

## Bescheinigung Certificate Certificat

XOMOX International GmbH & Co. Postfach 3240 D-88114 Lindau/Bodensee

Air Liquide AGS GmbH  
Werk Hanau

Depotstrasse 1

-63457 Hanau

Zeugnis-Nr.  
Certificate No. 05/50018/1  
No. de Certificat  
Bestell-Nr./Order No./No. d'ordre  
4500025377

Auftrags-Nr.  
Order No. B622020  
No. d'ordre

Bestell-Datum  
Date of order 1.07.2005  
Date d'ordre

Kd.-Nr.  
Cust. No. 15692  
No. de Client

Seite / Page

1

### Abnahmeprüfzeugnis 3.1B nach EN 10204

Markierung der Teile Marking of Parts Repere des pes	Pos Item Pos	Menge Qty Qte	Typ Type Type	Werkstoff / Material / Material Gehäuse Body Corps	Abschlusskörper Endcap Corps de fermeture	DN Size Diamètre	PN Class Classe	Prüfdruck/Bar Test Press. / bar Pression d'exam. / bar
--	--------------------	---------------------	---------------------	---	---	------------------------	-----------------------	--

A) Dichtheitsprüfung des Gehäuses und Abschlusses  
mit Luft (6 bar) nach DIN 3230/3 (BF und BO)

B) Festigkeitsprüfung des Gehäuses mit Wasser nach DIN 3230/3 (BA)

F) Funktionsprüfung

PV006	K115051	1	7500	1.4408	1.4021	300	10-16	A) 6 bar B) 24 bar
PV007	K115082	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV008	K115903	1	7500	1.4408	1.4021	300	10-16	A) 6 bar B) 24 bar
PV012	K120064	1	7500	1.4581	1.4021	100	10-16	A) 6 bar B) 24 bar
PV014	K120115	1	7500	1.4581	1.4021	100	10-16	A) 6 bar B) 24 bar
PV015	K120706	1	7500	1.4581	1.4021	<del>100</del> 150	10-16	A) 6 bar B) 24 bar

- 2 -

Datum / Date / Date 31.08.2005

SK

XOMOX Process Valves & Actuators

Qualitätswesen  
Quality Assurance  
Assurance de qualité

Der Sachverständiger  
The Authorized inspector  
L'inspecteur autorisé

Joachim Röhling

Der Werkssachverständiger  
Works Inspector  
Inspecteur de l'usine



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Markierung der Teile Marking of Parts Repère des pes.	Pos Item Pos	Menge Qty Qte.	Typ Type Type	Werkstoff / Material / Material Gehäuse Body Corps	Abchlusskörper Closure Member Corps de fermeture	DN Size Diamètre	PN Class Classe	Prüfdruck/Bar Test Press. / bar Pression d'exa. / bar
PV017 K12072	7	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV018 K12074	8	1	7500	1.4581	1.4021	80	10-16	A) 6 bar B) 24 bar
PV035 K13140	9	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV037 K13151	10	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV042 K13240	11	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV044 K13251	12	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV053 K14010	13	1	7500	1.4581	1.4021	80	10-16	A) 6 bar B) 24 bar
PV061 K14130	14	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV063 K14141	15	1	7500	1.4581	1.4021	100	10-16	A) 6 bar B) 24 bar

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Datum / Date / Date 31.08.2005

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### Abnahmeprüfzeugnis 3.1B nach EN 10204

Markierung der Teile Marking of Parts Repère des pcs.	Pos. Item Pos.	Menge Qty Qte.	Typ Type Type	Werkstoff / Material / Material Gehäuse Body Corps		DN Size Diamètre	PN Class Classe	Prüfdruck/Bar Test Press. / bar Pression d'exa. / bar	
PV067K1423016		1	7500	1.4581	1.4021	150	10-16	A) B)	6 bar 24 bar
PV069K1424117		1	7500	1.4581	1.4021	100	10-16	A) B)	6 bar 24 bar
PV090K1504218		1	7500	1.4408	1.4021	500	10	A) B)	6 bar 15 bar
PV109K1663019		1	7500	1.4408	1.4021	300	10-16	A) B)	6 bar 24 bar
PV110K1663120		1	7500	1.4581	1.4021	150	10-16	A) B)	6 bar 24 bar
PV111K1663221		1	7500	1.4408	1.4021	300	10-16	A) B)	6 bar 24 bar
PV172K7004022		1	7500	1.4408	1.4021	250	10-16	A) B)	6 bar 24 bar
PV173K7050523		1	7500	1.4581	1.4021	150	10-16	A) B)	6 bar 24 bar
PV174K7050624		1	7500	1.4581	1.4021	100	10-16	A) B)	6 bar 24 bar

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Datum / Date / Date 31.08.2005

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Markierung der Teile Marking of Parts Repère des pes	Pos Item Pos	Menge Qty Qte	Typ Type Type	Werkstoff / Material / Material Gehäuse Body Corps	Abschlußkörper Closure Member Corps de fermeture	DN Size Diamètre	PN Class Classe	Prüfdruck/Bar Test Press. / bar Pression d'exa. / bar
PV175K70580	25	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV180K77040	26	1	7500	1.4408	1.4021	250	10-16	A) 6 bar B) 24 bar
PV181K77505	27	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV182K77506	28	1	7500	1.4581	1.4021	100	10-16	A) 6 bar B) 24 bar
PV183K77590	29	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar

Die Prüfungen wurden ohne Beanstandung durchgeführt.  
Die Ergebnisse entsprechen den Anforderungen Ihrer Bestellung.  
All tests have been performed without any objection.  
The results meet the order requirements.

