

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

## Bescheinigung Certificate Certificat

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

Selste / Page

1

Abnahmeprüfzeugnis 3.1B nach EN 10204

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
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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	100 150	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

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

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Markierung der Teile Marking of Parts Repere des pes	Pos Item Pos	Menge Qty Qte	Typ Type Type	Werkstoff / Material / Material Gehäuse Body Corps	Abchlusskörner Closure Member Corps de fermeture	DN Size Diamètre	PN Class Classe	Prüfdruck/Bar Test Press. / bar Pression d'exa / bar
PV017K12072	7	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV018K12074	8	1	7500	1.4581	1.4021	80	10-16	A) 6 bar B) 24 bar
PV035K13140	9	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV037K13151	10	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV042K13240	11	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV044K13251	12	1	7500	1.4408	1.4021	200	10-16	A) 6 bar B) 24 bar
PV053K14010	13	1	7500	1.4581	1.4021	80	10-16	A) 6 bar B) 24 bar
PV061K14130	14	1	7500	1.4581	1.4021	150	10-16	A) 6 bar B) 24 bar
PV063K14141	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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Joachim Röhling

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Werk Hanau

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-63457 Hanau

Zeugnis-Nr.  
Certificate No. 05/50018/1  
No. de Certificat  
Bestell-Nr./Order No./No. d'ordre  
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Order No. B622020  
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Abnahmeprüfzeugnis 3.1B nach EN 10204

Markierung der Teile Marking of Parts Repère des pss.	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
PV172K1004022	1	7500	1.4408	1.4021		250	10-16	A) B)	6 bar 24 bar
PV173K1050523	1	7500	1.4581	1.4021		150	10-16	A) B)	6 bar 24 bar
PV174K1050624	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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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 Gehäuse Body Corps	Abchlußkörper Closure Member Corps de fermeture	DN Size Diametre	PN Class Classe	Prüfdruck/Bar Test Press. / bar Pression d'exarn / bar
PV175K7058025	1	7500	1.4581	1.4021	150	10-16	A) B)	6 bar 24 bar
PV180K7704026	1	7500	1.4408	1.4021	250	10-16	A) B)	6 bar 24 bar
PV181K7750527	1	7500	1.4581	1.4021	150	10-16	A) B)	6 bar 24 bar
PV182K7750628	1	7500	1.4581	1.4021	100	10-16	A) B)	6 bar 24 bar
PV183K7759029	1	7500	1.4581	1.4021	150	10-16	A) B)	6 bar 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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Joachim Röhling

Der Werkssachverständiger  
Works Inspector  
Inspecteur de l'usine

**CRANE**

Process Flow Technologies  
A Crane Co. Company

K 15042  
K 12006, K 12011, K 14141, K 14241,  
K 11505, K 11590, K 16630, K 16632,  
K 14230, K 16631, K 70505, K 70580,  
K 77505, K 77590



Abnahmeprüfzeugnis / Inspection certificate  
EN 10204

Typ Type	Zeugnis-Nr. Certificate No.	Datum Date	Seite Page	von of
CENTERLINE Klappe Serie RS	20241 / kr	31.08.05	1	1

Auftraggeber Customer	XOMOX International GmbH & Co. / 231185
Bestell-Nr. Cust. Order No.	X50356-05 LN: 1/3690
Crane-Kom-Nr. Crane Order No.	399234

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	Scheibe/ Disc 3.1B 2.2	Sitz Seat 2.2
			2738C3G3G00							
2	1	500	AXGB1E1U9G	10	10					
3	4	100	AMSD1E1V9H	16	16	0705 / 465 - 468	H 27 / 10977 G 27 / 10978 L 223 / 11475	X		
			271723G3H00							
4	1	125	ANGD1E1V9H	16	10	0705 / 469	E 19 / angef.	X		
5	8	150	APGD1E1V9H	16	10	0705 / 381 - 384 0705 / 470 - 473	M 19 / 9696 M 17 / 8167 H 5 / 10724 J 2 / 11238	X		
			271723G3H00							
6	4	300	ATGD1E1V9G	16	10	0805 / 113-116	GA / angef.	X		
			272623G3G00							

