



DAVINCI  
VALVES™



## INSPECTION REPORT



*For professionals who wants more.*

**Product:** Knife Gate Valves

**P.O. REF.NR:** HKC21605

**Quantity:** SECTOR B

**Service Type:** **PRE-SHIPMENT INSPECTION**

**INSPECTION DATE:** May 15<sup>th</sup>, 2021



## A. INSPECTION RESULT SUMMARY

	PASS	FAIL	PENDING	NOT APPLICABLE	REMARKS
PRODUCT TYPE	X				1
WORKMANSHIP	X				
ON-SITE TESTS	X				
MARKING OF PRODUCTS	X				3
MEASUREMENT	X				
PACKING & ASSORTMENT	X				1
OVERALL RESULT	PASS				See remark 4*

Remark: \*

Production status as below:

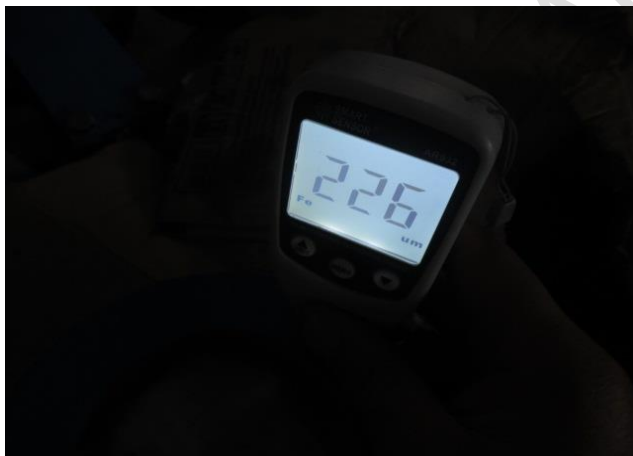
Product name	Product name	PN	DN	Quantity	
KNIFE GATE VALVE, WAFER type	KNIFE GATE VALVE, WAFER type	10/16	50	40	Completed assembly
			65	25	Completed assembly
			80	40	Inspected 14-5-2021
			100	50	Inspected 14-5-2021
			125	20	Inspected 14-5-2021
			150	30	Product packing into wooden box
	10	10	200	40	Product packing into wooden box
			250	30	Product packing into wooden box
			300	25	Completed assembly
			350	20	Completed assembly
			400	25	Factory finished assembly 1pc
			KNIFE GATE VALVE, WAFER type	10/16	10/16
65	10	Completed assembly			
80	20	Inspected 14-5-2021			
100	20	Inspected 14-5-2021			
125	10	Inspected 14-5-2021			
150	15	Product packing into wooden box			
10	10	200		10	Product packing into wooden box
		250		20	Product packing into wooden box
		300		10	Completed assembly
		350		5	Completed assembly
		400		10	Completed assembly

**A.1. Finish packing**

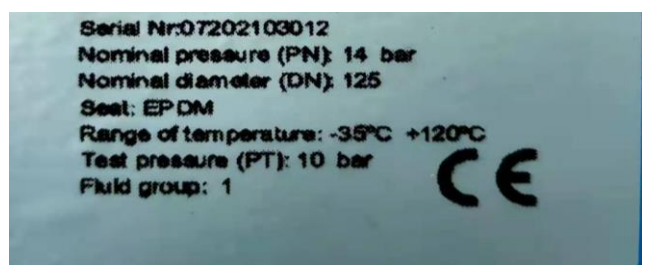
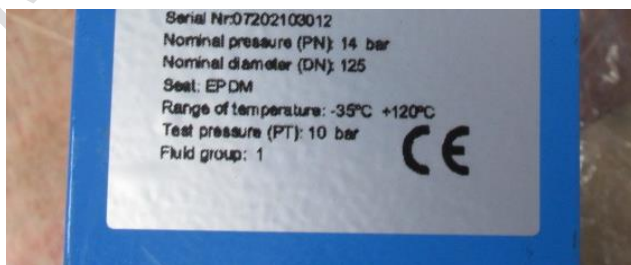


**A.2. For DN80 and DN 100 / DN125**  
*Factory finished fit, but no clean it, so dirty mark on product -100%.*





**A.3.** For DN 100  
Poor printing on label -100%.



## B. PRODUCTS INFORMATION & SAMPLING PLAN:

CODE	QUANTITY	SAMPLING SIZE		
		Visual	Size	Pressure
KNIFE GATE VALVE, WAFER type-DN50	40	5	1	1
KNIFE GATE VALVE, WAFER type-DN60	25	5	1	1
KNIFE GATE VALVE, WAFER type-DN80	40	5	1	1
KNIFE GATE VALVE, WAFER type-DN100	50	5	1	1
KNIFE GATE VALVE, WAFER type-DN125	20	5	1	1
KNIFE GATE VALVE, WAFER type-DN150	30	5	1	1
KNIFE GATE VALVE, WAFER type-DN200	40	5	1	1
KNIFE GATE VALVE, WAFER type-DN250	30	5	1	1
KNIFE GATE VALVE, WAFER type-DN300	25	5	1	1
KNIFE GATE VALVE, WAFER type-DN350	20	5	1	1
KNIFE GATE VALVE, WAFER type-DN400	25	5	1	1
KNIFE GATE VALVE, WAFER type-DN50	20	5	1	1
KNIFE GATE VALVE, WAFER type-DN60	10	3	1	1
KNIFE GATE VALVE, WAFER type-DN100	20	5	1	1
KNIFE GATE VALVE, WAFER type-DN125	10	5	1	1
KNIFE GATE VALVE, WAFER type-DN150	15	3	1	1
KNIFE GATE VALVE, WAFER type-DN200	10	3	1	1
KNIFE GATE VALVE, WAFER type-DN250	20	5	1	1
KNIFE GATE VALVE, WAFER type-DN300	10	2	1	1
KNIFE GATE VALVE, WAFER type-DN350	5	1	1	1
KNIFE GATE VALVE, WAFER type-DN400	10	2	1	1
	335	89	21	21

Inspection Standard:	ANSI/ASQ Z1.4 (formerly known as MIL-STD-105)		
Inspection Level – Workmanship / Visual:	N/A	AQL - Critical Defectives:	/
Sample Size – Workmanship / Visual:	89pcs	AQL - Major Defectives:	/
		AQL - Minor Defectives:	/

## C. INSPECTION CRITERIA

- C.1. VISUAL INSPECTION  
Sample size:  
According to ANSI/ASQC Z1.4 general inspection level III:  
Total 89 samples
- C.2. DIMENSIONAL INSPECTION  
Sample size:  
Total 21 samples 1 pcs/item according client's claim.
- C.3. PRESSURE TEST  
Testing following ISO 5208.

### C.3.1. Obturator test:

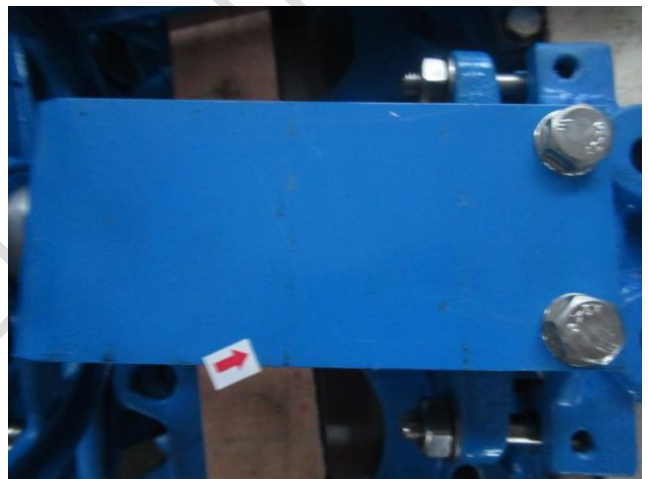
Pressure test was performed by factory staff under the guidance of inspector, the rated pressure for each item tested is 1.2 Mpa (Pressure = 1,1 x PN , PN=1.6MPa(16bar)), the pressure will be increased gradually from 0 to 1.2 Mpa, when it reached 1.2 Mpa, it will keep 0.15~2 minutes(30s for DN80~125), The test shall show no leakage through the metal, pressure containing joints, or stem seals;

### C.3.2. Shell test:

Pressure test was performed by factory staff under the guidance of inspector, the rated pressure for each item tested is 2.4 Mpa (Pressure = 1,5 x PN , PN=1.6MPa(16bar)), the pressure will be increased gradually from 0 to 2.4 Mpa, when it reached 2.4 Mpa, it will keep 0.15~3 minutes(15s for DN50,60s for DN65~60 180s for more than DN250 ), The test shall show no leakage through the metal, pressure containing joints, or stem seals;

- C.4. PAINTING TEST (3 pcs):  
This painting test was by a hammer

## D. WORKMANSHIP DEFECTIVES



As all sample no clean, so dirty mark on product -100%.