Datum / Date / Date 31.08.2005

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XOMOX Process Valves & Actuators

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Quality Assurance  
Assurance de qualité

Der Sachverständiger  
The Authorized Inspector  
L'inspecteur autorisé

Joachim Röhling

Der Werkssachverständiger  
Works Inspector  
Inspecteur de l'usine



**CRANE**

Process Flow Technologies  
A Crane Co. Company

K 11508, K 12072, K 14130,  
K 12074, K 14010,  
K 13140, K 13151, K 13240,  
K 13251



Abnahmeprüfzeugnis / Inspection certificate  
EN 10204

Type	Zeugnis-Nr.	Datum	Seite	von
Type	Certificate No.	Date	Page	of
CENTERLINE Klappe Serie RS	20269 / bp	31.08.05	1	1

Auftraggeber Customer	XOMOX International GmbH & Co. / 231185
Bestell-Nr. Cust. Order No.	X50396-05 LN: 1/3690
Crane-Kom-Nr. Crane Order No.	400814

Umfang der Lieferung/Number of items supplied

Pos. Nr. Item No.	Stückzahl Quantity	Größe DN Size DN	Ident Nr.: Ident No.:	P max. PN [ bar ]	Δ P PN [ bar ]	Serien-Nr. Serial No.	Chargen - Nr. Cast - No.	Gehäuse/ Body 3.1B 2.2	Scheibel/ Disc 3.1B 2.2	Sitz Seat 2.2
1	2	80	ALGD2E1V9H	16	10	0805 / 11-12	5 ASC / 11617 5 ATH / 11618	X		
2	3	80	ALGD2E1V9F	16	10	0805 / 265-267	5 ASD / 11666 5 ASC / 11617 5 CLC / 11655	X		
3	6	100	AMGD6E1H3H	16	10					
4	3	150	APGD6E1H3G	16	10					
5	1	150	APGD1E1V9H	16	10	0804 / 14	J 2 / 11238	X		
6	12	200	ARGB6E1V9G	10	3,5					

☒ Prüfverfahren/Testmethods acc. DIN 3230, Teil 3/Part 3 EN 10204

☐ 2.2

☒ 3.1B

☐ Prüfverfahren/Testmethods acc. DIN 3230, Teil 5 PG 3/Part 5 PG 3 EN 10204

Bemerkungen / Remarks  <input checked="" type="checkbox"/> Leckrate 1 / Leak rate 1 <input type="checkbox"/> KKS Nr. und Charge siehe Anhang (KKS No. and Heat No. see attached list)							Sonstige Prüfungen: Other Test's:  <input type="checkbox"/> Prüfungen gem. TRD 110 (Test's in acc. with TRD 110)  <input type="checkbox"/> Armatur entspr. VBG62 öl- und fettfrei gereinigt (Valve in acc. to VGB63 - free of grease and oil)  <input type="checkbox"/> Prüfung gem. DVGW - Reg. Nr.:NG - 4313 AN 0172 (Test in acc. with DVGW - Reg. Nr.:NG - 4313 AN 0172)			
Drücke in bar Überdruck Pressures in bar										
Position Item	BA	BN	BV	BV n. BA	BW	BO				
1	24	11								
2	24	11								
3										
4										
5	24	11								
6										

Das Original kann beim Hersteller eingesehen werden. The original is available in manufacture's files  
Es wird hiermit bestätigt, daß die geprüften Erzeugnisse ohne Beanstandung sind  
It is hereby certified, that the tested material is without any defect

**CRANE**  
Crane Process Flow  
Technologies GmbH  
Postfach 11 12 40  
D-40512 Düsseldorf  
Heerdter Lohweg 63-64  
D-40549 Düsseldorf  
Telefon (0211) 59 56-0  
Telefax (0211) 59 56-111

Crane Process Flow Technologies GmbH  
Postfach 11 12 40, D-40512 Düsseldorf, Heerdter Lohweg 63-71, D-40549 Düsseldorf  
Telefon (0211) 59 56-0, Telefax (0211) 59 56-111, www.craneflow.de  
Amtsgericht Düsseldorf, HR B 24702, Geschäftsführer: Hans D. Ptak



**A.K.P. FOUNDRIES PVT. LTD.**

INSPECTION CERTIFICATE ACC : TO EN 10204 3.1b

R.S. No. 689, Udyambag,

BELGAUM - 590 008

Phone : 440164,441530

CLIENTE	REDIDO NO.	CERTIFICADO
KUNDE : CRANE PROCESS FLOW TECHNOLOGIES	DESTELL NO.	ZEUGNIS NO
CUSTOMER :	ORDER NO.:	CERTIFICATE NO. : 5755
CLIENT	ORDER DATE:	CERTIFICATE NO.
	COMMANDE NO.	

