SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4569245
Siekmann-Order-No.: 8035636

CERTIFICATE-NO.: 40-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
40	V362	1	2	

Siekmann Econosto GmbH&Co.KG

QM Meinold Oestreich 12.5.05

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
Germany

Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
Web: www.siekmann-econosto.de

HEAD OFFICE AND PLANT
Via G.Mazzini, 6
24060 S.Paolo D'Argon (BG) - ITALY
Tel +39.035.4255211 - Fax +39.035.959210
Internet: www.lvf.it - E-mail: info@lvf.it

FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 i.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBEL srl Reg.Imp. BG n° 02805260169

INSPECTION CERTIFICATE according to

[X] UNI EN 10204 - 3.1 B [ ]

TEST PROCEDURE & SPECIFICATION

[X] API 598 [X] ANSI/ASME B 16.34 [ ]
[X] MSS SP. [X] BS 6755 [ ]
[ ] DIN 3230 [X] EN 12266-1 [ ]

CERTIFICATE N° **C 046601-002/01**

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG
FREIGRAFENWEG 2
D-44357 DORTMUND ()

OUR JOB N°	POSITION	Q.TY
046601	002	1

YOUR P.O. N°
9005644OP/ZAGROS II -LURGI-

ITEM: **2**

DESCRIPTION
GLOBE VALVE BB FB FL
WCB/1.4006/1.4006* RFS

GLOBE VALVE PARABOLIC DISC SM.F. #600 2"

TAG: V 362 - 00040

Serial Number:

TEST PRESSURES
[X] BAR [ ] PSI

HYDROSTATIC BODY & BACKSEAT	HYDROSTATIC SEAT	PNEUM. SEAT
155	115	6

TEST RESULT
TEST HYDROSTATIC AND PNEUMATIC [X] CONFORM [ ] NOT CONFORM
VISUAL AND DIMENSIONAL TEST [X] CONFORM [ ] NOT CONFORM

NOTES
* HARD FACING OVERLAY: AWS R Co Cr A (STELLITE GR. 6)

WEDGES OVERLAIED WITH 1,6[mm] THICKNESS OF STELITED N°6 ON SURFACE
SEATS OVERLAIED WITH 1,6 [mm] THICKNESS OF STELLITED N°6 ON SURFACE

LVF S.p.A.
Quality Control Dept.
TRUE CERTIFIED COPY

COMPONENT / CHEMICAL ANALYSIS

PART NAME	MATERIAL	C / Al	Mn / Co	Si / N	S / V	P / Nb	Cr / Sn	Mo / CE	Ni / Nb+Ta	Ti	Cu	Fe	MILL #
BODY	A216 Gr.WCB	0,230	0,720	0,410		0,020	0,022	0,024	0,012	0,014		0,036	
	L3014	0,020				0,003	0,001						
		577,00	280,00	26,00		38,00							
BONNET	A216 Gr.WCB	0,200	0,830	0,510		0,017	0,021	0,191	0,012	0,058		0,066	
	L4075	0,025				0,020	0,010						
		590,00	281,00	27,00		39,00							
WEDGE	A105	0,250	0,790	0,270		0,017	0,021	0,090	0,073	0,320		0,020	
	0406108	0,024				0,005	0,003						
		498,00	280,00	25,00		49,00							
STEM	EN 10272 (1.4006) X12Cr13	0,084	0,450	0,440		0,001	0,022	12,220	0,030	0,150		0,080	
	0404109	0,004		0,033									
		670,00	405,00	25,00	70,00						223,00		
SEAT	A105	0,200	0,690	0,210	0,025	0,012	0,060	0,070	0,014		0,180		
	0406104	0,020			0,030	0,001							
		525,00	395,00	23,00	60,00					175,00			
BOLTS	A193 Gr. B7	0,430	0,730	0,230	0,018	0,014	1,000	0,230	0,050				
	040201												
		889,00	734,00	22,00	56,00					283,00			
NUT	A194 Gr.2H	0,420	0,510	0,220	0,009	0,006	0,150		0,070				
	0404201												
		724,00	426,00	20,00	56,00					241,00			

