION HYDRAULIQU LAURENT RAMUS FRANCE	ΙΈ
Service:	Waste Water outlet from grit chamber	Type:		5A (1 shaft)	
		No		22170 5A	
Installation:	out door	Duty:		temporary	
Main drive	Manual by gear box	Reserve dri	ve	no	
Dimension AxB (mm)	700 x 600	Total Heigh	•	nm ~1900	
Material frame	carbon steel-zinc coated	Material pla	te	INOX steel	
Gasket	rubber	Screw shaft		INOX steel	]

4. INSPECTION DATA

	GATE		DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND	ОК	CLEANING AND	
FrameCorrosion	NO	BLASTING AND NEW		GREASING	
Plate Corrosion	NO	CORROSION			
Shafts	OK	PROTECTION	İ		
Manuel drive	OUT OF FUNCTION	NEW GASKET		·	
Bearings	OK				
Gasket	NO	]			
Peinture	NEW				



Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

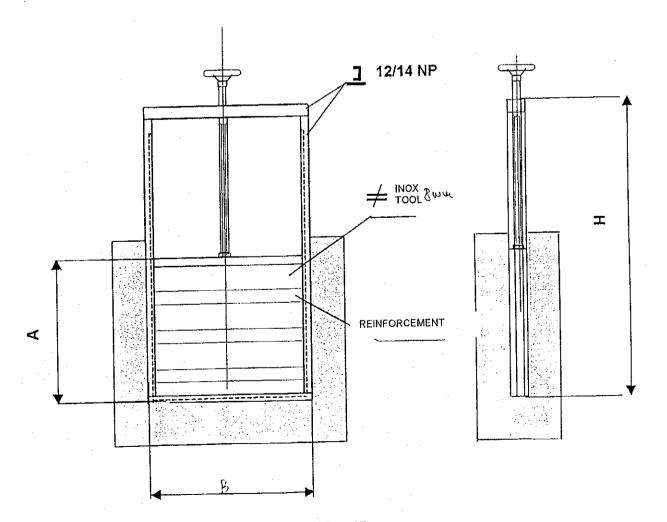
#### INSPECTION SHEET

## SLUICE GATE WITH MANUAL DRIVE

Nº3-A3

	,, ,	. •				
1	Grit chamber outlet		Dat			07.07.1999
Location:		Manufacture	∍r:			TION HYDRAULIQUE
Sluice gate typ	e, Oldioo gato that manaar are	ļ		LAUI	RENT RA	AMUS FRANCE
Service:	Waste Water outlet from grit chamber	Type:			4A	
Service.	Walleto Water Lawrence	No			22165 4A	
Installation:	out door	Duty:			tempora	<u>ry</u>
Main drive	Manual by screw	Reserve driv	ve		no	
Dimension AxE		Total Height	l H m	ım	~3300	
(mm)	- i - a staal zina aastad	Material plat	te		INOX st	eel
Material frame		Screw shaft			INOX st	
Gasket	rubber	1				

4. INSPECTION DATA DRIVE GATE Recommendation for Present situation Recommendation for Present situation reparation reparation CLEANING AND CLEANING, SAND BLASTING AND NEW QΚ GREASING Figure YES 80% FrameCorrosion CORROSION NO Plate Corrosion **PROTECTION** OK Shafts **NEW GASKET** IN FUNCTION Manuel drive ΟK Bearings NO Gasket NEW Peinting



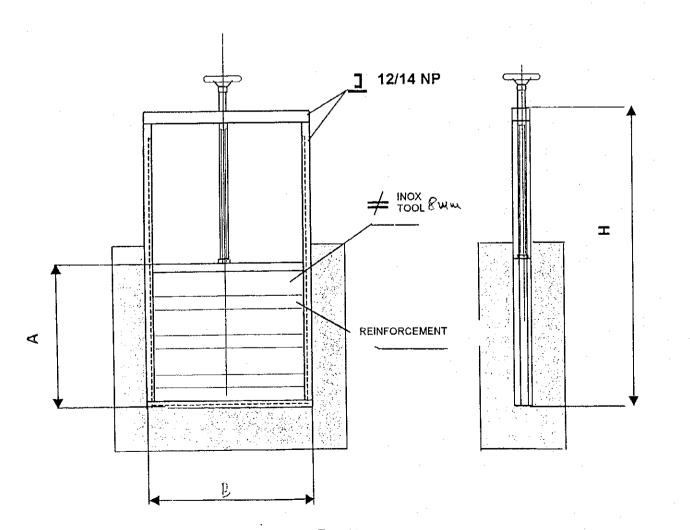
## SLUICE GATE WITH MANUAL DRIVE

N	°3	_	В	3
---	----	---	---	---

Location:	Grit chamber outlet	Da	<del></del>	7.07.1999	
Sluice gate type	: Sluice gate with manual drive	Manufacturer:	CONSTRUCTION LAURENT RAM	ON HYDRAULIQUE MUS FRANCE	
Service:	Waste Water outlet from grit chamber	Type:	4A		
OUI 1100.		No	22166 4A	22166 4A	
Installation:	out door	Duty:	temporary		
Main drive	Manual by screw	Reserve drive	no		
Dimension AxB (mm)	1500 x 1500	Total Height H r	nm ~3300		
Material frame	carbon steel-zinc coated	Material plate	INOX stee	1	
Gasket	rubber	Screw shaft	INOX stee	1	

4 INSPECTION DATA

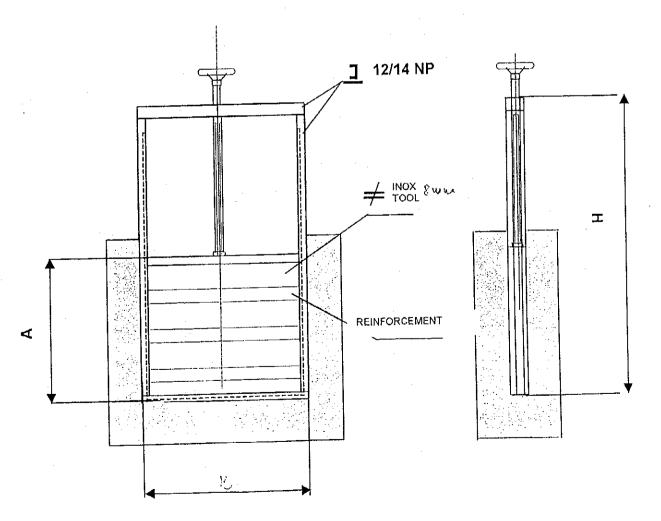
4. INSPECTIO		GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	ОК	CLEANING, SAND	ОК	CLEANING AND	
FrameCorrosion	YES 80%	BLASTING AND NEW	l	GREASING	
Plate Corrosion	NO	CORROSION	·		
Shafts	OK	PROTECTION			
Manuel drive	IN FUNCTION	NEW GASKET			
Bearings	OK				
Gasket	NO		ł		
Peintina	NEW				



#### SLUICE GATE WITH MANUAL DRIVE Nº3-C3

	14 0	<b>-</b>			
	Grit chamber outlet	Da		07.07.1999	
Location: Sluice gate type	1 11 1 1 1 1 1 1 1 1 1	Manufacturer:		JCTION HYDRAULIQUE	
Sitilice gate type				RAMUS FRANCE	
Service:	Waste Water outlet from grit chamber	Type:	4A		
Service.		No		22167 4A	
Installation:	out door	Duly:	temp	orary	
	Manual by screw	Reserve drive	no		
Main drive Dimension AxE		Total Height H r	nm  ~330	0	
(mm)	the steel sine goaled	Material plate	INOX	( steel	
Material frame	carbon steel-zinc coated	Screw shaft	INOX	< steel	
Gasket	rubber			•	