MATERIAL	NORMAS DE CONTROL EESPECIFICACIONES	EN 1563
WERKSOFF	KONTROLL NORM/SPEZIFICACIONES	DIN 50125
MATERIAL SG EN-GJS-400/15	TECHNICAL REQUIREMENT/DEMAND	
MATIERE	NORMOS DE CCNTROL ET SPECIFICATIONS	

DESINACION		
GEGENSTAD		
DESIGNATION	150MM WAFER BODY	(DRAWING NO. 7010554 B )
DESIGNATION		

## ANALYSIS QUIMICO CHEMISCHE ANALYSE/CHEMICAL ANALYSE/ANALYSE-CHEMIQUE

COLADAN NO.	C	SI	Mn	P	S	Mg
SCHMELZE NO.						
HEAT NO. J.2	3.470	2.780	0.310	0.039	0.011	0.042
COULEE NO.						

CODIGO INENTIFICACION COLADA	CANTIDAD		
SCHMELZEIDENTIFIKATIONSKOD	MENGE	Inv No. 3859	Dt: 09/04/2004
HEAT IOENTIFIKATION CODE	QUANTITY	123	Nos
CODE INDENTIFICATION COULEE	QUANTITE		

## ENSAYOS MECHANICOS/MECHANISCHE PRUFUNGNM/MECHANICAL TEST/ESSAIS MECANIOVES

TRACCION/ZUGFESTIGKFT/TENSILE/TRACTION					RESILIENCIA KERBSCHLAAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N	Temperatura de Ensayo pril temperatur Test temperature T deessais	Limite Elastico Dehngrenze Yiled Strength Limite Elastibue	Cangade Rotura Zugfestigkeit Tensile Strength Fresist a traction	Aargamiento Bruchdehning Elongation Allongement	Temperatura do Ensayo Pril temperatur T deessais	Energia Absorbica Schlagabell Energy of Impact Energia Absorbee	HB 10/3000	HB 2.5/187.5
PROBE Nr.								
TEST NO.								
EPRGUV Nr.								
HEAT NO.	oC	0.2% N/mm2	N/mm <sup>2</sup>	%	J			
J.2		320.70	517.40	16.80			163 , 163	

TRATAMIENTO TERMICO  
WARMEBEHANDLUNG  
HEAT TREATMENT  
TRAITEMENT THERM QUE

NOT APPLICABLE.

OBSERVACIONES/BEMERKUNGEN/REMARKS OBSERVATIONS  
Graphite Nodules in Ferritic Matrix

LOS RESULTADOS INDICAN QUE EL MATERIAL ESTA DE  
ACUERDO ALAS ESPECIFICACIONES

DIE RESULTATE ERGEBEN, DASS DAS MATERIAL DEN  
SPEZIFIKATIONEN ENSPRICHT

THE RESULTS SHOW THAT THE MATERIAL IS IN ACCORDANCE  
WITH REQUIREMENTS.

PECHA / DATUM / DATE / DATE

DIRECTOR CIUDAD / Q.C. MANAGER

CASTINGS ARE VISUALLY INSPECTED AND ARE FREE FROM FOUNDRY DEFECT



AD-Matblatt-W-3/1

Registration No.04202W130020013 Dtd.01.03.2002

Inv. No.-2739

Certificate No. : 2597

Date : 23/01/2005

"Der RWTUV hat mit schreiben vom 30.06.03 auf die Gangeszeichnung verzichtet".

<b>BASHKO</b>	<b>3.1B MATERIAL TEST CERTIFICATE AS PER EN 18204</b>
Customer Name C. P. F. T. (I) LTD., SATARA	Material: W3/1 DIN EN1561:1997
Part Name DN 080 Wafer Body	Symbol: EN-GJL-250
Drawing No. 7010762 Z	Number: EN-JL-1040
Rev. No. Z	Quantity: 64 Nos.
P.O.No. 5510050/09.01.2004	DIE No.: 1,23

CHEMICAL ANALYSIS									
Heat No. : 5ASC	Heat Code : _____								
Manufacturer's Symbol: EE.									
	C%	Si%	Mn%	P%	S%	Cu%	Cr%	Mo%	Others
Specified Range	—Not Specified— Refer Clause-6 of DIN EN 1561:1997								
Actual Findings	3.400	1.850	0.660	0.062	0.075	—	—	—	—

STD. REFER-				Grain Size AS PER	
Inclusion Rating AS PER	A	B	C	D	_____

Heat Treatment	i) Normalized	<input type="checkbox"/>	ii) Oil/Water Quenched & Tempered	<input type="checkbox"/>	iii) ISO-Annealed	<input type="checkbox"/>
	iv) Annealed	<input type="checkbox"/>	v) Stress-Relieved	<input type="checkbox"/>	vi) Normalized & Tempered	<input type="checkbox"/>

% of Hardness Checked 3 Nos./Lot	Flash Line	<input type="checkbox"/>	Hardness Specified: 175 TO 250 BHN
By 10/3000 Kg.	Flat Surface	<input checked="" type="checkbox"/>	Observed: 180-180 BHN

MICRO EXAMINATION	Graphite	_____	Size	_____
	Matrix	_____	Carbide	_____

MECHANICAL PROPERTIES						IMPACT (J)			
	Y.S. 0.2%	TENSILE N/MM <sup>2</sup> 1.00%	UTS N/MM <sup>2</sup> 250 to 350	% E.A.	% ELONG	1	2	3	AVG.
Specified Range	_____	_____	_____	_____	_____	_____	_____	_____	_____
Actual Findings	_____	_____	269.29	_____	_____	_____	_____	_____	_____

SPARK & SPECTRAL : _____	HEAT TREATMENT CYCLE : _____
	SOAKING TIME : _____

PMI TEST : _____	
IOC TEST AS PER DIN EN ISO 3651 - 2 : _____	

VISUAL INSPECTION : _____	As per Attached P.D.I.R.
DIMENSIONAL INSPECTION : _____	

NO WELDING DONE  
 THE CAST IRON HAS NOT COME INTO DIRECT CONTACT WITH MERCURY OR ANY OF ITS COMPONENTS  
 OR ANY MERCURY CONTAINING DEVICES EMPLOYING A SINGLE BOUNDARY OF ON CONTAINMENT  
 DURING MANUFACTURING PROCESS, INSPECTION AND STORAGE.

