

# Valve TQC Company



- \* Forged Ball Valve
- \* GGC Valve
- \* Water Glass Casting
- \* Precision Casting

# "Be the Highest of Standards"





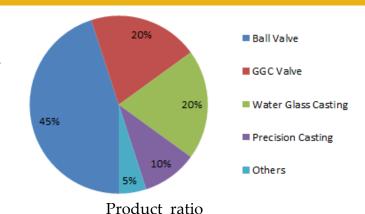


### "Be the Highest of Standards"

McSYS is one of the leading importers & exporters of valve parts in Korea. Our main products consist of forged ball valve part, forged GGC valve part, water glass casting part & precision casting with the total capacity of more than 10,000 metric tons per year. McSYS owns a professional QC team, from raw material to finished part, to inspect strictly according to the completed QA process.

With the experience of more than 20 years in processing valve products, our staff members, which are mostly specialists in the industry, are committed to providing the products with outstanding quality and competitive price that can meet the growing demand of our customers.





#### Main Products

















### **Quality Assurance Process**





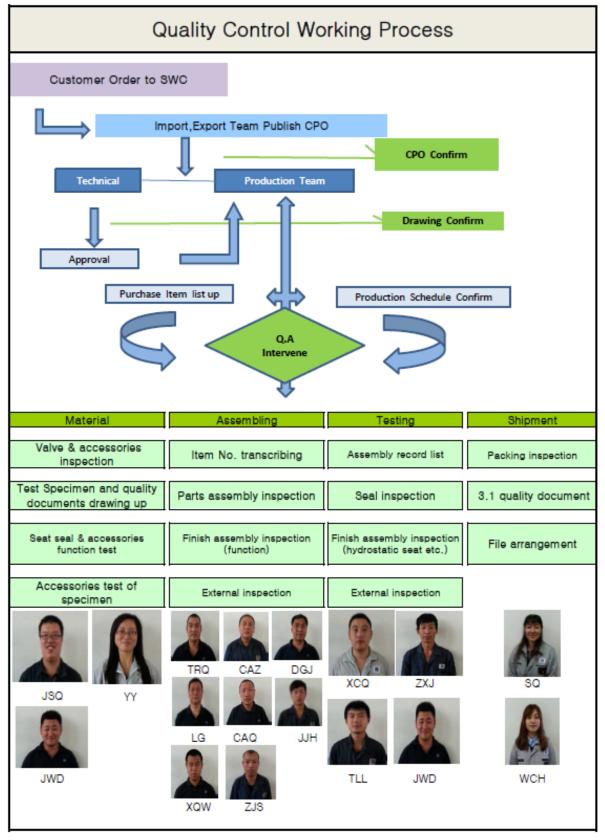
As an organization, McSYS is committed to growing with our clients and understand that our success is a directly related to the quality of our products.

The quality control process we follow is systematic and completely documented. Our commitment is to deliver to our clients nothing but the highest grade products. Our quality control process is a crucial resource in realizing this goal.











# **Inspection Documents**



SWC Automati	INSPECTION AN		DOCUMENT NO.					
SWC Automati	INSPECTION AN	INGI EGNORARD TEGN TEAR						
	RFQ NO./DESCRIPTION 305-81-85922 46#(A105N forged body∩&irim- 600#/900#/1500#/2500#/5M#)	LOCATION	Sheet 1 of 3	leaue 1				
Vendor:	SWC	Vendor's Job:	CP13	0520-R2				
PO. NO.:	305-81-85922	Material Req.:	At	05N				
Component:	A 105N forged body∩&trm- 600#900#1500#2500#5M#	Equipment:		body∩&trlm 00#/2500#/5M#				
Item:	Forged Parts	Vendor Doc. No.:	ITP-	ITP-130528				