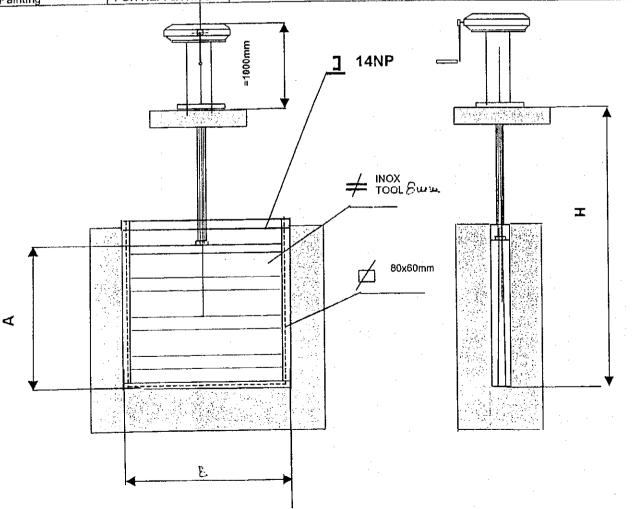
4. INSPECTION DATA DRIVE GATE Recommendation for Present situation Recommendation for Present situation reparation reparation CLEANING AND OK CLEANING, SAND BLASTING AND NEW OK Figure FrameCorrosion **GREASING** YES 80% CORROSION NO Plate Corrosion **PROTECTION** QΚ Shafts NEW GASKET IN FUNCTION Manuel drive OK Bearings NO Gasket NEW Peinting



Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### INSPECTION SHEET SLUICE GATE WITH GEAR BOX AND MANUAL DRIVE Nº4-B1 Date Primary setller inlet Location: CONSTRUCTION HYDRAULIQUE Manufacturer: Sluice gate with manual drive Sluice gate type: LAURENT RAMUS FRANCE GK 200 Type: Waste Water inlet in primary setller Service: OST 200-12,162 No Duty: temporary out door Installation: Opening torque 28,6 mKp 200mKp Manual by gear box | Closing torque Main drive Total Height H mm ~4000 2100 x 2100 Dimension AxB (mm) **INOX** steel Material plate carbon steel-zinc coated Material frame **INOX** steel Screw shaft rubber Gasket

4. INSPECTION	T T	GATE	DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	Wery bad	CLEANING, SAND	ANCHOR BOLTS AND	NEW FOUNDATION
FrameCorrosion	Yes 80%	BLASTING AND NEW	FOUNDATION	AND NEW ANCHOR BOLTS
Plate Corrosion	NO	CORROSION	DISTROED	CLEANING AND
Shafts	OK	PROTECTION NEW GASKET	·	GREASING
Manuel drive	IN FUNCTION	NEW GASKET		CITEMONIO
Bearings	OK .		•	·
Gasket	FOR CHANGE			i i
Painting	FOR REPAINTING			



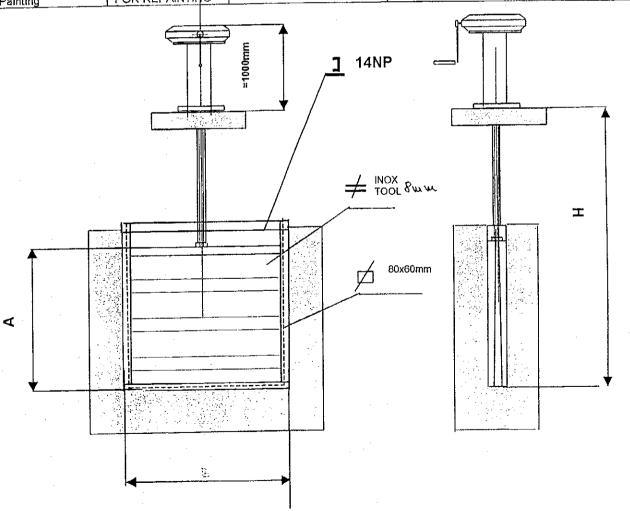
JICA STUDY TEAM
Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### **INSPECTION SHEET** SLUICE GATE WITH GEAR BOX AND MANUAL DRIVE Nº4-A1

Location:	Pr	imary setller inlet		Date			
Sluice gate typ	,	Sluice gate with manu	ıal drive	Manufacturer:		STRUCTION HY RENT RAMUS F	
Service:		Waste Water inlet in p	rimary setller	Type:		GK 200	
Service,		Tracto Tractor Inner In	,	No		OST 200-12,162	
Installation:		out door		Duty:		temporary	
Main drive		Manual by gear box	Closing torque	200mKp		Opening torque	28,6 mKp
Dimension Ax	В	2100 x 2100		Total Height H m	nm	~4000	
(mm) Material frame		carbon steel-zinc coa	led	Material plate		INOX steel	
Gasket		rubber		Screw shaft		INOX steel	

A INSPECTION DATA

4. INSPECTION		GATE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	Wery bad	CLEANING, SAND	ANCHOR BOLTS AND	NEW FOUNDATION	
FrameCorrosion	Yes 80%	BLASTING AND NEW	FOUNDATION	AND NEW ANCHOR BOLTS CLEANING AND GREASING	
Plate Corrosion	NO	CORROSION	DISTROED		
Shafts	OK .	PROTECTION			
Manuel drive	IN FUNCTION	NEW GASKET	1	GIVENONIAG	
Bearings	OK		1		
Gasket	FOR CHANGE				
Painting	FOR REPAINTING		<u>_</u>	<u> </u>	



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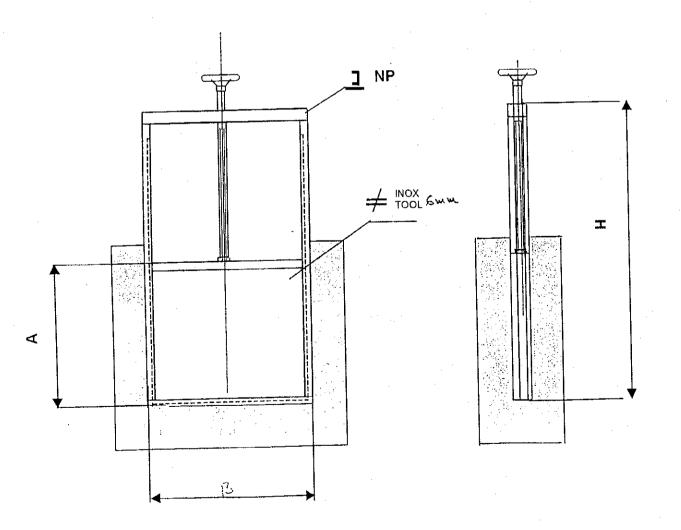
Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH
INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE NIOE 1 . A 1

١		N°5.1-	A1			
		ration chamber inlet	<del></del>	Dat	е	08.07.1999
	Location: Aer Sluice gate type:	Sluice gate with manual drive	Manufactur	~		ICTION HYDRAULIQUE RAMUS FRANCE
	Service:	Waste Water inlet in aeration chamber	Type:		4B 2218	9 4B

Duly: temporary out door Installation: Reserve drive no Manual by screw Main drive Total Height H mm ~920 400 x 550 Dimension AxB (mm) **INOX** steel Material plate carbon steel-zinc coated Material frame **INOX** steel Screw shaft rubber