## E. MEASUREMENT:

### During the inspection:

9 samples were provided by mill for the test under the witness of PTS inspector, details were as follows:

**Actual Findings:** Most of the points of the paint coat inspected thickness: 140-727um.

**Dimensional:** length of valve, valve thickness, painting thickness and center distance see below chart.

### Results:

DN	L	D	D1	D2	D0	H1
50	50.4	162.6	122.2	100.7	179.6	272
65	50.5	183.5	142	120.2	198	295
80	51.6	198	156	132	218.6	335
100	52.2	228.4	180.6	158	239.9	370
125	58.2	256.8	211.6	188.7	256.5	415
150	58	288	240	212	280	465
200	71	345	292	267	299	568
300	76	484	408	378.5	341.5	780
350	76	515	460	433	398	855
400	85	600	507	480	445	930

### Drawing product:

No.	Spare Parts	Material	6	Packing Gland	WCB	12	Handwheel	GGG40
1	Body	GGG40	7	Yoke	Q235 (Cr. D)	13	Cap	Q235 (Cr. D)
2	Sealing Ring	EPDM	8	Stem	2Cr13 (SS420)		Boilts/Nuts	A2-70
3	Disc	SS304	9	Nut	Brass			
4	Guide Pad	PTFE	10	Yoke head	HT200			
5	Packing	PTFE (EPDM)	11	Bearing	GCr15			

(Note): 1、Design): JB/T8691-2013  
2、Flange): GB/T9113.1-2010 3、(Face to face):  
GB/T15188.2-94 chart6-7  
4、(Testing): GB/T13927-2008

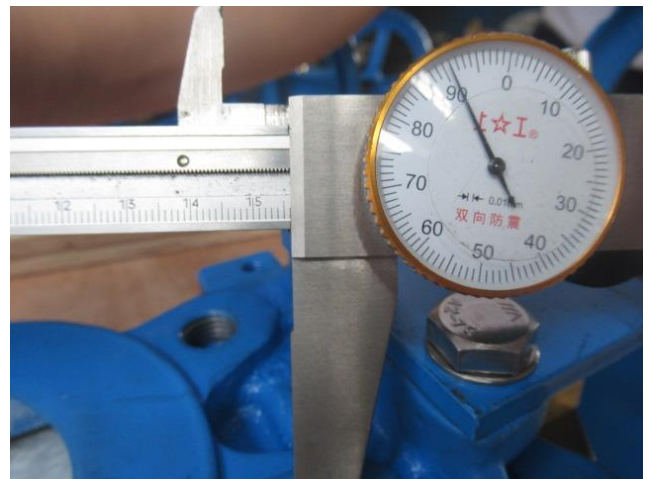
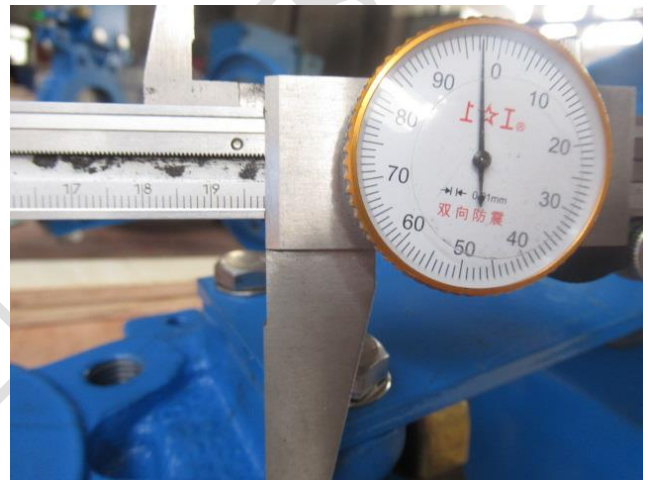
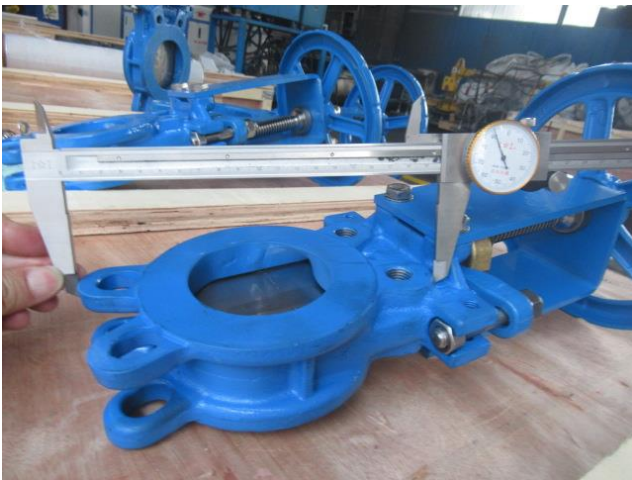
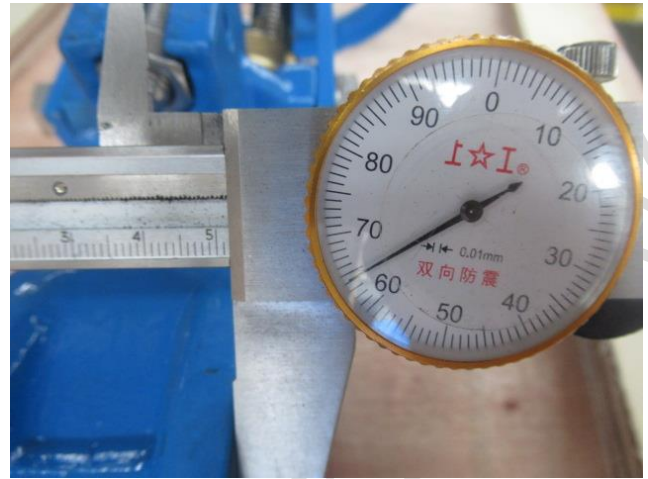
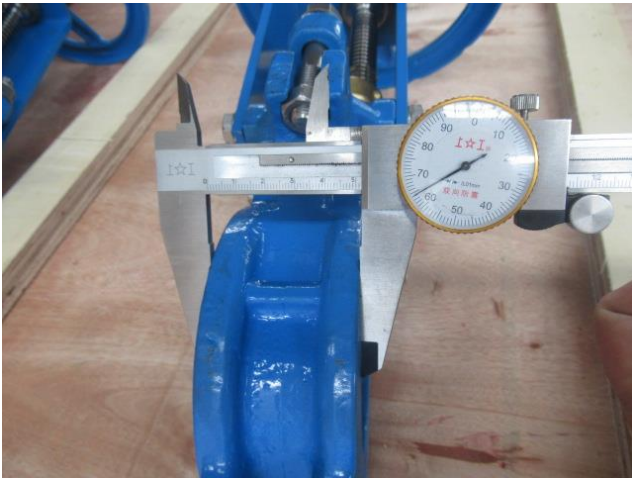
DN (mm)	L	D	D1	D2	D0	N-Th	T	●	⊕	d	H1
50	48	165	125	99	180	4-M16	12	2	2	018	275
65	48	185	145	118	200	4-M16	12	2	2	018	305
80	51	200	160	132	200	8-M16	12	2	6	018	345
100	51	220	180	156	240	8-M16	12	2	6	018	370
125	57	250	210	184	260	8-M16	12	2	6	018	420
150	57	285	240	211	280	8-M20	14	2	6	023	465
200	70	340	295	266	300	8-M20	16	2	6	023	580
250	70	395	350	319	320	12-M20	16	4	8	023	690
300	76	445	400	370	350	12-M20	16	4	8	023	800
350	76	505	460	429	400	16-M20	18	8	8	023	865
400	89	565	515	480	450	16-M24	20	10	6	027	945