☒ 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				
2										
3	24	11								
4	24	11								
5	24	11								
6	24	11								

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 63-71  
D-40549 Düsseldorf  
Telefon (02 11) 59 56-0  
Telefax (02 11) 59 56-111

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.craneflow.de  
Amtsgericht Düsseldorf, HR B 24702, Geschäftsführer: Hans D. Ptak

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

AD. NO CERT. REG. NO. 04202W1300200012 DATED: 01-02-2002 BY RMTUV

R. S. No. 689, Udayabag,  
BELGAUM - 590 008.  
Phone: 440164, 441530

INSPECTION CERTIFICATE ACC: TO 3.1B OF EN 10204

CUSTOMER: CRANE PROCESS FLOW TECHNOLOGIES	ORDER NO. 5113513 DT: 15/04/2002	CERTIFICATE NO. 6045 - 20/12/2002
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MATERIAL: SS EN-BIS-400/15	TECHNICAL REQUIREMENTS/DEMAND	EN 1563
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DESIGNATION DN150WAFERBODY 7010554 B

INVOICE NO.: 5910  
INVOICE DATE: 20/12/2002

## CHEMICAL ANALYSIS:

HEAT NO.	H. 17	C	Si	Mn	P	S	Cu	Cr	Ni	Mg
		3.540	2.790	0.280	0.039	0.011				0.047

HEAT IDENTIFICATION CODE	H. 17	QUANTITY	15
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## MECHANICAL TEST/PROPERTIES

TENSILE					IMPACT STRENGTH		HARDNESS IN BHN	
TEST NO.	Test temperature	Yield Strength	Tensile Strength	Elongation	Test Temperature	Energy of Impact	HB	HB
					T dessals		10/3000	12.5/187.5
HEAT NO.	°C	10.2% N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	°C	J		
H. 17		331.00	534.20	18.00			170	178
							170	178

HEAT TREATMENT	NOT APPLICABLE	Microstructure :	GRAPHITE NODULES IN FERRITIC MATRIX
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VISUAL INSPECTION: 0/0


## REMARKS/OBSERVATIONS


NO WELDING DONE

THIS CASTING HAS NOT COME INTO DIRECT CONTACT WITH MERCURY OR ANY OF ITS COMPONENTS OR ANY MERCURY CONTAINING DEVICES EMPLOYING A SINGLE BOUNDARY OF OR 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 REQUIREMENT OF THE PO & THE MATERIAL SPECIFICATIONS.

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

Name:   
Works Authorised Inspector.

CRANE PROCESS FLOW TECHNOLOGIES PVT. LTD. Quality Control Dept. Verified Ok Sign:  Date: 22/12
--

Authorised Insp.

8167

**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. DESTELL NO. ORDER NO.: /5114564/ ORDER DATE: 21/Apr/2003 COMMANDE NO.	CERTIFICADO ZEUGNIS NO CERTIFICATE NO.: 7912 CERTIFICATE NO.
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MATERIAL WERKSOFF MATERIAL SG EN-GJS-400/15 MATIERE	NORMAS DE CONTROL EESPECIFICACIONES KONTROLL NORM/SPEZIFIKATIONEN TECHNICAL REQUIREMENT/DEMAND NORMOS DE CCNTROL ET SPECIFICATIONS	EN 1563 DIN 50125
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DESINACION GEGENSTAD DESIGNATION 150MM WAFER BODY DESIGNATION	(DRAWING NO. 7010554 B)
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ANALYSIS QUIMICO CHEMISCHE ANALYSE/CHEMICAL ANALYSE/ANALYSE CHEMIQUE						
COLADAN NO. SCHMELZE NO. HEAT NO. COULEE NO.	C	Si	Mn	P	S	Mg
M.19	3.460	2.800	0.220	0.050	0.010	0.038