Gasket 4. INSPECTION DATA

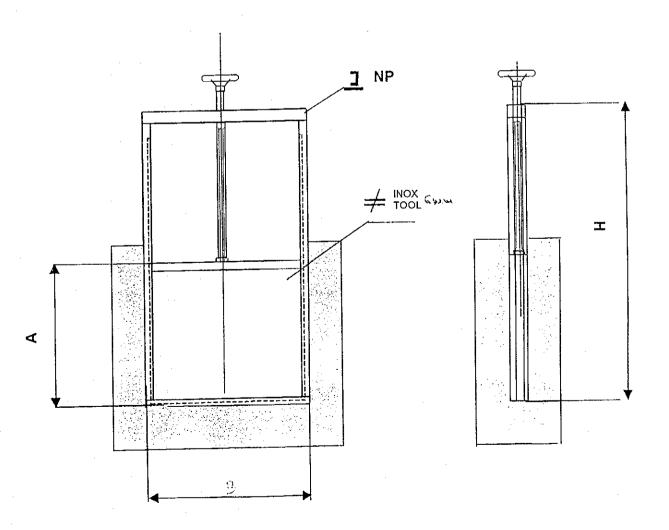
4, 100 LOTIC		GATE		DRIVE			
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation			
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	ОК	CLEANING AND GREASING			



# JICA STUDY TEAM Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE N°5.1-B1

Location:	Aeration chamber inlet		Date		08.07.1999
Sluice gate type:		Manufacture			TION HYDRAULIQUE AMUS FRANCE
Service:	Waste Water inlet in aeration chamber	Type:		4B	
Service.	VVasio vvator miot in acres	No		22184 4B	
Installation:	out door	Duty:		temporary	
Main drive	Manual by screw	Reserve driv	е	no	
Dimension AxB	400 x 550	Total Height H mm		~920	
(mm)		Material plate	Δ	INOX st	eel
Material frame	carbon steel-zinc coated		<del>-</del>	INOX st	
Gasket	rubber	Screw shaft		I INOX 3	.001

4, INSPECTION		GATE		DRIVE			
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation			
Figure	OK VEC 4004	CLEANING, SAND BLASTING AND NEW	ОК	CLEANING AND GREASING			
FrameCorrosion Plate Corrosion	YES 40% NO	CORROSION					
Shafts Manuel drive	OK IN FUNCTION	NEW GASKET					
Bearings	OK	_					
Gasket Peinting	NO NEW						



**INOX** steel

**INOX** steel

carbon steel-zinc coated

(mm)

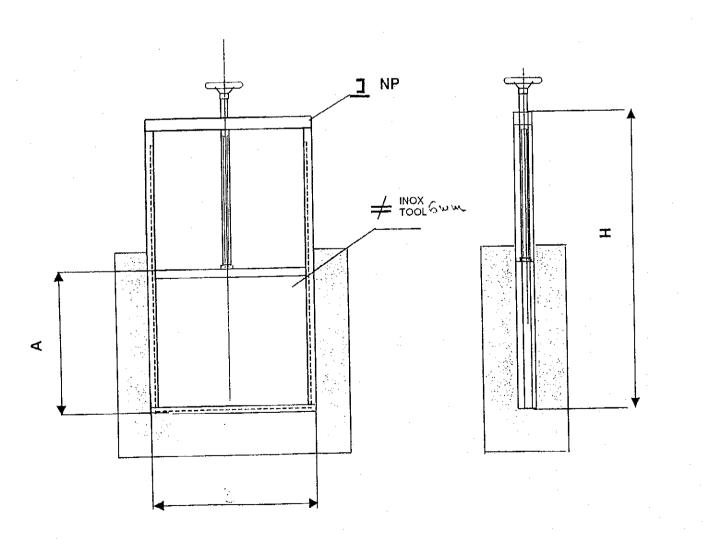
Material frame

Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE Nº5.1-C1 08.07.1999 Date Aeration chamber inlet Location: CONSTRUCTION HYDRAULIQUE Stuice gate with manual drive Manufacturer: Sluice gate type: LAURENT RAMUS FRANCE 4B Туре: Waste Water inlet in aeration chamber Service: 22184 4B No temporary Duty: out door Installation: Reserve drive no Manual by screw Main drive ~920 Total Height H mm 400 x 550 Dimension AxB

Gasket	rubber			
4. INSPECTION	JN DATA_ ·	GATE	DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for , reparation
Figure	ОК	CLEANING, SAND BLASTING AND NEW	ОК	CLEANING AND GREASING
FrameCorrosion Plate Corrosion	YES 40%	CORROSION		
Shafts	OK	PROTECTION NEW GASKET		
Manuel drive Bearings	IN FUNCTION OK			
Gasket Peinting	NO NEW	_		

Material plate

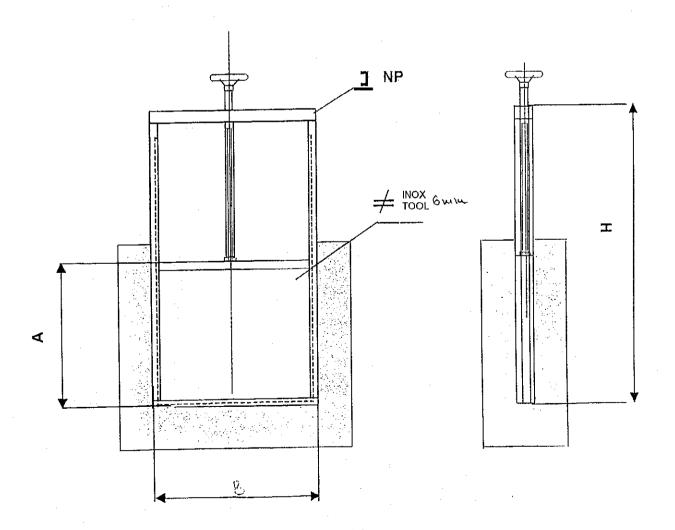
Screw shaft



## Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE Nº5.1-D1

Location:	Aeration chamber inlet		Da	te		08.07.1999
Sluice gate type		Manufacture	er:			TION HYDRAULIQUE AMUS FRANCE
Service:	Waste Water inlet in aeration chamber	Type:			4B	
OCIVICO.		No		22185 4B		
Installation:	out door	Duty:		temporary		
Main drive	Manual by screw	Reserve dri	ve		no	
Dimension AxB (mm)		Total Height H mm		~920		
Material frame	carbon steel-zinc coated	Material pla	te		INOX st	eel
Gasket	rubber	Screw shaft			INOX st	eel

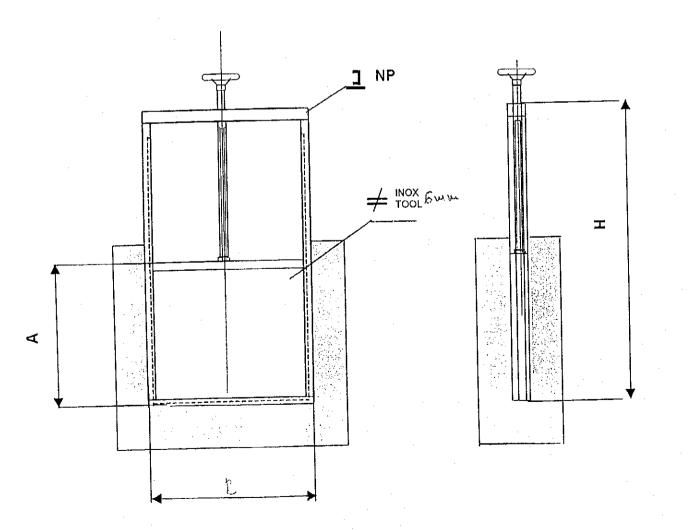
4. INSPECTION DATA DRIVE GATE Recommendation for Recommendation for , Present situation Present situation reparation reparation CLEANING AND CLEANING, SAND Figure GREASING **BLASTING AND NEW** YES 40% FrameCorrosion CORROSION Plate Corrosion NO **PROTECTION** ОK Shafts **NEW GASKET** Manuel drive IN FUNCTION OK Bearings NO Gasket NEW Peinting