	R	REVIEW			IME	DECTI	ON A	ND 1	LE C.	T PI AN	000	UMENT NO.
	м	MONITORING	SN	C Automation	IIVS	IFLAN	ITP-130528-R					
			$\overline{}$	Review of Purchase order order 1.1 Pre inspection meeting 1.2 Planning of product realisation	PROJECT	T LOCATION						
INTERVENTION											Sheet 2 of 2	Iccue 1
	w	WITNESS		CP130520-R2	46#							
CODES			$\Box$									
CODES	н	HOLD POINT	Pos.		Applicable Stand	Involvement			Result Recording	Date	Note	
				tems	.,,	JYB	swc		resource resourcing			
			-						_			
		INSPECT	1	order	Purchase order, dr	awing&spec.	R 100%	R 100%	М	Purchase order signature	2013.5.21	
			1.1		Purchase order, dr	awing&spec	R 100%	R 100%	М	Minute of meeting signature	2013.5.21	
	ssion to proceed does		1.2		8WC CI	PO	M 100%	R 100%	м	Production Plan	2013.5.22	
methods or material obligation.	s developed or select	ed by the supplier	1.3	Review UT operators qualification	ASTM A388	Lev. 2	R 100%	R 100%	м	UT operators cert	2013.5.22	

			1.4	Review heat treatment Metallographic operators qualification	ASTM A370. Max.HB187	R 100%	R 100%	
			2	Procurement of raw matti	ASTM A105	R 100%	R 100%	
				Incoming mat'l check(PMI)/review of		R	R	
1	issued to Company for review/comments	Jun 13,2013	2.1	mati cert for body&cep8trim	ASTM A105	100%	100%	
0	issued to Company for review/comments	May 28,2013	Г	Check of production		R	R	t
Rev.	Description	Date	3	activity with internal order requirements	SWC INTERNAL DOC.	100%	100%	
			3.1	Working machining	APPROVED DWG.	M 100%	M 100%	İ
			3.2	Mechanical properties of raw mat'l	ASTM A370	M 100%	M 100%	
			3.3	Hardness test on bodyšcapštrim	ASTM A370. Max.HB187	H 50%	R 100%	
			3.4	Low temperature impact properties	ASTM A370	H 50%	R 100%	
			3.5	UT examination on body\$cap\$trim	ASTM A388 Lev. 2	H 50%	R 100%	
			3.6	Visual and dimension check of finished pieces	APPROVED DWG.	H 50%	R 100%	
			4	packingSatoring	SWC STD EXPORT PACKING	M 100%	M 100%	
			4.1	Check of Final	CUSTOMER'S PO	R 1006	R 10096	П

*			
Re	port on Ultrasonic E	Examination of Forgi	ing
Entrusting party: SWC			
Forging Code		Heat Batch No.	10-107614,1321-116
Forging Designation	A108	Tested Pos	Plane, Out Circle
Heat Treatment Status	N	Tested Method	LongitudinalWave Normal Beam Method
Intrument Model	TTS-6208	Surface Status	Smooth
Probe Model	2.59200/140	Test fansitiveness	e2 Flat bottom bole

Test				
	Quantity	wing No.	Drawto	Forging Size
Not 1	- 5			2"-600 BODY
Not f		F02-0807	TB-06F0	21:600 CAP
Not t	10			2"-600 S/H
Not	8	F04-0430	TO ORGO	41-600 BODY
Not !	8		TB-06F04	41-500 CAP
Not 1	0	F10-0430	TO ME	10"-600 CAP
Not 1	Ó	10-0400	10-001	10-600 S/H
Not t	36			31-900 BODY
Not 1	36	F03-0926	TB-09F0	3"-900CAP
Not	72			31-900 S/H
				Teet Conclusion

NO.	DWG. DIMENTION	TOLER	WWCE	Seria No	1
		Casalia	FEMER	1#	_
- 1	Ø220			219.99	
2	Ø46			45.92	_
3	Ø103			103.17	
4	Ø87			66.93	
6	Ø92			91.5 F	_
6	Ø123.3			123	
7	Ø220			220	
8	49.2			40.	
8	52.4			52.7	0
10	39			30.	
11	17.6			17.	
12	158.2			158	
13	109.3			100	
14	28.5			26.5	
15	22.4			22.4	
18				_	
17					
18				$ _{\rm I}$	
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				11.1	
				r	
	DRAWING			Jan 1	
	DIONIFIEG		- 4	L I	
			- 11		*

SWC	Automation	PARTS CE	PTIEICA	TION		CERTIFI	CATION NO.
OHO		. Altio CE					PC130419
CUSTOMER	PARTS NAME	P0 NO.	CPO NO.	OWO. NO.	ORDER GTYRET 1	WEPECTION G'TY(SET)	QUALIFIED QTY(SET)
	HANDWHEEL	00V130123-001/2/3	CP-13012HR2	250WH15-9A75	1740	1740	1740
*A: ACCEPT			(), ()			0	
A ADDEPT A REJECT NO INSPECTA	on I	-	Te	nsile	Tes	t	
DIMENSION 1 (Refer to	176	Date		2013.8.2		Sami	ple name
affached de		Applica	nt	SWC			e Meterial
2 BANTON		Aominee co		Taevono m	etal		cification