POSITIVE STATEMENT OF COMPLIANCE : WE CERTIFY THAT THE CONTENTS OF THIS REPORT ARE  
 CORRECT AND ACCURATE & MEET THE REQUIREMENTS OF THE P.O. & THE MATERIAL SPECIFICATIONS

FOR BASHKO ENGINEERING PVT. LTD.

Name : *[Signature]* M.S. Kore  
 Works Authorized Inspector  
 BEPL/TC-15c

(K)

Authorized Inspector's Stamp



Inv. No. 4298-2777

AD-Merblatt-W-3/1

Registration No.04202W130020013 Dtd.01.03.2002

Certificate No. : 2622 Date : 28/01/2005

"Der RWTUV hat mit schreiben vom 30.06.03 auf die Gergenseichnung verzichtet".

<b>BASHKO</b>	<b>3.1B MATERIAL TEST CERTIFICATE AS PER EN 10204</b>
Customer Name C. P. F. T. (I) LTD., SATARA	Material: W3/1 DIN EN1561:1997
Part Name DN 080 Wafer Body	Symbol: EN-GJL-250
Drawing No. 7010762 Z	Number: EN-JL-1040
Rev. No. Z	Quantity: 25 Nos.
P.O.No. 5510050/09.01.2004	DIE No.: 1,2,3

CHEMICAL ANALYSIS									
Heat No. : 5ATH					Heat Code : _____				
Manufacturer's Symbol: BE.									
	C%	Si%	Mn%	P%	S%	Cu%	Cr%	Mo%	Others
Specified Range	—Not Specified — Refer Clause-6 of DIN EN 1561:1997								
Actual Findings	3.350	1.850	0.700	0.085	0.074	—	—	—	—

Inclusion Rating AS PER				Grain Size AS PER	
A	B	C	D	_____	

Heat Treatment	<input type="checkbox"/> i) Normalized <input type="checkbox"/> iv) Annealed	<input type="checkbox"/> ii) Oil/Water Quenched & Tempered <input type="checkbox"/> v) Stress Relieved	<input type="checkbox"/> iii) ISO-Annealed <input type="checkbox"/> vi) Normalized & Tempered
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% of Hardness Checked 3 Nos./Lot	Flash Line	Hardness Specified: 175 TO 250 BHN
By 10/3000 Kg.	Flat Surface <input checked="" type="checkbox"/>	Observed: 207-207 BHN

MICRO EXAMINATION	Graphite _____	Size _____
	Matrix _____	Carbide _____

MECHANICAL PROPERTIES									
	Y.S. 6.2%	TENSILE N/MM <sup>2</sup> 1.00%	UTS N/MM <sup>2</sup>	% R.A.	% ELONG	IMPACT (J)			
Specified Range	_____	_____	250 to 350	_____	_____	1	2	3	AVG.
Actual Findings	_____	_____	298.04	_____	_____	_____	_____	_____	_____

SPARK & SPECTRAL: _____	HEAT TREATMENT CYCLE: _____
	SOAKING TIME: _____

PMI TEST: \_\_\_\_\_

IGC TEST AS PER DIN EN ISO 3651 - 2: \_\_\_\_\_

VISUAL INSPECTION : \_\_\_\_\_

DIMENSIONAL INSPECTION : \_\_\_\_\_

As per Attached P.D.I.R.

NO WELDING DONE

THE CAST IRON HAS NOT COME INTO DIRECT CONTACT WITH MERCURY OR ANY OF ITS COMPONENTS OR ANY MERCURY CONTAINING DEVICES EMPLOYING A SINGLE BOUNDARY OF ON CONTAINMENT DURING MANUFACTURING PROCESS, INSPECTION AND STORAGE.

POSITIVE STATEMENT OF COMPLIANCE : WE CERTIFY THAT THE CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE & MEET THE REQUIREMENTS OF THE P.O. & THE MATERIAL SPECIFICATIONS

FOR BASHKO ENGINEERING PVT. LTD.

Name : *Manoj K. K.* M S Korg  
 Works Authorized Inspector  
 BEPL/FQC-15c

  
 Authorized Inspector's Stamp



Inv. No.- 3143

rlatt-W-3/1

Registration No.04202W130020013 Dtd.01.03.2002

Certificate No. : 2913

Date : 16/03/2005

"Der RWTUV hat mit schreiben vom 30.06.03 auf die Gengenseichnung verzichtet".