CODIGO IDENTIFICACION COLADA SCHMELZEIDENTIFIKATIONSKOD HEAT IDENTIFIKATION CODE CODE IDENTIFICATION COULEE	M.19	CANTIDAD MENGE QUANTITY QUANTITE	Inv No. 5182 80 Nos	De: 12/23/2003
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ENSAYOS MECHANICOS/MECHANISCHE PRUFUNGM/MECHANICAL TEST/ESSAIS MECANIOVES								
TRACCION/ZUGFESTIGKIT/TENSILE/TRACTION					RESILIENCIA KERBSCHLAAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N. PROBE Nr. TEST NO. EPRGUV Nr.	Temperatura de Ensayo prüf temperatur Test temperature T deessais.	Limite Elastico. Dehngrenze. Yield Strength Limite Elastique	Cargade Rotura Zugfestigkeit Tensile Strength Fliest a Traction	Aargamiento Bruchdehnung Elongation Allongement	Temperatura de Ensayo Prüf temperatur T deessais	Enerola Absorbica Schlagarbeit Energy of Impact Energia Absorbée	HB 10/3000	HB 2.5/187.5
HEAT NO.	°C	0.2% N/mm2	N/mm <sup>2</sup>	%	J		170	170
M.19		329.40	530.60	17.20				

TRATAMIENTO TERMICO WARMEBEHANDLUNG HEAT TREATMENT TRATTEMENT THERM-QUE	NOT APPLICABLE.
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OBSERVACIONES/BEMERKUNGEN/REMARKS OBSERVATIONS	Graphite Nodules In Ferritic Matrix
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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
---	--

10724.

**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. : 4786
CLIENT	ORDER DATE:	CERTIFICATE NO.
	COMMANDE NO.	

MATERIAL	NORMAS DE CONTROL EESPECIFICACIONES	EN 1563
WERKSOFF	KONTROLL NORM/SPEZIFICATTONES	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. H.5	3.530	2.540	0.200	0.037	0.010	0.032
COULEE NO.						

CODIGO INENTIFICACION COLADA	CANTIDAD		
SCHMELZEIDENTIFIKATIONSKOD	MENGE	Inv No. 3228	Dt: 08/07/2004
HEAT IDENTIFICATION CODE	QUANTITY	68	Nos
CODE IDENTIFICATION COULEE	QUANTITE		

ENSAYOS MECHANICOS/MECHANISCHE PRUFUNGM/MECHANICAL TEST/ESSAIS MECANOVES							
TRACCION/ZUGFESTIGKEIT/TENSILE/TRACTION				RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N	Temperatura de Ensayo pHl temperature Test temperature T dessals	Limite Elastico Dehngrenze Yield Strength Limite Elastique	Cargada Rotura Zugfestigkeit Tensile Strength Fisist a Traction	Aargamiento Bruchdehnung Elongation Allongement	Temperatura de Ensayo Pht temperature T dessals	Energia Absorbida Schlagarbeit Energy of Impact Energia Absorbee	
PROBE Nr.							
TEST NO.							
EPRGUV Nr.							
HEAT NO.	oC	0.2% N/mm2	N/mm2	%	J		
H.5		315.20	508.70	16.80		HB 10/3000	HB 2.5/187.5

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 CLIDAD / Q.C. MANAGER

CASTINGS ARE VISUALLY INSPECTED AND ARE FREE FROM FOUNDRY DEFECT

To,

ATTN: Mr. Hulyalkar (Q.C. department).  
Butterfly Valve.



**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	REDIDÓ NO.	CERTIFICADO
KUNDE CRANE PROCESS FLOW TECHNOLOGIES	DESTELL NO.	ZEUGNIS NO
CUSTOMER :	ORDER NO.:	CERTIFICATE NO. : 5558
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	DN 100 WAFER BODY	(DRAWING NO. 7010552 A )
DESIGNATION		

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

COLADAN NO.	C	SI	Mn	P	S	Mg
SCHMELZE NO.						
HEAT NO. H.27	3.420	2.540	0.200	0.042	0.011	0.031
COULEE NO.						