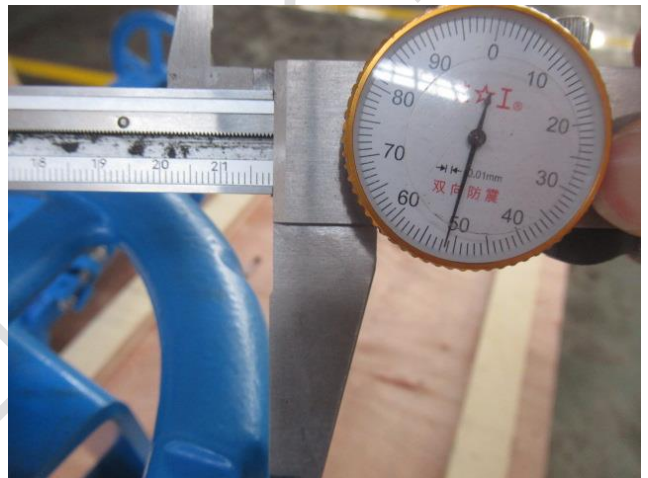
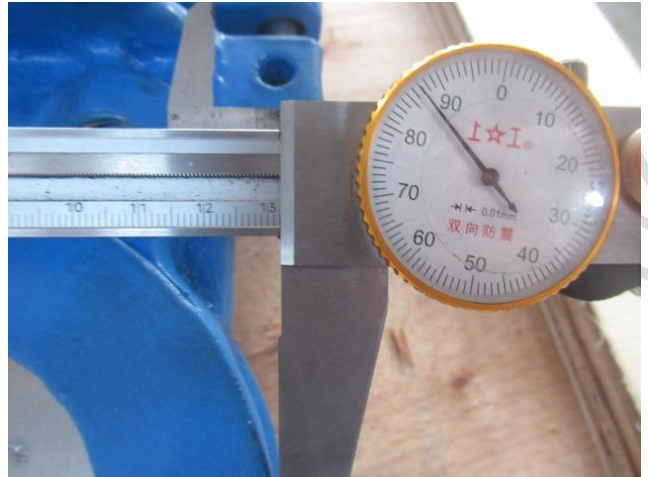
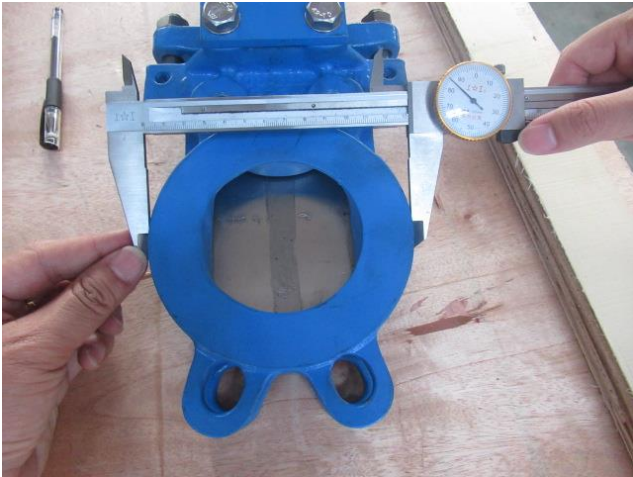
● (Blind threaded)  
⊕ (Tapping through)

Knife Gate Valve	

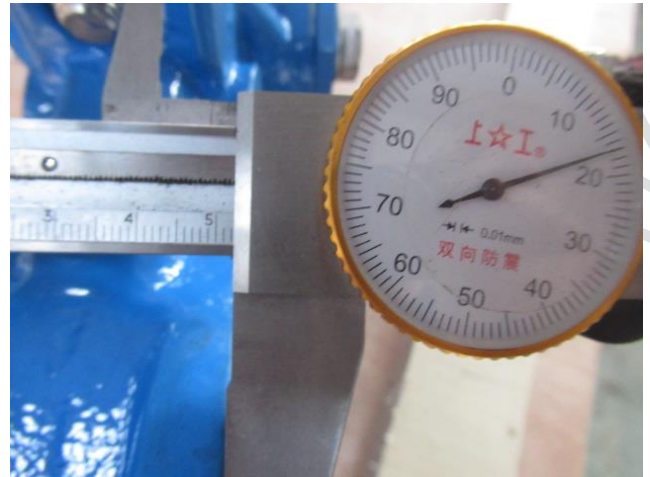


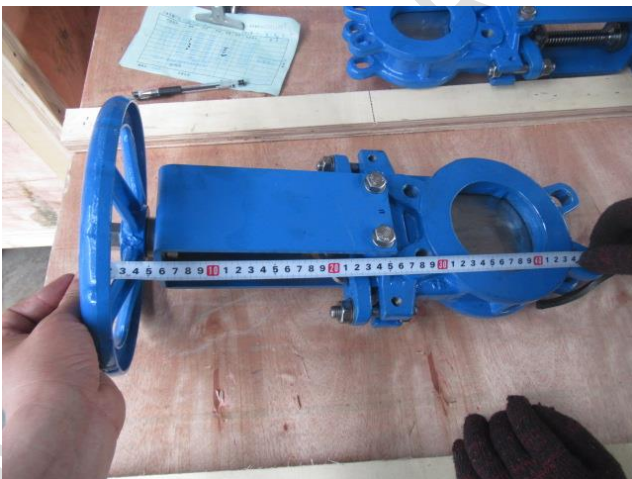
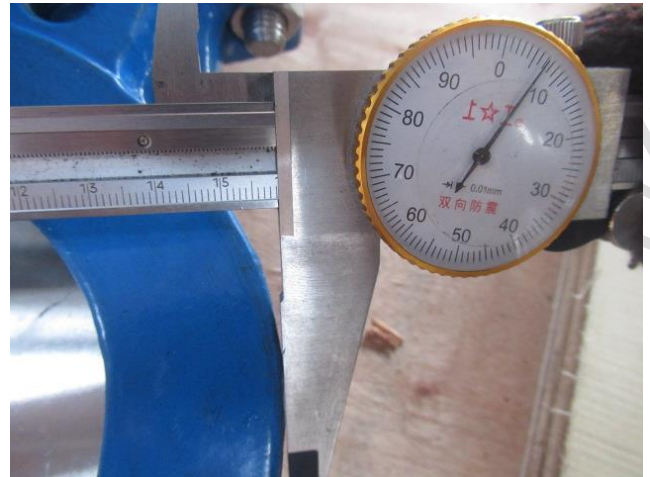
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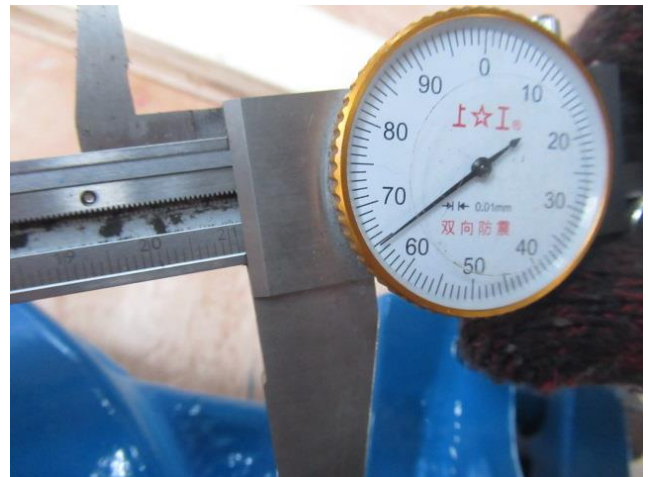


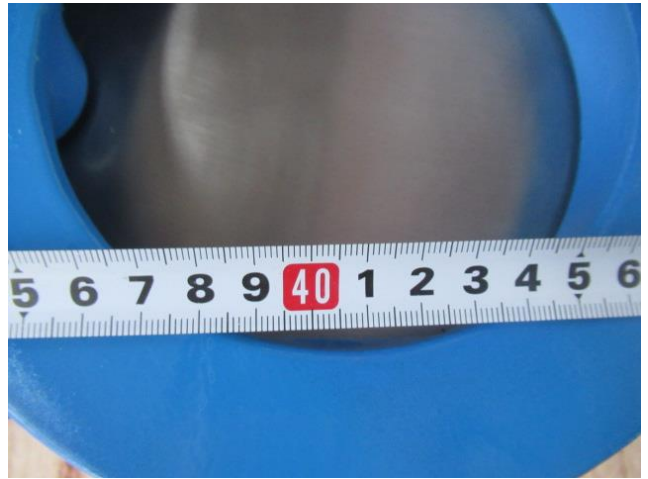
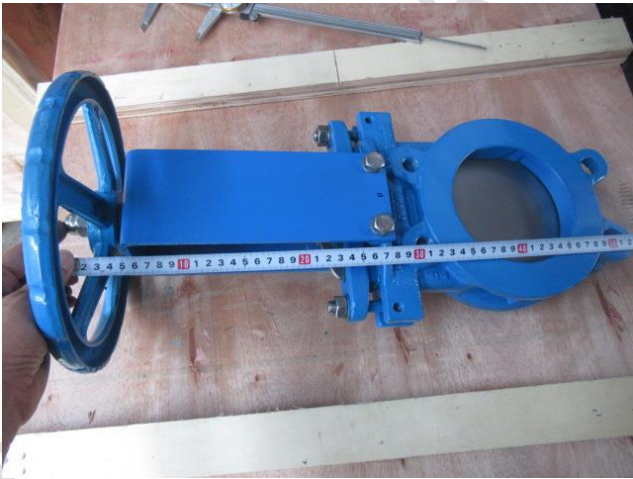
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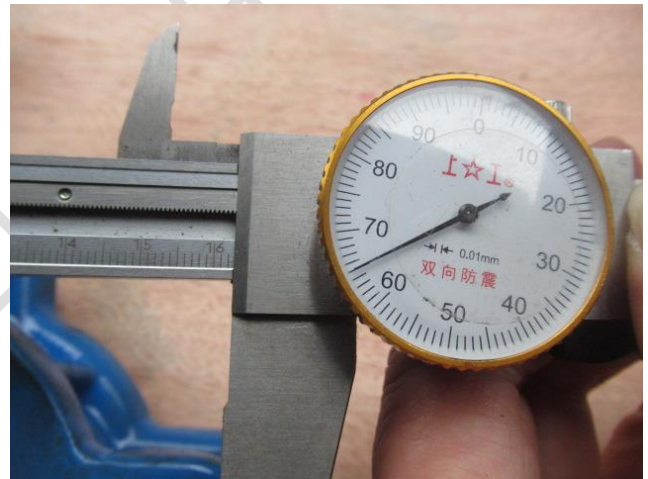
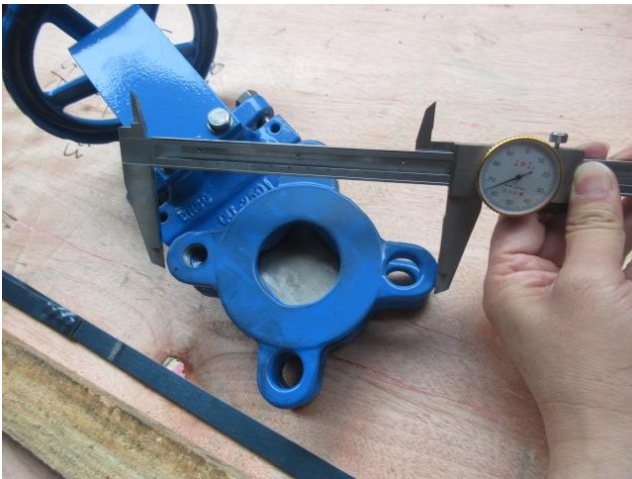
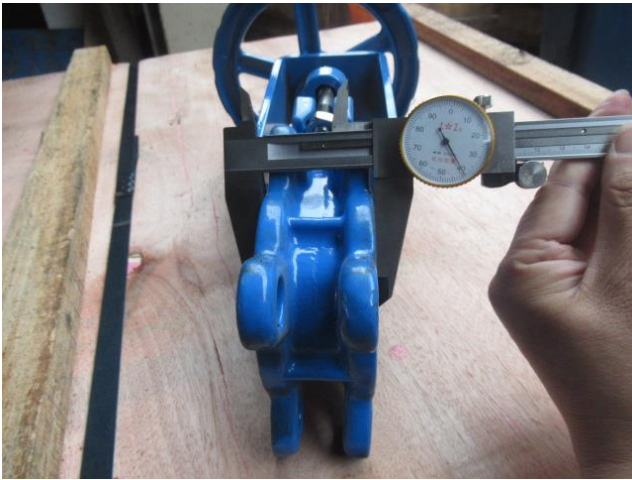