**BASHKO**

**3.1B MATERIAL TEST CERTIFICATE AS PER EN 10204**

Customer Name	C. P. F. T. (I) LTD., SATARA	Material	W3/1 DIN EN1561:1997
Part Name	DN 080 Wafer Body	Symbol	EN-GJL-250
Drawing No.	7010762 Z	Number	EN-JL-1040
Rev. No.	Z	Quantity	88 Nos.
P.O.No.	5510050/09.01.2004	DIE No.:	1,23

**CHEMICAL ANALYSIS**

Heat No. : 5CLC						Heat Code : _____			
Manufacturer's Symbol BE.									
	C%	Si%	Mn%	P%	S%	Cr%	Cr%	Mo%	Others
Specified Range	---Not Specified --- Refer Clause-6 of DIN EN 1561:1997								
Actual Findings	3.375	1.820	0.650	0.064	0.076	---	---	---	---

**STD. REFER-**

Inclusion Rating AS PER	Grain Size AS PER
A B C D	---

Heat Treatment	i) Normalized	ii) Oil Water Quenched & Tempered	iii) ISO-Annealed
	iv) Annealed	v) Stress Relieved	vi) Normalized & Tempered

% of Hardness Checked 3 Nos./Lot	Flash Line	Hardness Specified: 175 TO 250 BHN
By 10/3000 Kg.	Flat Surface	Observed: 197-207 BHN

MICRO EXAMINATION	Graphitic Matrix	Size Carbide
-------------------	------------------	--------------

**MECHANICAL PROPERTIES**

	Y.S.	N/MM2	UTS	%	%	IMPACT (J)			
	0.2%	1.00%	N/MM2	P.A.	ELONG	1	2	3	AVG.
Specified Range	---	---	250 to 350	---	---	---	---	---	---
Actual Findings	---	---	290.20	---	---	---	---	---	---

SPARK & SPECTRAL :	HEAT TREATMENT CYCLE :
	SOAKING TIME :

PEI TEST :  
IGC TEST AS PER DIN EN ISO 3651 - 2 :

VISUAL INSPECTION  
DIMENSIONAL INSPECTION : } As per Attached P.D.I.R.

NO WELDING DONE  
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FOR BASHKO ENGINEERING PVT. LTD.

Name : M S Kore  
Works Authorized Inspector  
BEPL/POC-15c

(K)

Authorized Inspector's Stamp

AD-Merblatt-W-3/1

Registration No.04202W130320013 Dtd.01.03.2002

Certificate No. : 3015

Date : 31/03/2005

"Der RWTUV hat mit schreiben vom 30.06.03 auf die Gengenseichnung verzichtet".

**BASHKO****3.1B MATERIAL TEST CERTIFICATE AS PER EN 10204**

Customer Name	C. P. F. T. (I) LTD., SATARA	Material:	W3/1 DIN EN1561:1997
Part Name	DN 080 Wafer Body	Symbol:	EN-GJL-250
Drawing No.	7010762 Z	Number:	EN-JL-1040
Rev. No.	Z	Quantity:	2 Nos.
P.O.No.	5510050/09.01.2004	DIE No.:	1,2,3

**CHEMICAL ANALYSIS**

Heat No. : 5ASD						Heat Code : -----			
Manufacturer's Symbol BE.									
	C%	Si%	Mn%	P%	S%	Cu%	Cr%	Mo%	Others
Specified Range	---Not Specified -- Refer Clause-5 of DIN EN 1561:1997								
Actual Findings	3.370	1.870	0.660	0.082	0.075	---	---	---	---

**STD. REFER-**

Inclusion Rating AS PER				Grain Size AS PER			
A	B	C	D				

Heat

Treatment i) Normalized

☐

ii) Oil/Water Quenched &amp; Tempered

☐

iii) ISO-Annealed

☐

iv) Annealed

☐

v) Stress Relieved

☐

vi) Normalized &amp; Tempered

☐

% of Hardness Checked 3 Nos./Lot	Flash Line	<input type="checkbox"/>	Hardness Specified: 175 TO 250 BHN
By 10/3000 Kg.	Flat Surface	<input checked="" type="checkbox"/>	Observed: 187-197 BHN

**MICRO EXAMINATION**

Graphite

Matrix

Size

Carbide

**MECHANICAL PROPERTIES**

	Y.S. 0.2%	N/MM2 1.00%	UTS N/MM2	% R.A.	% ELONG	IMPACT (J)			
						1	2	3	AVG.
Specified Range	-----	-----	250 to 350	-----	-----	-----	-----	-----	-----
Actual Findings	-----	-----	274.51	-----	-----	-----	-----	-----	-----

SPARK &amp; SPECTRAL : -----

HEAT TREATMENT CYCLE : -----

SOAKING TIME : -----

PMI TEST : -----

IGC TEST AS PER DIN EN ISO 3651 - 2 : -----

VISUAL INSPECTION : }

As per Attached P.D.I.R.

DIMENSIONAL INSPECTION : }

NO WELDING DONE

THE CAST IRON HAS NOT COME INTO DIRECT CONTACT WITH MERCURY OR ANY OF ITS COMPONENTS OR ANY MERCURY CONTAINING DEVICES EMPLOYING A SINGLE BOUNDARY OF ON CONTAINMENT DURING MANUFACTURING PROCESS, INSPECTION AND STORAGE.

POSITIVE STATEMENT OF COMPLIANCE : WE CERTIFY THAT THE CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE & MEET THE REQUIREMENTS OF THE P.O. & THE MATERIAL SPECIFICATIONS

FOR BASHKO ENGINEERING PVT. LTD.