INSPECTION SHEET	SLUICE GATE WITH MANUAL DF Nº5.1-E1	RIVE
Leastion: Agration chambe	er inlet	Da

	Aeration chamber inlet		Dat	te	08.07	7.1999
Location: Sluice gate type	La de la descripción de la des	Manufacture	er:		TRUCTION F NT RAMUS	IYDRAULIQUE FRANCE
	Waste Water inlet in aeration chamber	Type:		4	3	
Service:	VVasio vvator finet in deres			22	22183 4B	
1 1-Halions	out door	Duty:		te	mporary	
Installation:	Manual by screw	Reserve dri	ve	no	no	
Main drive Dimension AxB		Total Height H mm		nm   ~!	~920	
(mm)	La La La control	Material pla	ie	11	NOX steel	
Material frame		Screw shaf			NOX steel	
Gasket	rubber					

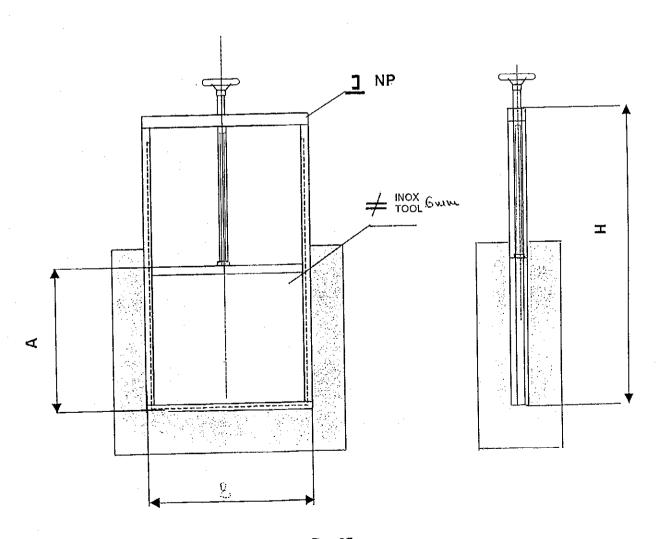
4. INSPECTION		GATE	DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	ОК	CLEANING AND GREASING



Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE N°5.1-F1 08.07.1999 Date Aeration chamber inlet Location: CONSTRUCTION HYDRAULIQUE Manufacturer: Sluice gate with manual drive Sluice gate type: LAURENT RAMUS FRANCE Type: Waste Water inlet in aeration chamber Service: 22186 4B No temporary Duty: out door Installation: Reserve drive no Manual by screw Main drive ~920 Total Height H mm 400 x 550 Dimension AxB (mm) **INOX steel** Material plate carbon steel-zinc coated Material frame **INOX** steel Screw shaft rubber Gasket

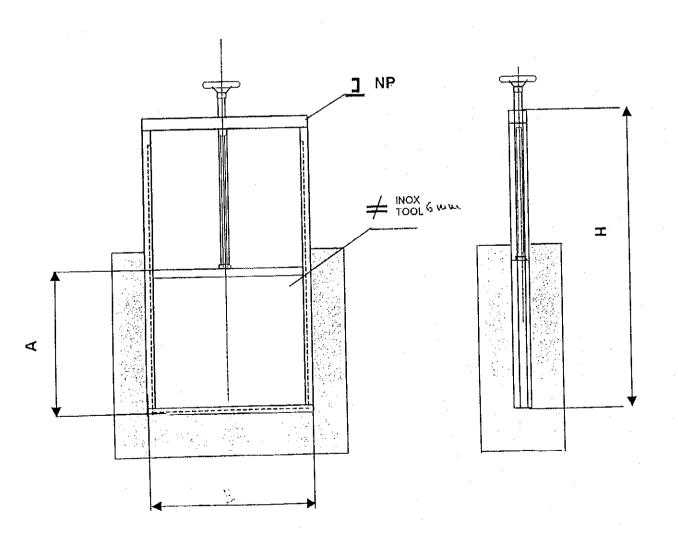
4. INSPECTION	GATE		DRIVE			
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation		
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings	OK YES 40% NO OK IN FUNCTION OK	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING		
Gasket Peinting	NO NEW					



## SLUICE GATE WITH MANUAL DRIVE Nº5.1-G1

	1' transportate		Dat	e		08.07.1999
	Aeration chamber inlet	Manufacture	2 r.	100	ISTRUC	TION HYDRAULIQUE
Sluice gate type	: Sluice gate with manual drive	Manuacture	J1.			AMUS FRANCE
	Waste Water inlet in aeration chamber	Type:			4B	
Service:	VVaste VVator milet in delactor			22180 4B		
	out door	Duty:			tempora	ary
Installation:		Reserve dri	ve		no	
Main drive	Manual by screw	Total Heigh		ım T	~920	
Dimension AxB	400 x 550	1 otal i loigi.				
(mm)		Material pla	te		INOX st	lee
Material frame	carbon steel-zinc coated	Screw shaft			INOX st	
Gasket	rubber	Screw Shan	L		1110710	

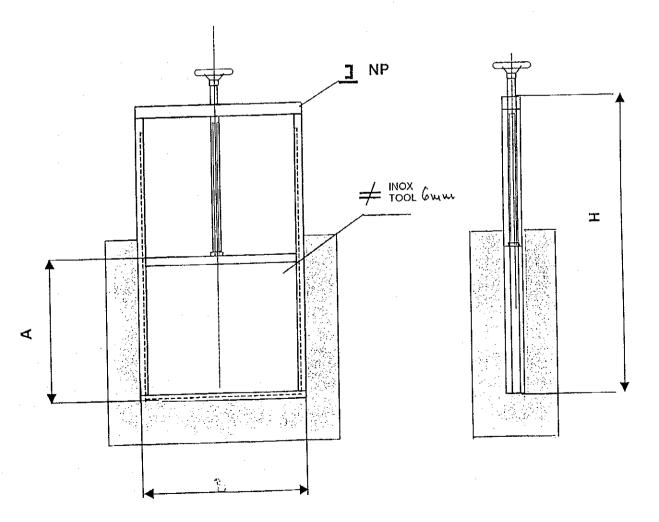
4. INSPECTIO	1	GATE	DRIVE				
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation			
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NO NEW	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING			



# USB KEDLY JICA STUDY TEAM Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE N°5.1-H1

	Aeration chamber inlet		Dat			08.07.1999
Location:	21 manual drive	Manufacture	er:	CO	NSTRUC	TION HYDRAULIQUE
Sluice gate type	: Sluice gate with manual drive			LAL	JRENT R	AMUS FRANCE
	Waste Water inlet in aeration chamber	Type:			4B	
Service:	Waste Water infect in derution strains	No			22172 4B	
	out door	Duty:			tempora	nry
Installation:		Reserve dri	ve		no	
Main drive Dimension AxB	Manual by screw 400 x 550	Total Height H mm		~920		
(mm)	- I I And	Material pla	te		INOX st	eel
Material frame	carbon steel-zinc coated	Screw shaft			INOX st	eel
Gasket	rubber	_1				

4. INSPECTIO	T	GATE		DRIVE			
	Present situation	Recommendation for	Present situation	Recommendation for reparation			
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NO	reparation  CLEANING, SAND  BLASTING AND NEW  CORROSION  PROTECTION  NEW GASKET	OK	CLEANING AND GREASING			