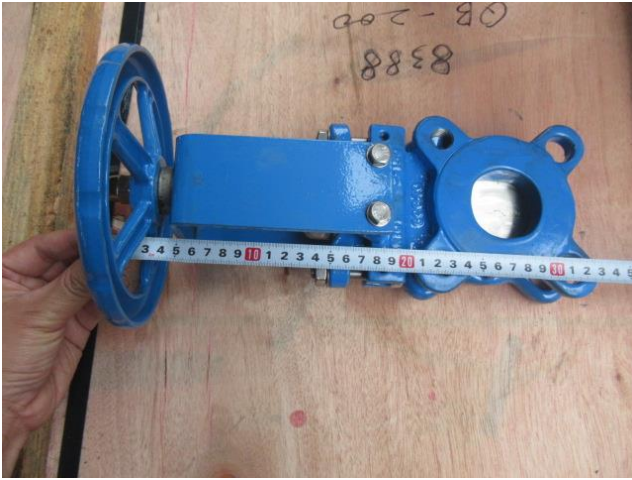
DN125



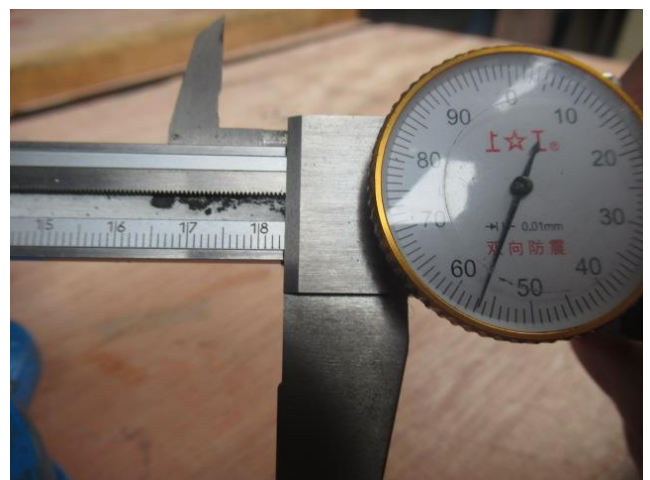
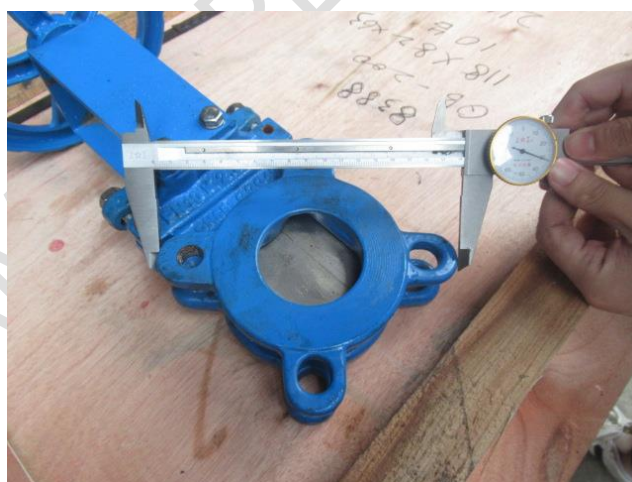
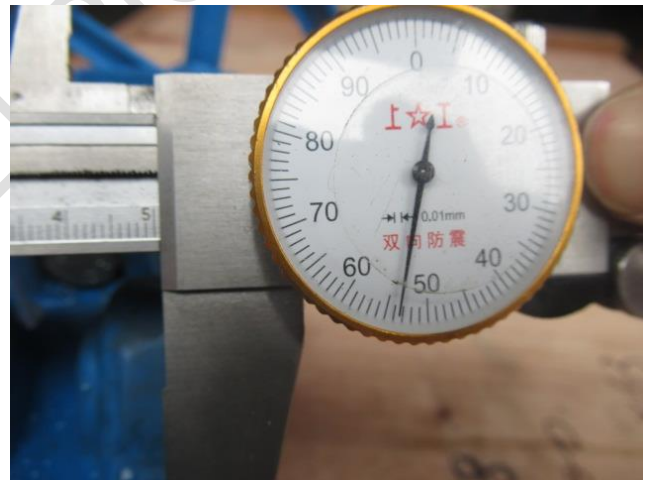
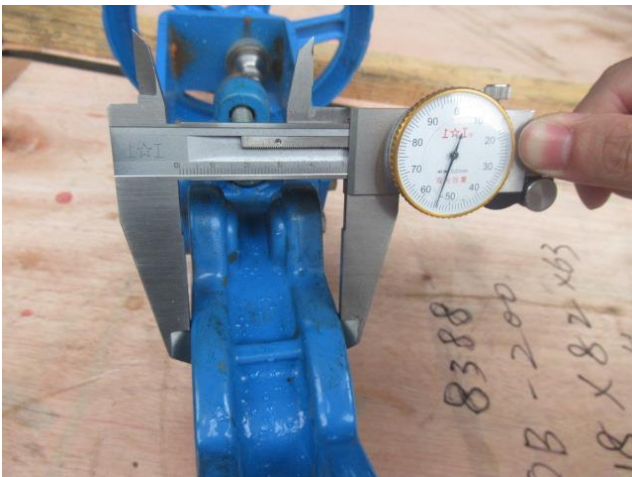


# DN50 BEFORE WASHING LINE

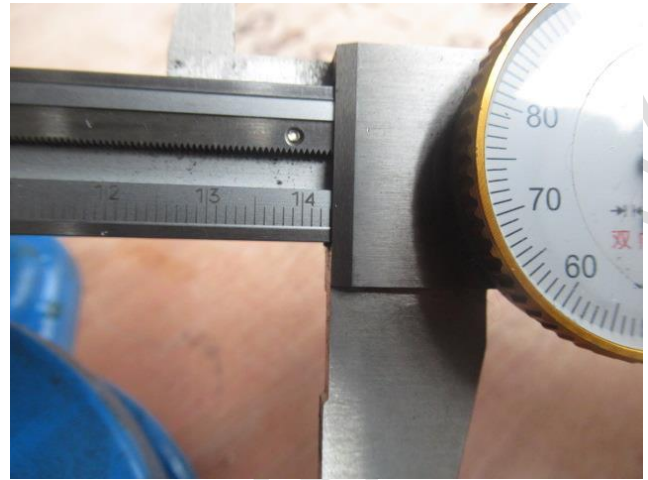
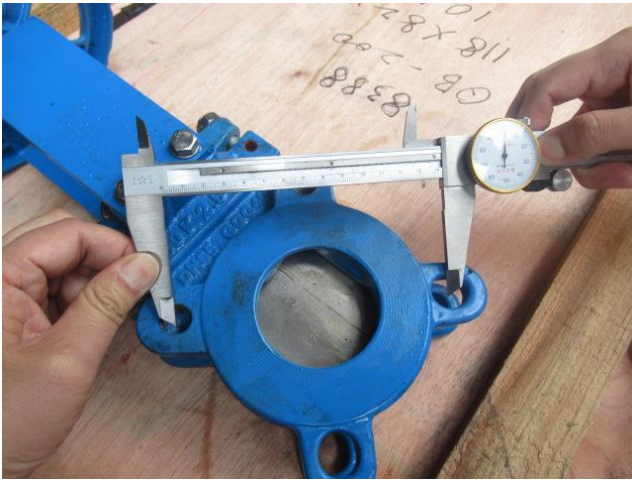