(K)

Name : *J. K. K.* M S Korde  
Works Authorized Inspector  
BEPL/F/QC-15c

Authorized Inspector's Stamp



**CRANE**

Process Flow Technologies  
A Crane Co. Company



14 309 1

**Abnahmeprüfzeugnis / Inspection certificate****EN 10204**

Typ Type	Zeugnis-Nr. Certificate No.	Datum Date	Seite Page	von of
CENTERLINE Klappe Serie RS	18444 / bp	13.01.04	1	1

Auftraggeber Customer	XOMOX International GmbH & Co. / 231185
Bestell-Nr. Cust. Order No.	X30039-03
Crane-Kom-Nr. Crane Order No.	351462

**Umfang der Lieferung / Number of items supplied**

Pos. Nr. Item No.	Stückzahl Quantity	Größe DN Size DN	Ident.Nr.: Ident No.:	P max. PN [bar]	ΔP PN [bar]	Serien-Nr. Serial No.	Chargen-Nr. Cast - No.	Gehäuse/ Body 3.1B 2.2	Schelle/ Disc 3.1B 2.2	Sitz Seat 2.2
1	2	80	ALGDIE18MH	16	10	0104/ 47-48	G 24 / 8890 J 11 / 9123	X		

☐ Prüfverfahren/Testmethods acc. DIN 3230, Teil 3/Part 3 EN 10204☐ 2.2☐ 3.1B☐ Prüfverfahren/Testmethods acc. DIN 3230, Teil 5 PG 3/Part 5 PG 3 EN 10204**Bemerkungen / Remarks**

- ☐ Leckrate 1 / Leak rate 1  
☐ KKS Nr. und Charge siehe Anhang  
(KKS No. and Heat No. see attached list)

**Sonstige Prüfungen:****Other Test's:**

- ☐ Prüfungen gem. TRD 110  
(Test's in acc. with TRD 110)

- ☐ Armatur entspr. VBG62 81 - und fettfrei gereinigt  
(Valve in acc. to VGB63 - free of grease and oil)

- ☐ Prüfung gem. DVGW - Reg. Nr.: NG - 4313 AN 0172  
(Test in acc. with DVGW - Reg. Nr.: NG - 4313 AN 0172)

**Drücke in bar Überdruck  
Pressures in bar**

Position Item	BA	BN	BV	BV n. BA	BW	BO

Das Original kann beim Hersteller eingesehen werden. The original is available in manufacture's files

Es wird hiermit bestätigt, daß die geprüften Erzeugnisse ohne Beanstandung sind

It is hereby certified, that the tested material is without any defect

**Crane Process Flow Technologies GmbH**

Postfach 11 12 40, D-40512 Düsseldorf, Heerdter Lohweg 63-71, D-40549 Düsseldorf

Telefon (0211) 5958-0, Telefax (0211) 5956-111, www.craneflow.de

Amtsgericht Düsseldorf, HRB 24702, Geschäftsführer: Joachim Lukoschek, Hans D. Plak

**CRANE**  
The world's best  
Crane Process Flow  
Technologies GmbH  
Postfach 11 12 40  
D-40512 Düsseldorf  
Heerdter Lohweg 63-71  
D-40549 Düsseldorf  
Telefon (0211) 5958-0  
Telefax (0211) 5956-111

31.08.2005, 14:12 KLOEP 143091.-- - P1/3

8890

**A.K.P. FOUNDRIES PVT. LTD.**

INSPECTION CERTIFICATE ACC : TO EN 10204 3.1b

R.S. No. 639, Udyambag, 14 3 0 9 1

BELGAUM - 590 008

Phone : 440164, 441530

CLIENTE KUNDE CUSTOMER : CRANE PROCESS FLOW TECHNOLOGIES CLIENT		RECIBIDO NO. DESTELL NO. ORDER NO. : 75114563/ ORDER DATE: 21/Apr/2003 COMMANDE NO.		CERTIFICADO ZEUGNIS NO. CERTIFICATE NO. 2876 CERTIFICATE NO.	
MATERIAL WERKSTOFF MATERIAL SG EK-GJS-400/15 MATIERE		NORMAS DE CONTROL EESPECIFICACIONES KONTROLL NORM/SPEZIFIKATIONEN TECHNICAL REQUIREMENT/DEMAND NORMES DE CONTROL ET SPECIFICATIONS		EN 10013 DIN 50125	
DESINACION GEGENSTAD DESIGNATION DESIGNATION		DN 80 W/L WAFER BODY DRAWING NO. 7010527 A			
ANALYSIS QUIMICO/CHEMISCHE ANALYSE/CHEMICAL ANALYSE/ANALYSE-CHEMIQUE					
COLADAN NO. SCHMELZE NO. HEAT NO. COULEE NO.		G.24			
		C		SI	
		1.50		2.70	
		Mn		P	
		0.200		0.042	
		S		Pb	
		0.012		0.005	
CODIGO IDENTIFICACION COLADA SCHMELZEIDENTIFIKATIONSOD HEAT IDENTIFICATION CODE CODE IDENTIFICATION COULEE		G.24		CANTIDAD MENGE QUANTITY QUANTITE	
				Inv No. 2114 87 Nos.	
ENSAYOS MECANICOS/MECHANISCHE PRUEBUNG/MECHANICAL TEST/ESSAIS MECANICOES					
TRACCION/ZUGFESTIGKEIT/TENSILE/TRACTION				RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE	
PROBETA N PROBE Nr. TEST NO. EPRGUY Nr.	Temperatura de Ensayo pri temperatur Test temperature T deessai	Limite Elastico Dehngrenze Yield strength Limite Elastique	Capacidad Rotura Bruchlast Tensile strength Rupture strength Rupture strength	Alargamiento Bruchdehnung Elongation Allongement	Temperatura de Ensayo Pri temperature T deessai
HEAT NO.	oC	0.2% N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	J
G.24		339.50	523.70	17.40	
				DUREZA/HARTE HARDNESS/CHARENTE	
				HB 10/3000	
				HB 2.5/181.5	
TRATAMIENTO TERMICO WARMBEHANDLUNG HEAT TREATMENT TRAITEMENT THERMIQUE					
NOT APPLICABLE					
OBSERVACIONES/BEMERKUNGEN/REMARKS OBSERVATIONS					
LOS RESULTADOS INDICAN QUE EL MATERIAL ESTA DE ACUERDO ALAS ESPECIFICACIONES DIE RESULTATE ERGEBEN, DASS DAS MATERIAL DEN SPEZIFIKATIONEN ENSPRICHT THE RESULTS SHOW THAT THE MATERIAL IS IN ACCORDANCE WITH REQUIREMENTS.				PECHA / DATUM / DATE / DATE  DIRECTOR CALIDAD / Q.C. MANAGER	