CODIGO IDENTIFICACION COLADA	CANTIDAD	
SCHMELZEIDENTIFIKATIONS KOD	MENGE	Inv No. 3716 Dt: 08/30/2004
HEAT IDENTIFICATION CODE	QUANTITY	270 Nos
CODE IDENTIFICATION COULEE	QUANTITE	

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

TRACCION/ZUGFESTIGKEIT/TENSILE/TRACTION					RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N PROBE Nr. TEST NO. EPRGUV Nr.	Temperatura de Ensayo pril temperatur Test temperature T dessals	Limite Elastico Dehngrenze Yield Strength Limite Elastique	Cargade Rotura Zugfestigkeit Tensile Strength Fleisist a Traction	Alargamiento Bruchdehnung Elongation Allongement	Temperatura do Ensayo Pril temperature T dessals	Energia Absorbida Schlagarbeit Energy of Impact Energia Absorbee	HB 10/3000	HB 2.5/187.5
HEAT NO.	oC	0.2% N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	J			
H.27		320.70	518.50	17.40			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.

CASTINGS ARE VISUALLY INSPECTED AND ARE FREE FROM FOUNDRY DEFECT

PECHA / DATUM / DATE / DATE

DIRECTOR/CIIDAD / Q.C. MANAGER

**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 : CLIENT	CRANE PROCESS FLOW TECHNOLOGIES	REDIDO NO. DESTELL NO. ORDER NO.: ORDER DATE: COMMANDE NO.	CERTIFICADO ZEUGNIS NO CERTIFICATE NO. : 4503 CERTIFICATE NO.
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MATERIAL WERKSOFF MATERIAL MATIERE	SG EN-GJS-400/15	NORMAS DE CONTROL EESPECIFICACIONES KONTROLL NORM/SPEZIFIKATIONEN TECHNICAL REQUIREMENT/DEMAND NORMOS DE CCNTROL ET SPECIFICATIONS	EN 1563 DIN 50125
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DESINACION GEGENSTAD DESIGNATION DESIGNATION	DN 100 WAFER BODY	(DRAWING NO. 7010552 A )
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**ANALYSIS QUIMICO CHEMISCHE ANALYSE/CHEMICAL ANALYSE/ANALYSE CHEMIQUE**

COLADAN NO. SCHMELZE NO. HEAT NO. COULEE NO.	G.27	C	SI	Mn	P	S	Mg
		3.540	2.610	0.130	0.042	0.012	0.039


CODIGO INENTIFICACION COLADA SCHMELZEIDENTIFIKATIONSOD HEAT IDENTIFICATION CODE CODE IDENTIFICATION COULEE	CANTIDAD MENGE QUANTITY QUANTITE	Inv No. 3011 113	Dt: 07/30/2004 Nos
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**ENSAYOS MECHANICOS/MECHANISCHE PRUFUNGNM/MECHANICAL TEST/ESSAIS MECANIOVES**

TRACCION/ZUGFESTIGKFT/TENSILE/TRACTION					RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N PROBE Nr. TEST NO. EPRGUV Nr.	Temperatura de Ensayo Prüf temperatur Test temperature T dessals	Limite Elastico Dehngrenze Yield Strength Limite Elastique	Cargade Rotura Zugfestigkeit Tensile Strength Fieist a Traction	Aargamiento Bruchdehnung Elongation Allongement	Temperatura do Ensayo Prüf temperatur T dessals	Energia Absorbica Schlagarbeit Energy of Impact Energia Absorbee	HB 10/3000	HB 2.5/187.5
HEAT NO.	oC	0.2% N/mm2	N/mm2	%	J			
G.27		325.20	518.40	17.00			163 , 170	