DN65 BEFORE WASHING LINE

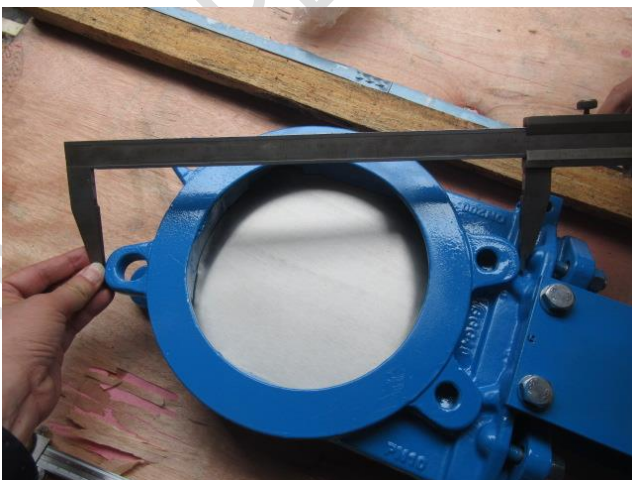
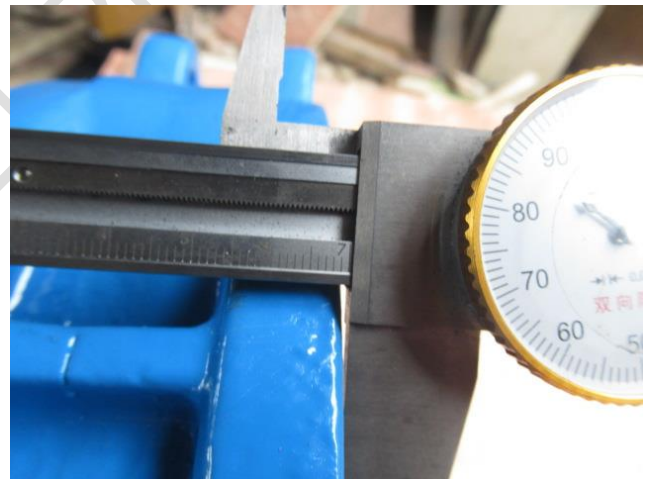


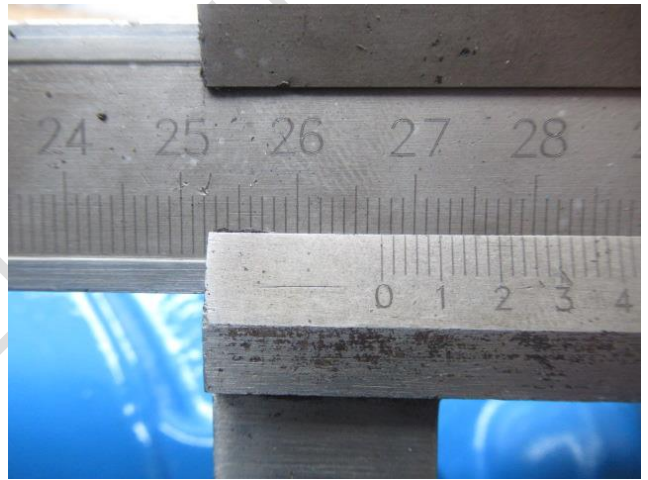
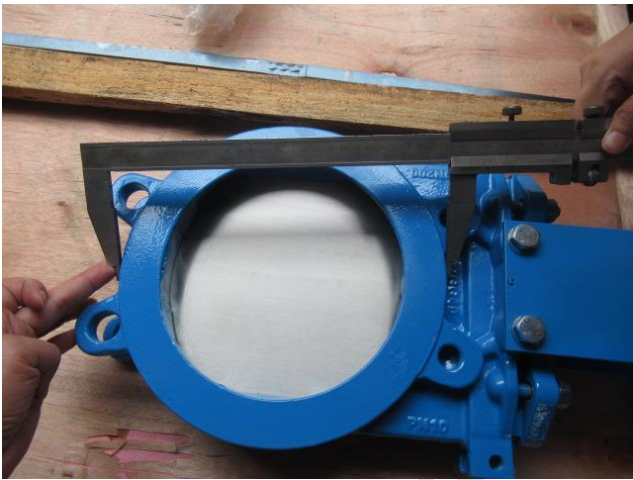
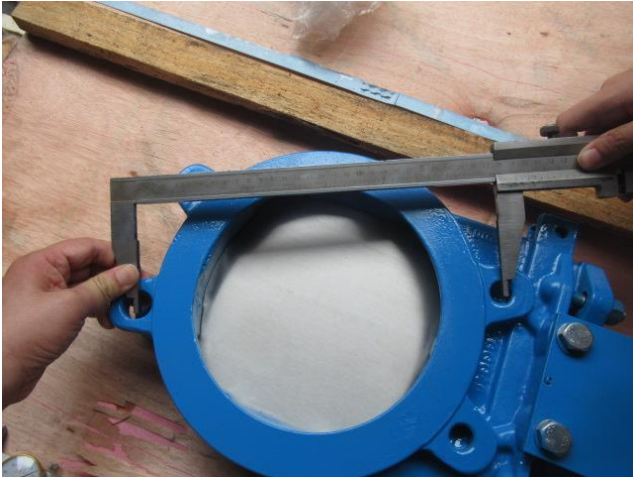