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9123

**A.K.P. FOUNDRIES PVT. LTD.**

INSPECTION CERTIFICATE ACC : TO EN 10204 3.1b

R.S. No. 689, Udyambag,

BELGAUM - 590 008

Phone : 440164,441530

CLIENTE KUNDE CUSTOMER : CRANE PROCESS FLOW TECHNOLOGIES CLIENT	RECIBO NO. DESTIN. NO. ORDER NO. : 15114563/ ORDER DATE : 21/Apr/2003 COMMANDE NO.	CERTIFICADO ZEUGNIS NO CERTIFICATE NO. : 4728 CERTIFICATE NO.
--	--	--

MATERIAL WERKSCH. MATERIAL : SG EN-GJS-400/15 MATIERE	NORMAS DE CONTROL Y ESPECIFICACIONES KONTROLL. NORM./SPEZIFIKATIONEN TECHNICAL REQUIREMENT/DEMAND NORMES DE CONTROL ET SPECIFICATIONS	EN 1563 DIN 50125
--	--	----------------------

DESIGNACION GEGENSTAND DESIGNATION : DN 80 W/L WAFER BODY DESIGNATION	(DRAWING NO. : 7010527 A)
--	---------------------------

ANALISIS QUIMICO / CHEMISCHE ANALYSE / CHEMICAL ANALYSIS / ANALYSE CHIMIQUE						
COLODAN NO. SCHNELZE NO. HEAT NO. COULEE NO.	C	Si	Mn	P	S	Mg
1.11	3.430	2.560	0.210	0.038	0.011	0.043

CODIGO IDENTIFICACION COLADA SCHNELZEIDENTIFIKATIONSKOD HEAT IDENTIFICATION CODE CODE IDENTIFICATION COULEE	1.11	CANTIDAD MENGE QUANTITY QUANTITE	Inv No. : 3237 100 Nos	DE : 09/20/2003
--	------	---	---------------------------	-----------------

ENSAYOS MECANICOS / MECHANISCHE PRUFUNGEN / MECHANICAL TEST / ESSAIS MECANIOVES									
TRACCION / ZUGFESTIGKEIT / TENSILE / TRACTION					RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE		
PROBETA M PROBE Nr. TEST NO. EPRGV Nr.	Temperatura de Ensayo prüf temperatur Test temperature T desais	Limite Elastico Dehnengrenze Yield Strength Limite Elastique	Cargade Rotura Zugfestigkeit Tensile Strength Fleissel a Traction	Alargamiento Bruchdehnung Elongation Allongement	Temperatura de Ensayo prüf temperatur T desais	Energia Absorbida Schlagarbeit Energy of Impact Energie Absorbée			
HFAT NO.	eC	0.2% N/mm2	N/mm <sup>2</sup>	%	J		HB 10/3000		HB 2.5/187.5
1.11		329.50	523.70	18.40			170, 170		

TRATAMIENTO TERMICO  
WARMEBEHANDLUNG  
HEAT TREATMENT  
TRAITEMENT THERM QUE

NOT APPLICABLE.

OBSERVACIONES/BEMERKUNGEN/REMARKS OBSERVATIONS

Graphite Nodules in Ferritic Matrix

LOS RESULTADOS INDICAN QUE EL MATERIAL ESTA DE  
ACUERDO ALAS ESPECIFICACIONES

DIE RESULTATE ERGEBEN, DASS DAS MATERIAL DEN  
SPEZIFIKATIONEN ENSPRICHT

THE RESULTS SHOW THAT THE MATERIAL IS IN ACCORDANCE  
WITH REQUIREMENTS.