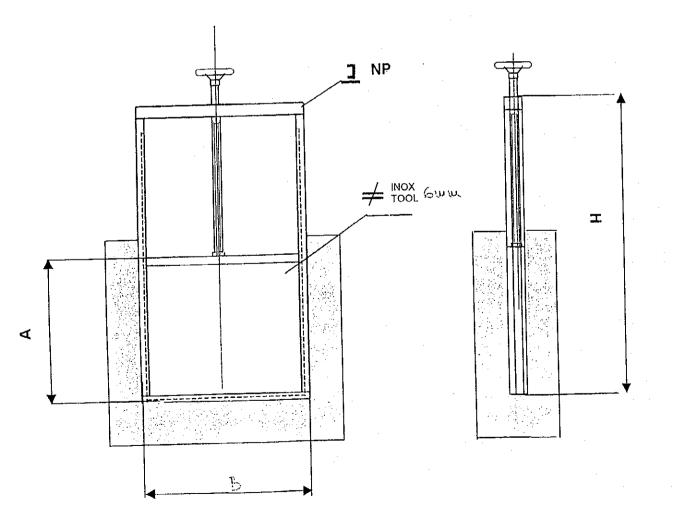


JICA STUDY TEAM

HE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

INSPECTION	SLUICE GATE WITH	MANUAL DF	RIVE			
	N°5.2-	A1	Dat			08.07.1999
Location: Sluice gate type	Aeration chamber inlet  Sluice gate with manual drive	Manufacture		CO		TION HYDRAULIQUE AMUS FRANCE
Service:	Waste Water inlet in aeration chamber	Type: No		22188 4B		
Installation: Main drive Dimension AxB	out door Manual by screw 400 x 550	Duty: Reserve drive Total Height H mm		no ~920		
(mm) Material frame	carbon steel-zinc coated	Material pla Screw shaft			INOX st	

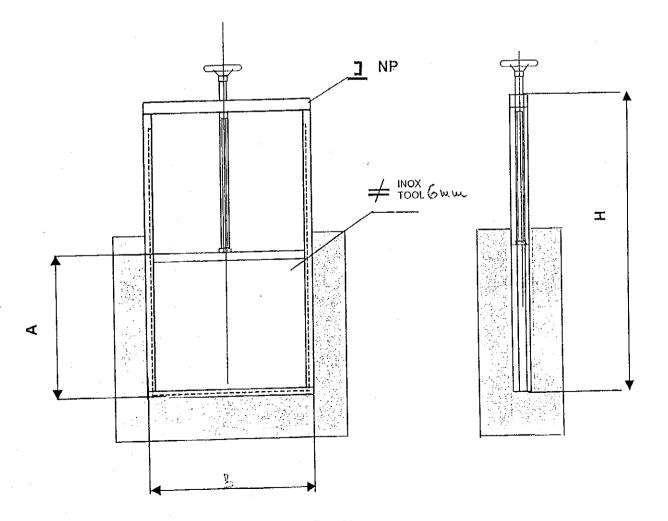
Material Italic	- Carson -		Screw shaft INOX steel			
Gasket	rubber		Colon Citati			
4. INSPECTIO	N DATA	GATE	DRIVE			
	Present situation	Recommendation for reparation	Present situation	reparation		
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING		



## JICA STUDY TEAM Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE N°5.2-B1

1	Aeration chamber inlet		Da			08.07.1999
Location: Sluice gate type		Manufacture	er;			TION HYDRAULIQUE AMUS FRANCE
0 1	Waste Water inlet in aeration chamber	Type:			4B	
Service:	VVasto VVator unot in a	No			22194 4B	
Lt-llation:	out door	Duty:			tempora	ry
Installation:	Manual by screw	Reserve dri	ve		no	
Main drive Dimension AxE		Total Height H mm		~920		
(mm)	carbon steel-zinc coated	Material pla	te		INOX st	eel
Material frame carbon steel-zinc coated  Gasket rubber		Screw shaft			INOX steel	

4. INSPECTIO	N DATA GATE		DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NEW	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING	

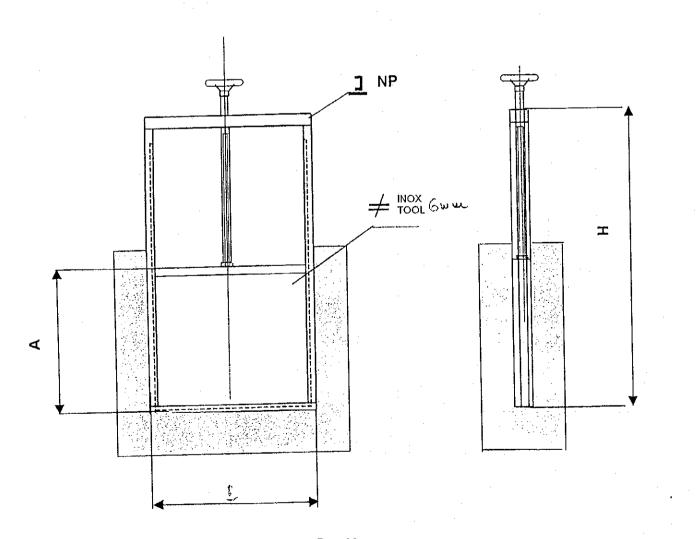


JICA STUDY TEAM

IF FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

INSPECTION	Project: THE FEASIBILITY STUDY ON THE WASTEW SHEET SLUICE GATE WITH I					
	N°5.2-		., ,			
Langtion	Aeration chamber inlet		Date		08.07.1999	
Location: Sluice gate type	and the state of t	Manufacture			TION HYDRAULIQUE AMUS FRANCE	
Service:	Waste Water inlet in aeration chamber	Type:		4B 22192 4	4B 22192 4B	
Installation:	out door	Duty: Reserve drive		tempora no	ary	
Main drive Dimension AxB	Manual by screw 400 x 550	Total Height H mm		n ~920		
(mm) Material frame	carbon steel-zinc coated	Material plat	e	INOX s	<del></del>	
Gasket	rubber	Screw shaft		LINOV 2	1001	

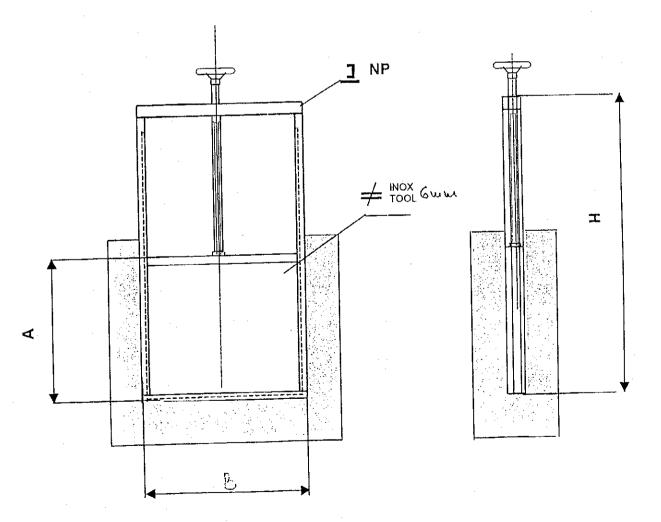
4. INSPECTIO	<u> </u>	GATE		DRIVE			
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation			
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket Peinting	OK YES 40% NO OK IN FUNCTION OK NO NEW	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK	CLEANING AND GREASING			