TRATAMIENTO TERMICO WARMEBEHANDLUNG HEAT TREATMENT TRAITEMENT THERM QUE	NOT APPLICABLE.
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**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.  CASTINGS ARE VISUALLY INSPECTED AND ARE FREE FROM FOUNDRY DEFECT	PECHA / DATUM / DATE / DATE   DIRECTOR CLIDAD / Q.C. MANAGER
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**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 CCTRL ET SPECIFICATIONS	

DESINACION		
GENSTAD		
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 IDENTIFICATION CODE J.2	QUANTITY 123 Nos
CODE IDENTIFICATION COULEE	QUANTITE

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

TRACCION/ZUGFESTIGKEIT/TENSILE/TRACTION					RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N	Temperatura de Ensayo pni temperatur Test temperature T dessals	Limite Elastico Dehngrenze Yield Strength Limite Elastique	Cargada Rotura Zugfestigkeit Tensile Strength Fleisist a Traction	Aargamiento Bruchdehnung Elongation Allongement	Temperatura de Ensayo pni temperatur T dessals	Enerola Absorbica Schlagarbeit 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/mm2	%	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-CLIDAD / Q.C. MANAGER

CASTINGS ARE VISUALLY INSPECTED AND ARE FREE FROM FOUNDRY DEFECT

**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 CRANE PROCESS FLOW TECHNOLOGIES CUSTOMER : CLIENT	REDIDO NO. DESTELL NO. ORDER NO.: ORDER DATE: COMMANDE NO.	CERTIFICADO ZEUGNIS NO CERTIFICATE NO. : 8440 CERTIFICATE NO.
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MATERIAL WERKSOFF MATERIAL EN-GJS-400/15 MATIERE	NORMAS DE CONTROL EESPECIFICACIONES KONTROLL NORM/SPEZIFIKATIONEN TECHNICAL REQUIREMENT/DEMAND NORMOS DE CCNTROL ET SPECIFICATIONS	EN 1563 DIN 50125
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DESINACION  
GEGENSTAD  
DESIGNATION DN 100 WAFER BODY (DRAWING NO. 7010552 A )  
DESIGNATION

ANALYSIS QUIMICO CHEMISCHE ANALYSE/CHEMICAL ANALYSE/ANALYSE CHEMIQUE

COLADAN NO. SCHMELZE NO. HEAT NO. L22 3 COULEE NO.	C	Si	Mn	P	S	Mg
	3.550	2.540	0.220	0.044	0.011	0.046

CODIGO INENTIFICACION COLADA SCHMELZEIDENTIFIKATIONSOD HEAT IOENTIFIKATION CODE CODE INDENTIFICATION COULEE L22 3	CANTIDAD MENGE Inv No. 5688 Dt: 11/26/2004 QUANTITY 75 Nos QUANTITE
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ENSAYOS MECHANICOS/MECHANISCHE PRUFUNGNM/MECHANICAL TEST/ESSAIS MECANIOVES

TRACCION/ZUGFESTIGKFT/TENSILE/TRACTION					RESILIENCIA KERBSCHLAGARBEIT IMPACT STRENGTH/RESILIENCE		DUREZA/HARTE HARDNESS/CURETE	
PROBETA N PROBE Nr. TEST NO. EPRGUV Nr.	Temperatura de Ensayo prij temperatur Test temperature T dessals	Limite Elastico Dehngrenze Yield Strength Limite Elasticque	Cargade Rotura Zugfestigkeit Tensile Strength Fleisist a Tracthon	Aargamiento Bruchdehung Elongation Allongement	Temperatura do Ensayo Prii temperature T dessals	Energia Absorbida Schlagarbeit Energy of Impact Energia Absorbee	HB 10/3000	HB 2.5/187.5
HEAT NO. L22 3	oC	0.2% N/mm2	N/mm <sup>2</sup>	%	J		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.

CASTINGS ARE VISUALLY INSPECTED AND ARE FREE FROM FOUNDRY DEFECT

PECHA / DATUM / DATE / DATE

DIRECTOR-CLIDAD / Q.C. MANAGER