FECHA / DATUM / DATE / DATE

DIRECTOR CALIDAD / Q.C. MANAGER

**CRANE**

Process Flow Technologies  
A Crane Co. Company



Abnahmeprüfzeugnis / Inspection certificate  
EN 10204

Typ Type	Zeugnis-Nr. Certificate No.	Datum Date	Seite Page	Von of
CENTERLINE Klappe Serie RS	19215 / bp	03.09.04	1	1

Auftraggeber Customer	XOMOX International GmbH & Co. / 231185			
Bestell-Nr. Cust. Order No.	X40470-04	272023531100		
Crane-Kom-Nr. Crane Order No.	373515			

Umfang der Lieferung/Number of items supplied

Pos. Nr. Item No.	Stückzahl Quantity	Größe DN Size DN	Ident. Nr.: Ident. No.:	P <sub>max</sub> PN [bar]	ΔP PW [bar]	Serien-Nr. Serial No.	Chargen-Nr. Cast. No.	Gehäuse/ Body 1.1B 2.2	Scheibe/ Disc 3.1B 2.2	Sitz Seat 2.2
1	1	200	ARGDIE1V8H	16	10	0906 / 16	M 16 / 8338	X		

☐ Prüfverfahren/Testmethods acc. DIN 3230, Teil 3/Part 3 EN 10204

☐ 2.2

☐ 3.1B

☐ Prüfverfahren/Testmethods acc. DIN 3230, Teil 5 PG 3/Part 5 PG 3 EN 10204

<b>Bemerkungen / Remarks</b>  <input type="checkbox"/> Leckrate 1 / Leak rate 1 <input type="checkbox"/> KKS Nr. und Charge siehe Anhang (KKS No. and Heat No. see attached list)							<b>Sonstige Prüfungen:</b> <b>Other Test's:</b>  <input type="checkbox"/> Prüfungen gem. TRD 110 (Test's in acc. with TRD 110)  <div style="font-size: 2em; text-align: center;">146214</div> <input type="checkbox"/> Armatur entspr. VBG62 III - und fettfrei gereinigt (Valve in acc. to VBG63 - free of grease and oil)  <input type="checkbox"/> Prüfung gem. DVGW - Reg. Nr.: NG - 4313 AN 0172 (Test in acc. with DVGW - Reg. Nr.: NG - 4313 AN 0172)			
<b>Drücke in bar Überdruck</b> <b>Pressures in bar</b>										
Position Item	BA	BN	BV	BV n. BA	BW	BO				

Das Original kann beim Hersteller eingesehen werden. The original is available in manufacture's files  
 Es wird hiermit bestätigt, daß die geprüften Erzeugnisse ohne Beanstandung sind  
 It is hereby certified, that the tested material is without any defect

Crane Process Flow Technologies GmbH

Postfach 11 12 40, D-40512 Düsseldorf, Heerdter Lohweg 63-71, D-40549 Düsseldorf

Telefon (02 11) 59 56-0, Telefax (02 11) 59 56-111, www.crane-flow.de

Amtsgericht Düsseldorf, HR B 24702, Geschäftsführer: Joachim Lukoschek, Hans O. Patak

**CraneFlow**  
 Crane Process Flow  
 Technologies GmbH  
 Postfach 11 12 40  
 D-40512 Düsseldorf  
 Heerdter Lohweg 63-71  
 D-40549 Düsseldorf  
 Telefon (02 11) 59 56-0  
 Telefax (02 11) 59 56-111



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A. K. P. FOUNDRIES PVT LTD.,

R.C.No. 699, Udyanbagh,  
DELHI - 590 008.  
Phone: 410164, 441530

INSPECTION CERTIFICATE ACC: TO 5.18 OF EN 10204

CUSTOMER: CRANE PROCESS FLOW TECHNOLOGIES

ORDER NO. 5113404  
DT: 22/04/2002

CERTIFICATE NO.  
7257 - 06/02/2003

MATERIAL: SG 60G10

TECHNICAL REQUIREMENTS/DEMAND EN 1563

DESIGNATION: DMC200 WAFERBODY 7010SSS Z

INVOICE NO.: 6959  
INVOICE DATE: 06/02/2003

CHEMICAL ANALYSIS %

HEAT NO.	C	Si	Mn	P	S	Cu	Cr	Ni	Mg
H.16	3.640	2.800	0.220	0.041	0.012				0.051

HEAT IDENTIFICATION CODE: H.16

QUANTITY

MECHANICAL TEST/PROPERTIES

TENSILE

IMPACT STRENGTH

HARDNESS IN HRC

TEST NO.	Test temperature	Yield Strength	Tensile Strength	Elongation	Test Temperature	Energy off	HB	HV
					T (degrees)	Impact	10/3000	12.5/187.5
HEAT NO.	oC	0.2% N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	oC	J		
H.16		329.20	537.50	17.40			170	

HEAT TREATMENT

NOT APPLICABLE.

Microstructure: GRAPHITE NODULES IN FERRITIC MATRIX.

POSITIVE STATEMENT OF COMPLIANCE: WE CERTIFY THAT THE CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE & MEET THE REQUIREMENT OF THE PD & THE MATERIAL SPECIFICATIONS.

For A.K.P. FOUNDRIES PVT. LTD.,

Name: *[Signature]*  
Works Authorised Inspector.

CRANE PROCESS FLOW TECHNOLOGIES

(PRIVATE LTD.)

Quality Control Dept.

Version: 01

Sign

Date: 18/2

146214