# SLUICE GATE WITH MANUAL DRIVE $N^{\circ}5.2\text{-}D1$

	Il a leasthau inlat		Dat	e	08.07.1999	
Location: Sluice gate type:	Aeration chamber inlet Sluice gate with manual drive	Manufacture	er:	CONSTI	RUCTION HYDRAULIQ NT RAMUS FRANCE	UE
	Waste Water inlet in aeration chamber	Type:		4B		
Service:	VVdSto Tuto, mo	No			22191 4B	
1 Lillations	out door	Duty:		ten	nporary	
Installation:	Manual by screw	Reserve dri	ve	no		
Main drive Dimension AxB		Total Height H mm		ım ~9:	~920	
(mm)	The start since posted	Material pla	te	INC	OX steel	
Material frame	carbon steel-zinc coated rubber	Screw shaft		INC	OX steel	
Gasket	Tubbei					

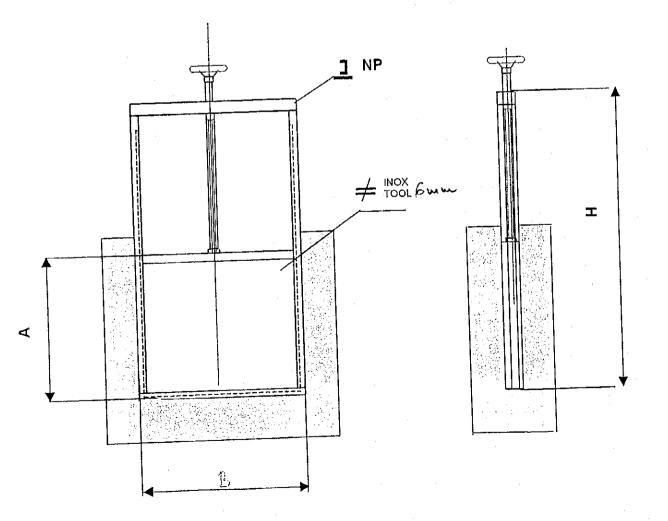
4. INSPECTION	1	GATE	DRIVE			
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation		
Figure FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket	OK YES 40% NO OK IN FUNCTION OK NO NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	OK .	CLEANING AND GREASING		



# SLUICE GATE WITH MANUAL DRIVE N°5.2-E1

	to sinlat		Da	te 08.07.1999
Location: Sluice gate type	Aeration chamber inlet  Sluice gate with manual drive	Manufactur	er:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water inlet in aeration chamber	Type: No		4B 22181 4B temporary
Installation: Main drive Dimension AxB	out door Manual by screw 400 x 550	Duty: Reserve dri Total Heigh	ive it H n	no
(mm) Material frame Gasket	- Live control	Material pla Screw shaf		INOX steel INOX steel

Gasket 4. INSPECTION L				
4, MOFLOTION	DATA		DRIVE	
F	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
FrameCorrosion Plate Corrosion Shafts Manuel drive Bearings Gasket	OK YES 40% NO OK IN FUNCTION OK NO NO	CLEANING, SAND BLASTING AND NEW CORROSION PROTECTION NEW GASKET	ОК	CLEANING AND GREASING

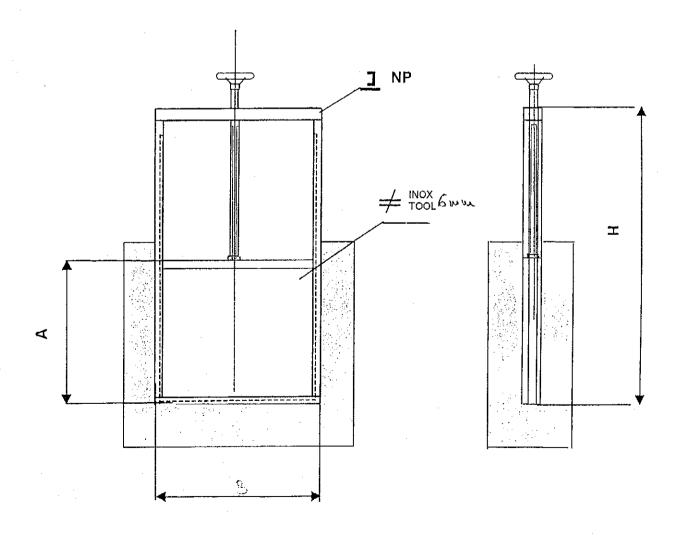


## USB KEDLY JICA STUDY TEAM Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH INSPECTION SHEET SLUICE GATE WITH MANUAL DRIVE N°5.2-F1

Location:	Aeration chamber inlet	Da	nte 08.07.1999
Sluice gate type		Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water inlet in aeration chamber	Туре:	4B
		No	22182 4B
Installation:	out door	Duty:	temporary
Main drive	Manual by screw	Reserve drive	no
Dimension AxB (mm)	400 x 550	Total Height H n	nm ~920
Material frame	carbon steel-zinc coated	Material plate	INOX steel
Gaskel	rubber	Screw shaft	INOX steel

4. INSPECTION DATA

	GATE		DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND	ОК	CLEANING AND	
FrameCorrosion	YES 40%	BLASTING AND NEW		GREASING	
Plate Corrosion	NO	CORROSION	ļ		
Shafts	OK	PROTECTION	ĺ		
Manuel drive	IN FUNCTION	NEW GASKET			
Bearings	OK				
Gasket	NO			Ī	
Peinting	NEW	·			

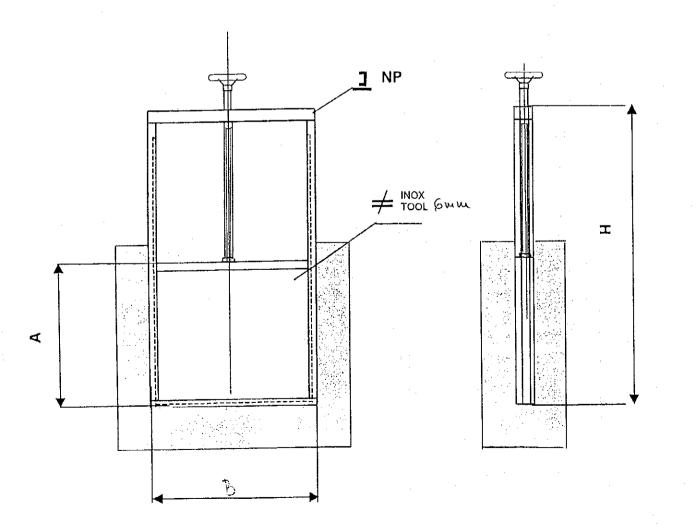


## SLUICE GATE WITH MANUAL DRIVE N°5.2-G1

Location:	Aeration chamber inlet		Dat		08.07.1999	
Sluice gate type		Manufacture	er:		CTION HYDRAULIQUE RAMUS FRANCE	
Service:	Waste Water inlet in aeration chamber	Type:		4B		
Service.		No 2:		22193	22193 4B	
Installation:	out door	Duty:		tempor	ary	
Main drive	Manual by screw	Reserve driv		no		
Dimension AxB (mm)		Total Height	Hm	m ~920		
Material frame	carbon steel-zinc coated	Material pla	te	INOX s	teel	
Gasket	rubber	Screw shaft		INOX steel		