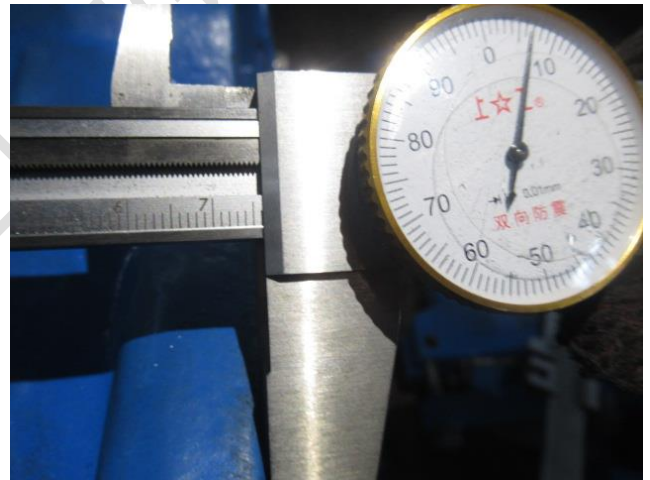
DN200

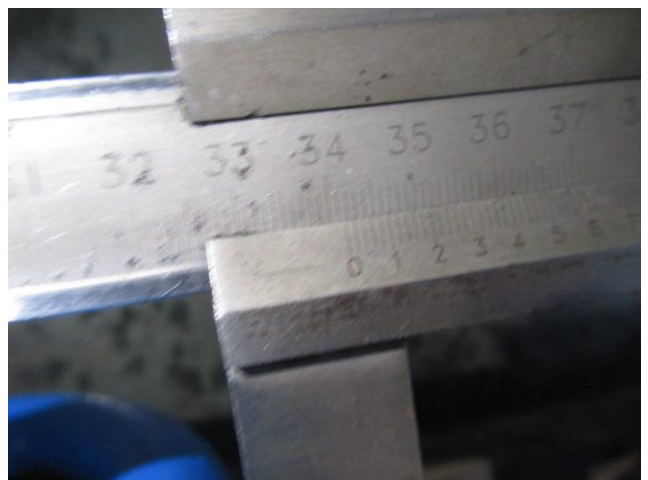
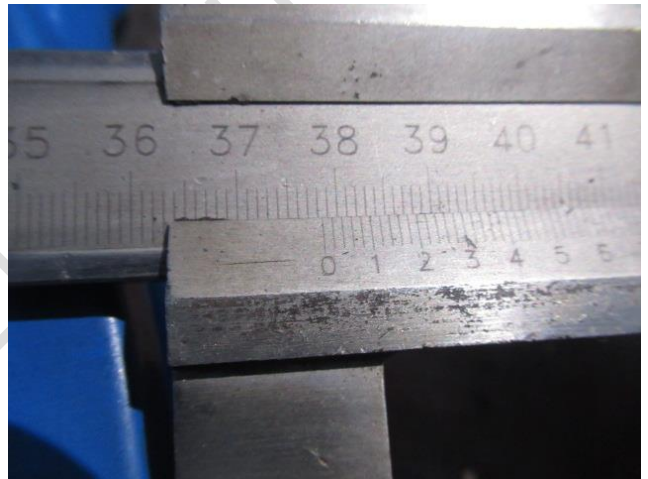
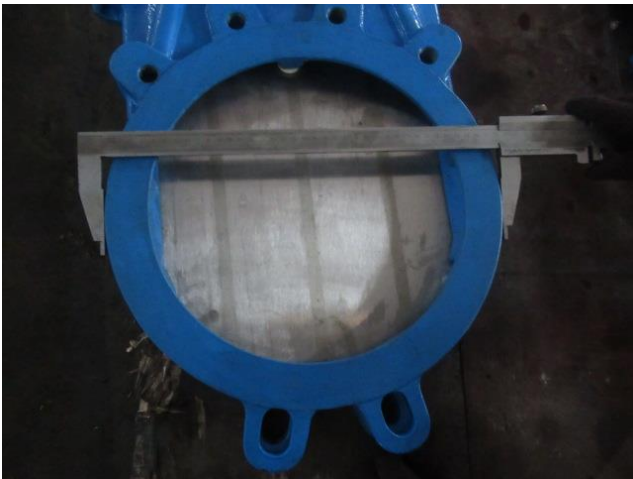
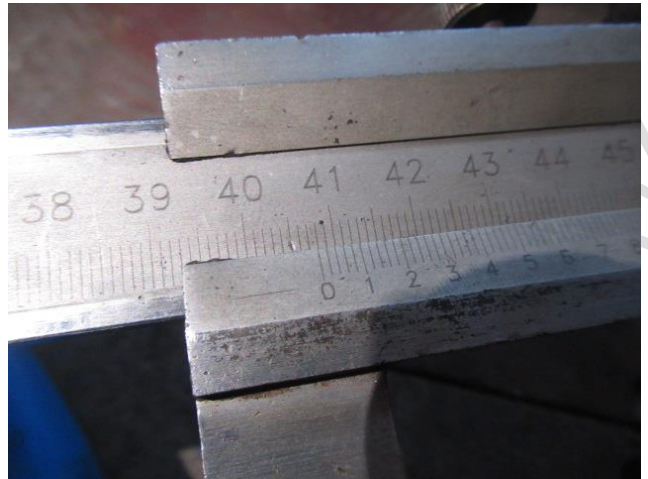
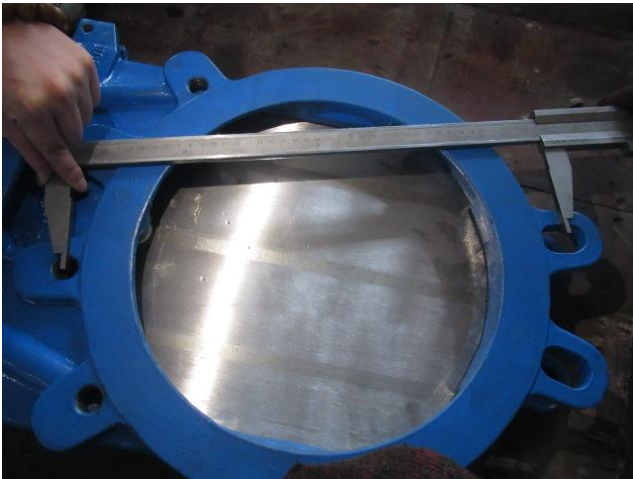


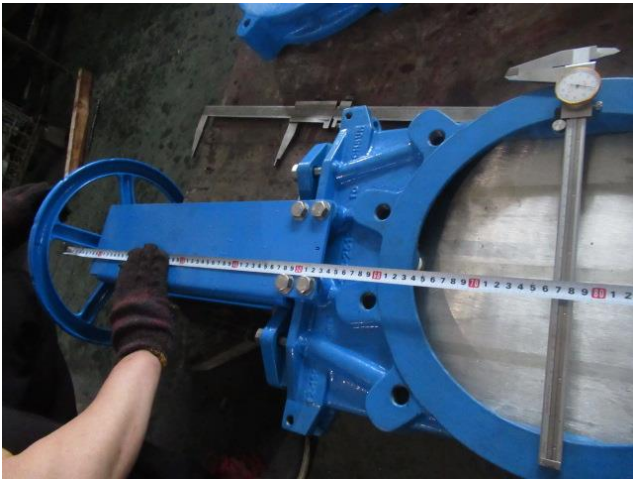




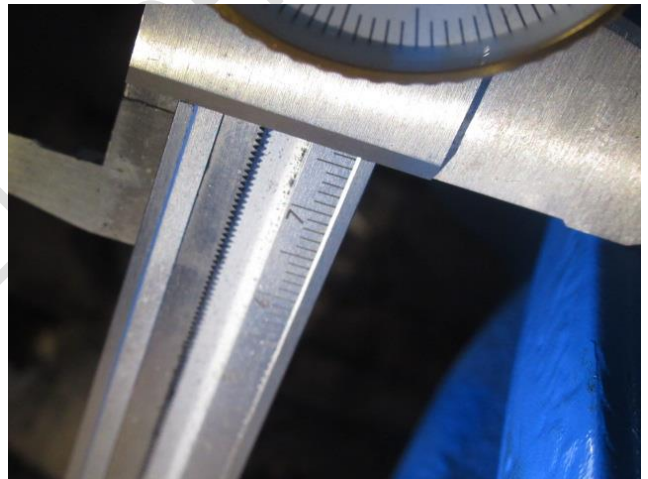
DN300



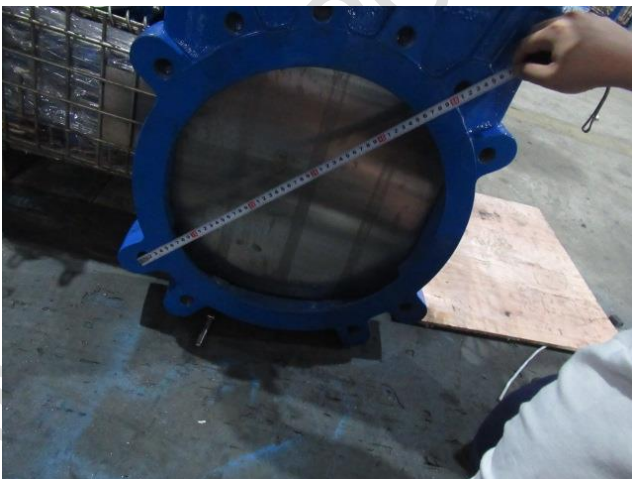




DN350



DN400



## F. WITNESS TESTING

- F.1. VISUAL INSPECTION  
Sample size:  
According to ANSI/ASQC Z1.4 general inspection level III:  
Total 24 samples
- F.2. DIMENSIONAL INSPECTION  
Sample size:  
Total 3 samples 1pcs/item according client's claim.
- F.3. PRESSURE TEST

### Testing following ISO 5208.

**Obturator test:** Pressure test was performed by factory staff under the guidance of inspector, the rated pressure for each item tested is 1.2 Mpa(Pressure =  $1,1 \times PN$  ,  $PN=1.6\text{MPa}(16\text{bar})$ ), the pressure will be increased gradually from 0 to 1.2 Mpa, when it reached 1.2 Mpa, it will keep 0.15~2 minutes(30s for DN80~125), The test shall show no leakage through the metal, pressure containing joints, or stem seals;

**Shell test:** Pressure test was performed by factory staff under the guidance of inspector, the rated pressure for each item tested is 2.4 Mpa(Pressure =  $1,5 \times PN$  ,  $PN=1.6\text{MPa}(16\text{bar})$ ), the pressure will be increased gradually from 0 to 2.4 Mpa, when it reached 2.4 Mpa, it will keep 0.15~3 minutes(15s for DN50,60s for DN65~60 180s for more than DN250 ), The test shall show no leakage through the metal, pressure containing joints, or stem seals;

### PAINTING TEST (3 pcs):

This painting test was by a hammer as factory had no test equipment.

The painting test Factory make indenter (0.5kg) free fall at 1 m height, slight dent was found after test.