	S	VC	Au	toma	ation			M	ATE	RIAL	TES	T RE	POF	RT						CERTIE	MTR1	
_			_					СНІ	EMICAL	ANALY	SIS							TECHANIC	AL PRO	PERTIES		
MA	TERIAL	HEAT	NO.	С	Si	Mo	р	s	Cr	Ni	Mo Cu V Nb CE							ELOWOXTICS				
				_											CE	MPs	MPs	%	%	нв	Impac	-
1	A105N	1321		0.18	0.2	0.92	0.017	0.002	0.077	0.039	0.004	0.025	0.001	0.002		495	274	36	60	153-156	27	20
2	A105N	10-10	7514	0.19	0.23	0.0	0.006	0.003	0.04	0.032	0.007	0.084	0.001	0.001		460	310	33	63	101-104	85	56
3																						
4																						
5			_							_												$\vdash$
6		_	Min.		0.150	0.600			_	_						485	250	22	30		20J	16,1
	Requiremen	ete		0.000	0.150		0.035	0.025	0.300	0.400	0.400	0.400	0.050	0.000	_	655	250	22	30	107	AVE.	
			max.	0.230	0.300	1.330	0.035	0.025	0.300	0.400	0.120	0.400	0.050	0.020		655				107	AVE.	EAU
								CHI	EMICAL	ANALY	SIS							ECHANIC	AL PRO	PERTIES		
MA	TERIAL	HEAT	NO.	С	SI	Mn	P S Cr Ni Mo CH V No N TENSILE YIELD ELONDATION HED. AREA HARD						HARDNESS									
				·	31	sen	P	3	ur	Ni	MO	Cu		Nb	14	MPa	MPa	%	%	HB		
1																						
	Requiremen	ote	Min.																			
	codomente		Max.																			
				HEAT	TREA'	TMENT	STAT	US (IF	APPLI	CABLE	6											
_											_											
STM	A105N: No	ormalizir				hours,	cool in	air.														_
	A105N: No	ormalizir			aintain 1	hours,		air.					1321	1-118								
				0°C, ma	aintain 1		4		NAME.	оту		NAME			NAME	OTY	SIZE	NAME	QΤΎ			_
		SIZE	g at 90	O'C, ma	sintain 1	0-10751 NAME	4			QTY 32		NAME		SIZE	NAME S/H	QTY	SIZE	NAME	QTY			
		SIZE 600-2"	NAME BODY	QTY	SIZE 900-4*	0-10751 NAME BODY	4 QT'Y 24	SIZE	BODY	32	SIZE 900-6"	CAP	QT'Y 12	SIZE 2500-2*	S/H	8	SIZE	NAME	QTY			
		SIZE 600-2"	NAME BODY CAP	QT'Y 5	SIZE 900-4*	0-10751 NAME BODY CAP	4 QT'Y 24 40	SIZE			SIZE 900-6"	CAP SH	QT"Y 12 12	SIZE 2500-2* 2500-4*	S/H BOOY	8	SIZE	NAME	QTY			
		SIZE 600-2" 600-2"	NAME BODY CAP	QT'Y 5 5	SIZE 900-4" 900-4"	0-10751 NAME BODY CAP SH	4 QT'Y 24 40	SIZE	BODY	32	SIZE 900-0" 900-0"	GAP SH CAP	QT"Y 12 12 12	\$1ZE 2500-2* 2500-4* 2500-4*	S/H BODY CAP	8 2 4	SIZE	NAME	οτγ			
HE		SIZE 600-2"	NAME BODY CAP	QT'Y 5	SIZE 900-4*	0-10751 NAME BODY CAP	4 QT'Y 24 40	SIZE	BODY	32	SIZE 900-6"	CAP SH	QT"Y 12 12	SIZE 2500-2* 2500-4*	S/H BOOY	8	SIZE	NAME	QTY			