A INSPECTION DATA

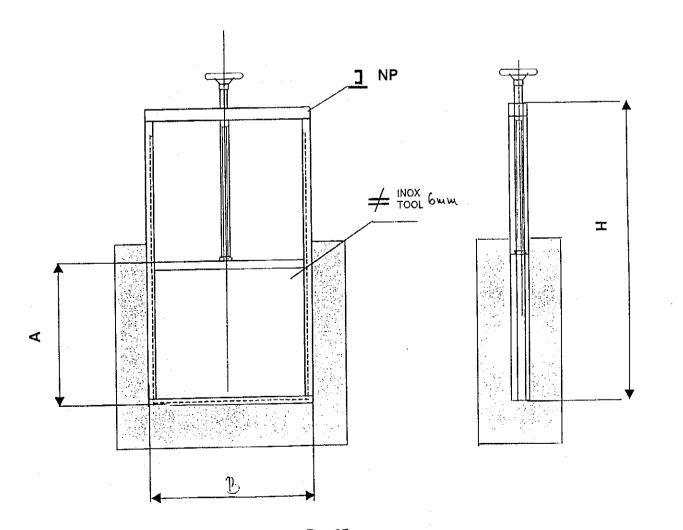
4. INSPECTION	GATE		DRIVE	DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation		
Figure	ОК	CLEANING, SAND	ОК	CLEANING AND		
FrameCorrosion	YES 40%	BLASTING AND NEW		GREASING		
Plate Corrosion	NO	CORROSION				
Shafts	OK	PROTECTION				
Manuel drive	IN FUNCTION	NEW GASKET				
Bearings	OK		·			
Gasket	NO	· ·	Ì			
Peinting	NEW					



## SLUICE GATE WITH MANUAL DRIVE N°5.2-H1

Location:	Aeration chamber inlet		Dat	-	08.07.1999	
Sluice gate type		Manufacture	r:		CTION HYDRAULIQUE RAMUS FRANCE	
Service:	Waste Water inlet in aeration chamber	Type:		4B		
Service.	AAGOTO AAGOT III OT III	No		22190	22190 4B	
Installation:	out door	Duty:		tempor	ary	
Main drive	Manual by screw	Reserve driv	/e	no		
Dimension AxB		Total Height	H m	m ~920		
(mm)	carbon steel-zinc coated	Material plat	<u></u>	INOX s	steel	
Material frame Gasket	rubber	Screw shaft		INOX s	steel	

4. INSPECTION	GATE		DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND BLASTING AND NEW	OK	CLEANING AND GREASING	
FrameCorrosion Plate Corrosion	YES 40%	CORROSION			
Shafts	OK IN FUNCTION	PROTECTION NEW GASKET			
Manuel drive Bearings	OK	~ <b>-</b>			
Gasket Peinting	NO NEW				



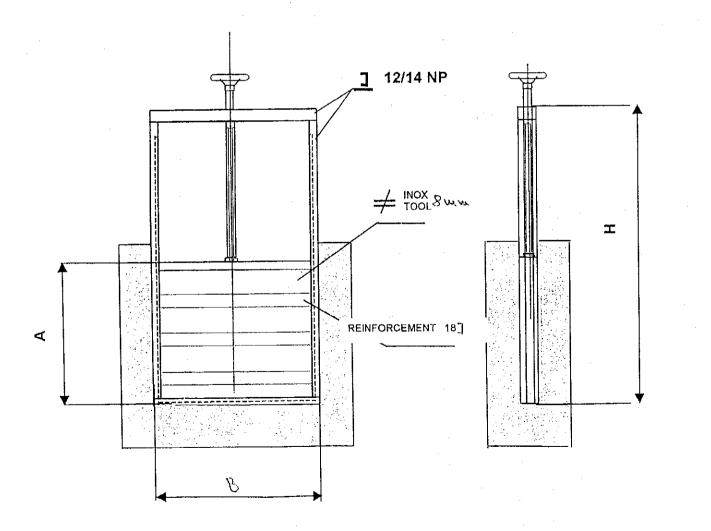
## SLUICE GATE WITH MANUAL DRIVE

## N°5.1-A2

Location:	Aeration chamber channel outlet	Da	
Sluice gate typ		Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water outlet from aeration	Type:	7A
30,,,,,,	chamber	No	22177 7A
Installation:	out door	Duty:	temporary
Main drive	Manual by screw	Reserve drive	no
Dimension AxE (mm)		Total Height H r	mm ~3100
Material frame	carbon steel-zinc coated	Material plate	INOX steel
Gasket	rubber	Screw shaft	INOX steel

4. INSPECTION DATA

4, 1101 20110	I GATE		DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	OK	CLEANING, SAND	OK	CLEANING AND
FrameCorrosion	YES 100%	BLASTING AND NEW		GREASING
Plate Corrosion	NO	CORROSION		
Shafts	ОК	PROTECTION		
Manuel drive	IN FUNCTION	NEW GASKET		
Bearings	OK			1
Gasket	NO		·	·
Peinting	NEW			

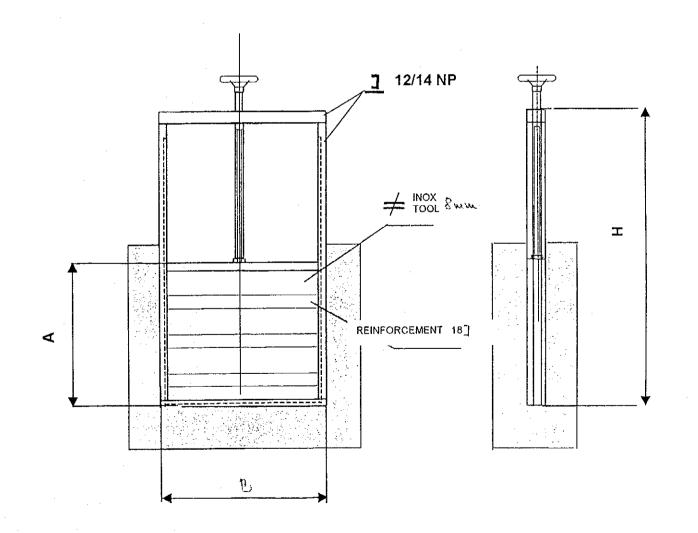


### SLUICE GATE WITH MANUAL DRIVE N°5.2-A2

Location:	Location: Aeration chamber channel outlet		Date		09.07.1999
Sluice gate type:	Sluice gate with manual drive	Manufacturer:			TION HYDRAULIQUE AMUS FRANCE
Service:	Waste Water outlet from aeration	Type:		7A	
	chamber	No		22178 7	Α
Installation:	out door	Duty:		tempora	ry
Main drive	Manual by screw	Reserve drive		no	
Dimension AxB (mm)	1350 x 1600	Total Height F	ł mm	~3100	
Material frame	carbon steel-zinc coated	Material plate		INOX st	eel
Gasket	rubber	Screw shaft		INOX st	eel

4. INSPECTION DATA

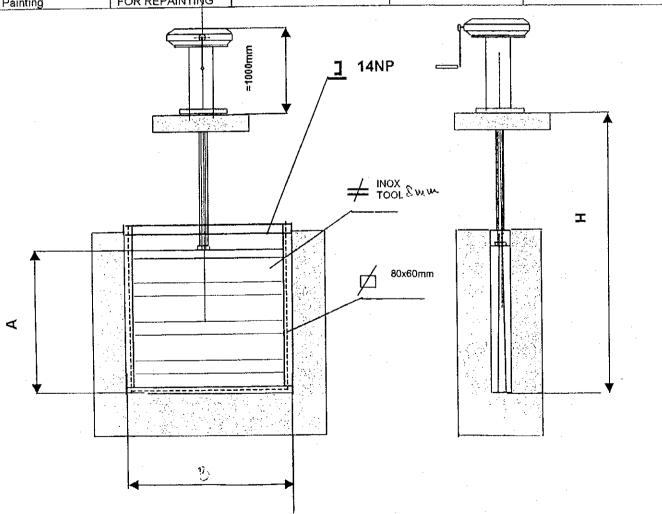
	GATE		DRIVE		
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation	
Figure	OK	CLEANING, SAND	ОК	CLEANING AND	
FrameCorrosion	YES 100%	BLASTING AND NEW		GREASING	
Plate Corrosion	NO	CORROSION			
Shafts	OK	PROTECTION			
Manuel drive	IN FUNCTION	NEW GASKET			
Bearings	OK				
Gasket	NO				
Peinting	NEW				



Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### **INSPECTION SHEET** SLUICE GATE WITH GEAR BOX AND MANUAL DRIVE N°5.1.-A3 Date 09, 07, 1999 Aeration chamber outlet Location: Manufacturer: CONSTRUCTION HYDRAULIQUE Sluice gate with manual drive Sluice gate type: LAURENT RAMUS FRANCE GK 50 GST 200-12,162 X1 Type: Waste Water inlet in primery setller Service: 805716 No Duty: temporary Installation: out door Manual by gear box | Closing torque 50mKp Opening torque 14,2 mKp Main drive Total Height H mm 2400 x 1400 Dimension AxB (mm) **INOX** steel Material plate carbon steel-zinc coated Material frame Screw shaft **INOX** steel rubber Gasket

4. INSPECTION DATA DRIVE GATE Present situation Recommendation for Recommendation for Present situation reparation reparation OK CLEANING AND CLEANING, SAND Wery bad Figure **BLASTING AND NEW** GREASING FrameCorrosion Yes 100% CORROSION Plate Corrosion NO **PROTECTION** ΟK Shafts **NEW GASKET** IN FUNCTION Manuel drive Bearings OK FOR CHANGE Gasket FOR REPAINTING Painting



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#### **INSPECTION SHEET**

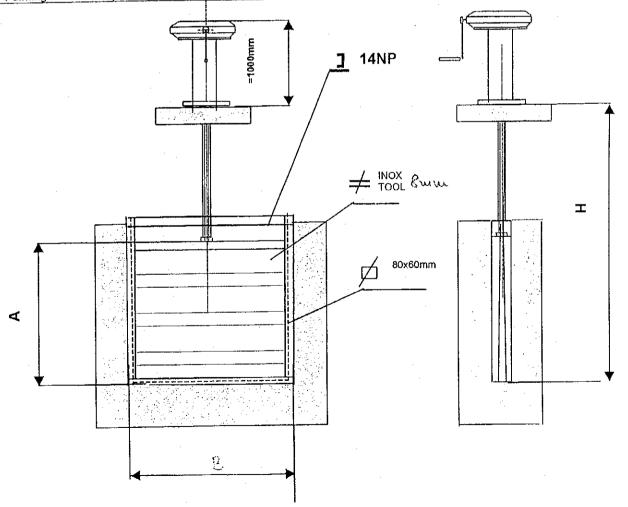
### SLUICE GATE WITH GEAR BOX AND MANUAL DRIVE

Nº	5.1	B	3
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Location:	Aeration chamber outlet	Date	09. 07. 1999
Sluice gate typ		Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE
Service:	Waste Water inlet in primery setller	Туре:	GK 50 X1
COLVICO.	, ,	No	805716 X1
Installation:	out door	Duty:	temporary
Main drive	Manual by gear box Closing torque	50mKp	Opening torque 14,2 mKp
Dimension AxE (mm)		Total Height H m	m ~6500
Material frame	carbon steel-zinc coated	Material plate	INOX steel
Gasket	rubber	Screw shaft	INOX steel

4. INSPECTION DATA

4. INO. E0115	GATE		DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	Wery bad	CLEANING, SAND	OK	NEW FOUNDATION
FrameCorrosion	Yes 100%	BLASTING AND NEW		AND NEW ANCHOR
Plate Corrosion	NO	CORROSION		BOLTS CLEANING AND GREASING
Shafts	OK	PROTECTION		
Manuel drive	IN FUNCTION	NEW GASKET	·	GREASING
Bearings	OK		·	
Gasket	FOR CHANGE			
Painting	FOR REPAINTING			



**INOX** steel

Project: THE FEASIBILITY STUDY ON THE WASTEWATER TREATMENT PLANT OF SARAJEVO, BIH

#### **INSPECTION SHEET** SLUICE GATE WITH GEAR BOX AND MANUAL DRIVE N°5.2.-A3 Date Aeration chamber outlet 09. 07. 1999 Location: CONSTRUCTION HYDRAULIQUE Sluice gate with manual drive Manufacturer: Sluice gate type: LAURENT RAMUS FRANCE Waste Water inlet in primery setller Type: GK 50 Service: X1 No Duty: Installation: out door temporary Opening torque Manual by gear box | Closing torque 50mKp 14,2 mKp Main drive 2400 x 1400 Total Height H mm ~6500 Dimension AxB (mm) Material frame carbon steel-zinc coated Material plate **INOX** steel

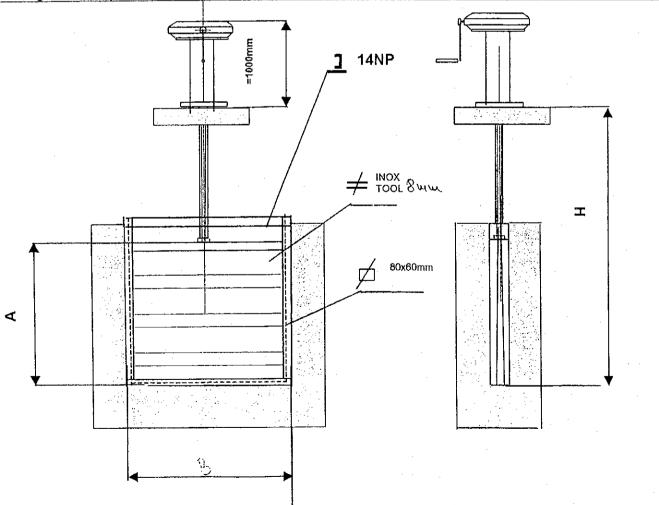
4. INSPECTION DATA

Gasket

rubber

	GATE		DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	Wery bad	CLEANING, SAND	OK ·	CLEANING AND
rameCorrosion	Yes 100%	BLASTING AND NEW		GREASING
Plate Corrosion	NO	CORROSION		
Shafts	OK	PROTECTION	]	
Manuel drive	IN FUNCTION	NEW GASKET		
Bearings	OK		· ·	
Gasket	FOR CHANGE	<u> </u>	•	
Painting	FOR REPAINTING			<u> </u>

Screw shaft



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#### **INSPECTION SHEET**

## SLUICE GATE WITH GEAR BOX AND MANUAL DRIVE

## N°5.2.-B3

Location:	Aeration chamber outlet	Date	09. 07. 1999	
Sluice gate type	: Sluice gate with manual drive	Manufacturer:	CONSTRUCTION HYDRAULIQUE LAURENT RAMUS FRANCE	
Service:	Waste Water inlet in primery setller	Туре:	GK 50 X1	
00////		No	X1	
Installation:	out door	Duty:	temporary	
Main drive	Manual by gear box Closing torque	50mKp	Opening torque 14,2 mKp	
Dimension AxB (mm)	2400 x 1400	Total Height H m	nm ~6500	
Material frame	carbon steel-zinc coated	Material plate	INOX steel	
Gasket	rubber	Screw shaft	INOX steel	

	GATE		DRIVE	
	Present situation	Recommendation for reparation	Present situation	Recommendation for reparation
Figure	Wery bad	CLEANING, SAND	OK	CLEANING AND
FrameCorrosion	Yes 100%	BLASTING AND NEW CORROSION PROTECTION		GREASING
Plate Corrosion	NO			
Shafts	OK			
Manuel drive	IN FUNCTION	NEW GASKET	ļ	
Bearings	OK			
Gasket	FOR CHANGE			
Painting	FOR REPAINTING			