### Pictures for testing:

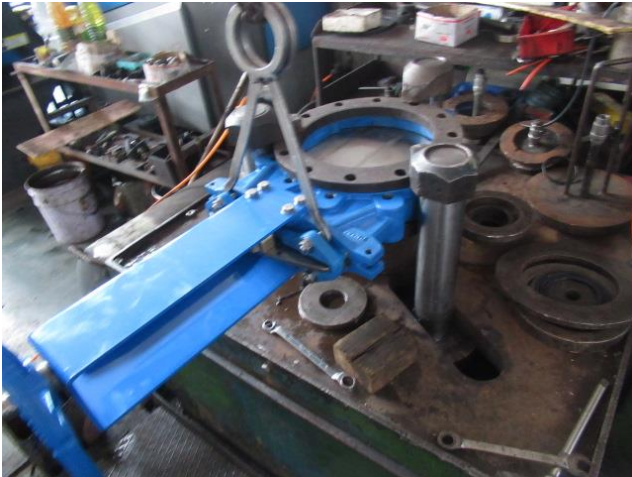




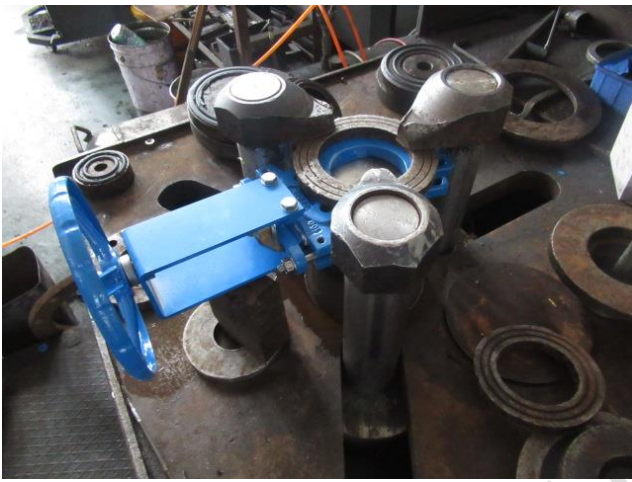












## G. INSTRUMENT CHECKLIST

No calibration certificate was available from the factory for the instrument used during test

## H. PACKING - SHIPPING MARKS - MARKING OF THE PRODUCTS

Valves have to be packed inside the wooden box, but shipping mark on it for DN150/200/250.  
Without packing side, the wooden box for DN 80/100/125.

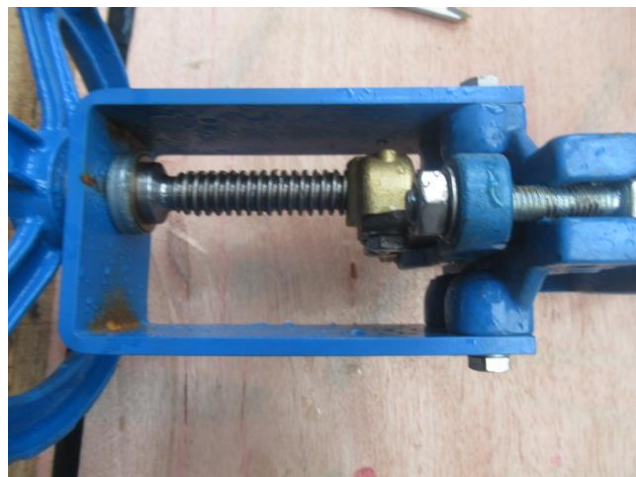
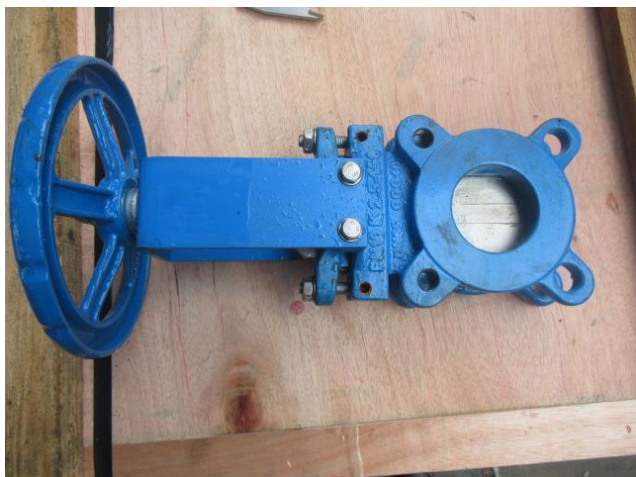
### DN50 BEFORE WASHING LINE NOT FINISH







DN65 BEFORE WASHING LINE NOT FINISH



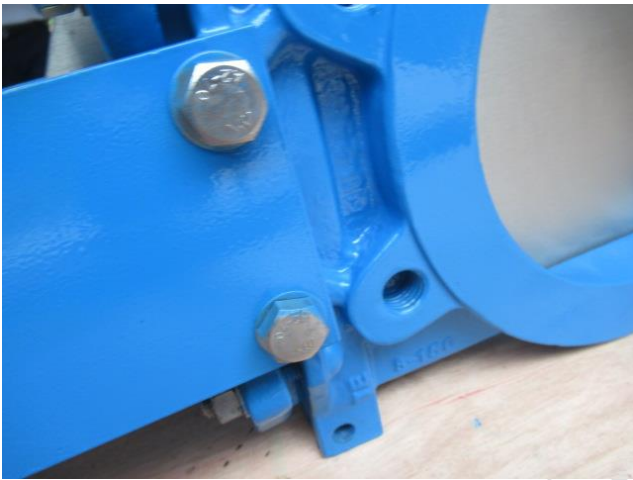
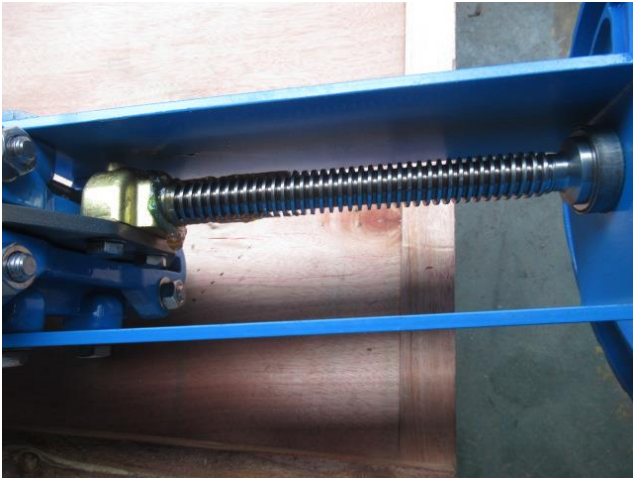


DN200

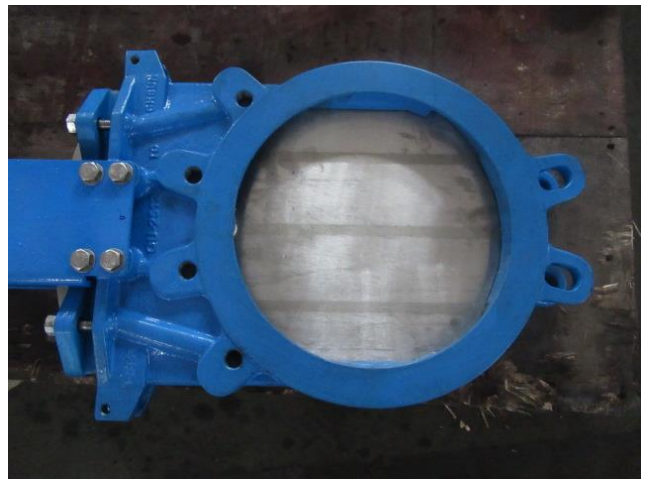
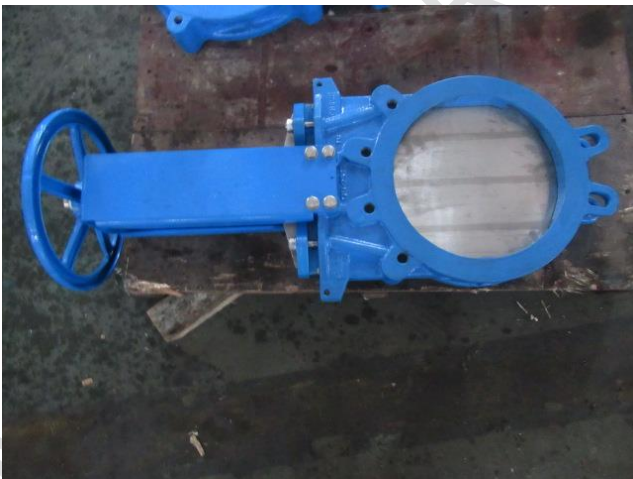