IT IS CERTIFIED THAT THE ABOVE IN COMPANY. QC: H. CHUNG CUSTOMER AUTHORIZED REPRE:	1,480.0									
	740.0	1,000 2	.400 4.800	7.200	9.600 1	12.000 14.	400 16.80	0 19.200	21.600 2 DISP (	
	Applicant Company	Area mm²	Reduction A	T.Stren [N/mm²]	Max.Load N	Y.Stren [N/mm²]	Y.Load N	Max.Disp mm	Elongat	Hardness
	8WC	87.748 87.348		834.16 831.08	7319.5 7259.4			22.12 23.47	20.11	233
	SWC's Supplier		69	759		586			21	241
	Standard Data		≥65	≥540		≥345			≥22	≥159





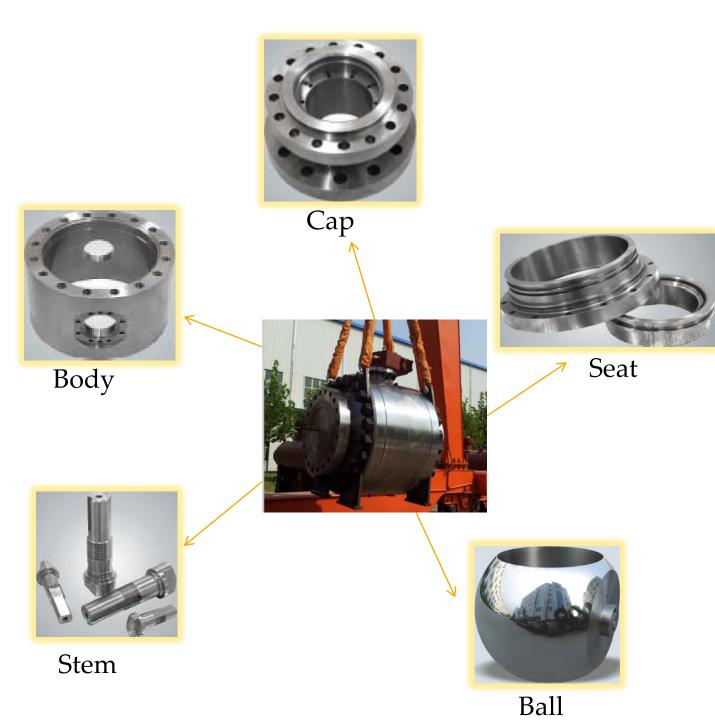
### Forged Ball Valve Parts



Size: 1/2"-56"

Pessure: CLASS 150#-2500#

Material: A105 LF2 F6a F304 F304L F316 F316L etc.







### Forged Ball Valve Parts



Ball: Floating Ball, Trunnion Ball, Three-way Ball, Stem Ball

Size: 1/2"~56"

Pressure Rating: Class 150#~2500#

Base Material: A105,LF2,F6a,F304,F304L,F316,F316L

Coatings: ENP, Chrome, Plorting, Tungsten, Catbide, Chrome, Stellite,

Inconel, Carbide, Special

Support Type: Seat, Stem, Support Plalte, Axle Sleeve

Drive: Curive Slot, Rectangle Socket, Straight Slot, Pin Hole, Key Hole,

Hexagon Hole



























#### RAW MATERIAL























### UT(Ultrasonic Examination)



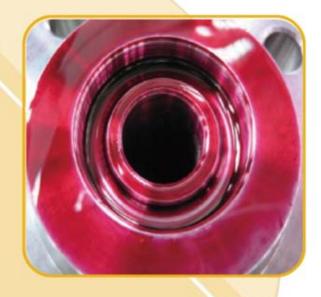




# **Test**

## PT(Dye Penetrant Inspection)















### Gate & Globe Valve Parts



Material: A105, F6a cl2, F304, F316, etc.



Body

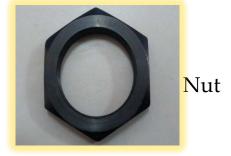


Sleeve Nut













#### Stem

Material: A105, F6a cl2, F304, F316, etc.







Raw material & Rough

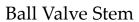






Gate Valve Stem







**Butterfly Valve Stem** 



Globe Valve Stem



Material: A395, A126, CL.A, A216 Gr.WCB etc.



















# **Precision Casting**

Material: WCB ,CF8, CF8M ,CF3 ,CF3M etc.





# **Water Glass Casting**

Material: WCB ,CF8 ,CF8M ,CF3 ,CF3M etc.

