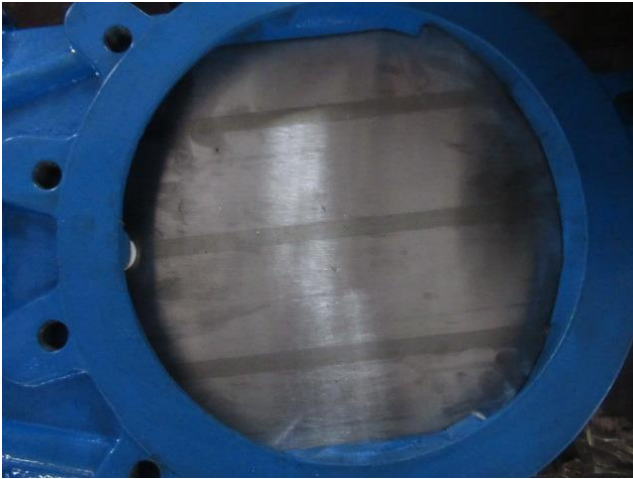




DN300

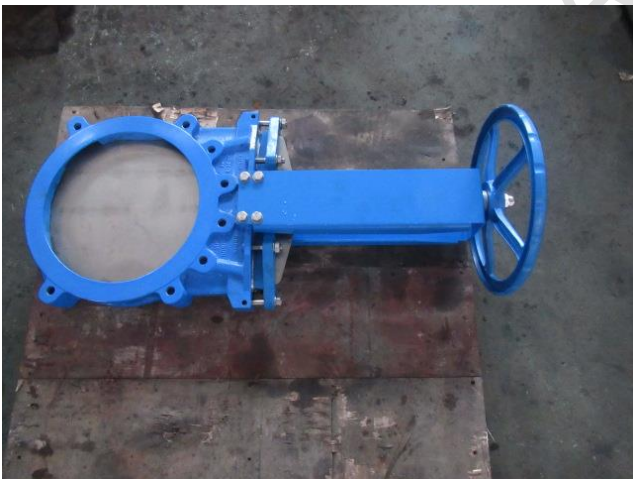




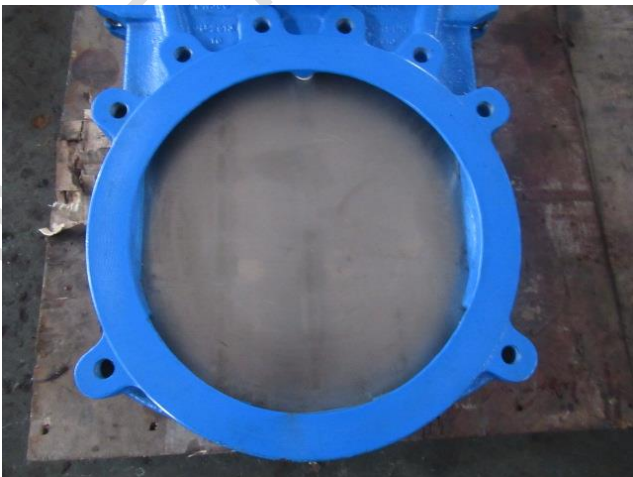




DN350







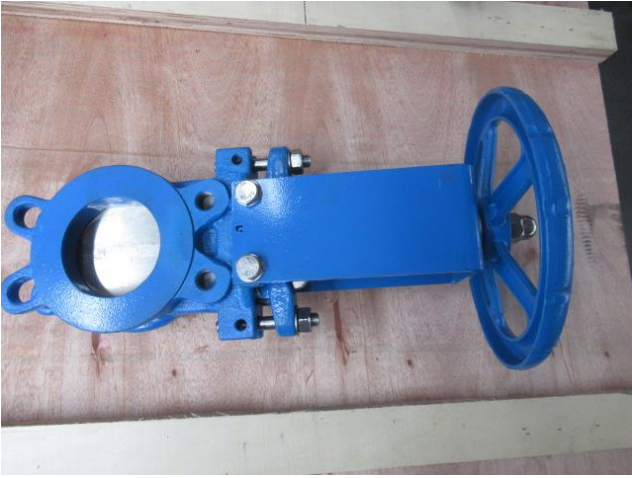


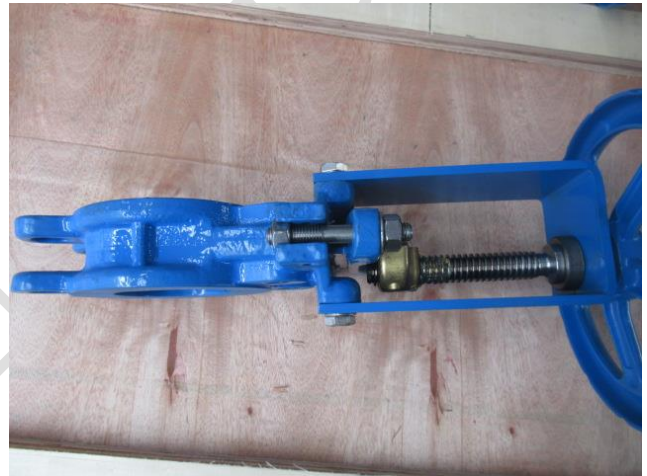
DN400





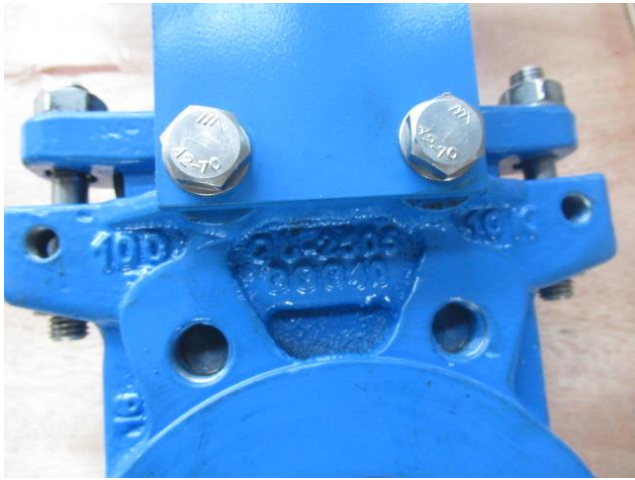
DN80

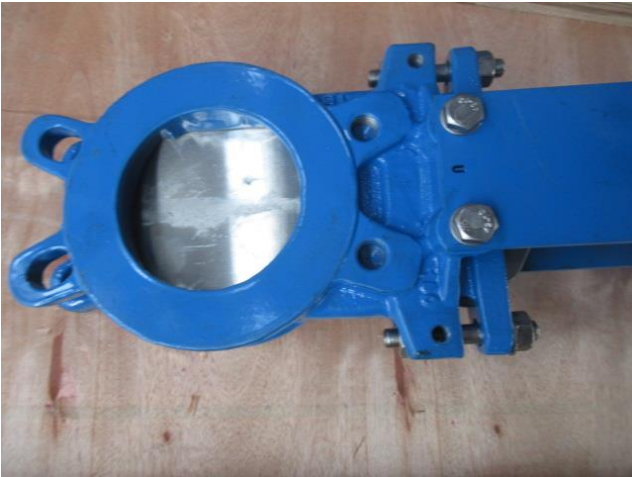




DN100

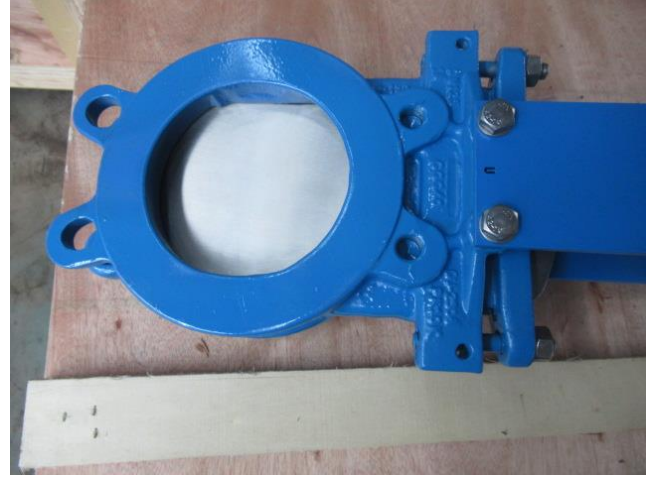
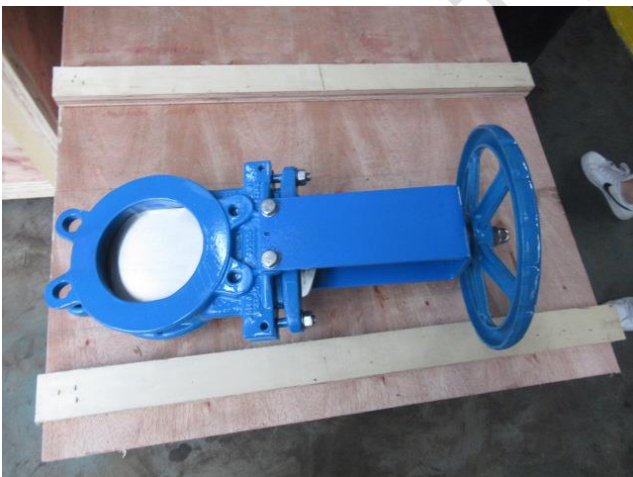






DN 125











**PRE-SHIPMENT REPORT COMPLETED SUCCESSFULLY.  
THANKS FOR YOUR ATTENTION.**

**PRE-SHIPMENT REPORT  
REF. NR: HKC21605**

For more information, please contact our quality technical department.  
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