MECHANICAL PROPERTIES, IMPACT TESTS

HEAT CODE	HEAT NR	TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RE OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST. TEMP. °C	HARDNESS HB
BODY	A216 Gr.WCB	0,230	0,720	0,410	0,020	0,022	0,024	0,012	0,014	0,036
	L3014	0,020			0,003	0,001				
		577,00	280,00	26,00	38,00					
BONNET	A216 Gr.WCB	0,200	0,830	0,510	0,017	0,021	0,191	0,012	0,058	0,066
	L4075	0,025			0,020	0,010				
		590,00	281,00	27,00	39,00					
WEDGE	A105	0,250	0,790	0,270	0,017	0,021	0,090	0,073	0,320	0,020
	0406108	0,024			0,005	0,003				
		498,00	280,00	25,00	49,00					
STEM	EN 10272 (1.4006) X12Cr13	0,084	0,450	0,440	0,001	0,022	12,220	0,030	0,150	0,080
	0404109	0,004		0,033						
		670,00	405,00	25,00	70,00					223,00
SEAT	A105	0,200	0,690	0,210	0,025	0,012	0,060	0,070	0,014	0,180
	0406104	0,020			0,030	0,001				
		525,00	395,00	23,00	60,00					175,00
BOLTS	A193 Gr. B7	0,430	0,730	0,230	0,018	0,014	1,000	0,230	0,050	
	040201									
		889,00	734,00	22,00	56,00					283,00
NUT	A194 Gr.2H	0,420	0,510	0,220	0,009	0,006	0,150		0,070	
	0404201									
		724,00	426,00	20,00	56,00					241,00

- EACH SINGLE COMPONENT OF THE VALVE WICH IS MENTIONED IN THIS CERTIFICATE HAS BEEN MANUFACTURED, HEAT TREATED AND TESTED FULLY IN ACCORDANCE WITH ITS OWN MATERIAL SPECIFICATION AS ABOVE INDICATED

- THE REPORTED VALUES ARE STRICTLY IN ACCORDANCE WITH THE ORIGINAL MILL CERTIFICATES

Achilles · STOOMWEZEN · TÜV SÜDDEUTSCHLAND HPO · API 6A 8428 · API 6D 0251 · API 5CT 0003 · APIQR REGISTERED FIRM ISO 9001 · ISO REG. N°. 0357 · ANSI-RAB QMS ACCREDITED

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
DATE	DATE	DATE 28/04/2005

LVF S.p.A.
Q.C. MANAGER
C. Nembrini

Certificate-No.: 40-1 Page 2/2

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4569245
Siekmann-Order-No.: 8035636

CERTIFICATE-NO.: 50-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
50	V485	1	2-4	

Siekmann Econosto GmbH&Co.KG

QM Meinold Oestreich 12.5.05

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
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24060 S.Paolo D'Argon (BG) - ITALY
Tel +39.035.4255211 - Fax +39.035.959210
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FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 i.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBEL srl Reg.Imp. BG n° 02605260169

INSPECTION CERTIFICATE according to
[X] UNI EN 10204 - 3.1 B [ ]

CERTIFICATE
N° **C 046601-003/01**

TEST PROCEDURE & SPECIFICATION

[X] API 598 [X] ANSI/ASME B 16.34 [ ]
[X] MSS SP.61 [X] BS 6755 [ ]
[ ] DIN 3230 T.3 [X] EN 12266-1 [ ]

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG

FREIGRAFENWEG 2
D-44357 DORTMUND ()

OUR JOB N°	POSITION	Q.TY
046601	**003**	**1**

YOUR P.O. N°
9005644OP/ZAGROS II -LURGI-

ITEM: **3**

DESCRIPTION
GLOBE VALVE OS#Y BB FB
2" F22/F6/F6* 1500 LBS BW160

15BP 208 BW160 sc.368 R.1

TAG: V 485 - 00050

Serial Number:

TEST PRESSURES

[X] BAR [ ] PSI

HYDROSTATIC BODY & BACKSEAT	HYDROSTATIC SEAT	PNEUM. SEAT
390	285	6

TEST RESULT

TEST HYDROSTATIC AND PNEUMATIC	[X] CONFORM	[ ] NOT CONFORM
VISUAL AND DIMENSIONAL TEST	[X] CONFORM	[ ] NOT CONFORM

NOTES
* HARD FACING OVERLAY: AWS R Co Cr A (STELLITE GR. 6)

COMPONENT / CHEMICAL ANALYSIS / MECHANICAL PROPERTIES. IMPACT TESTS

PART NAME / HEAT CODE	MATERIAL / HEAT NR	C / Al	Mn / Co	Si / N	S / V	P / Nb	Cr / Sn	Mo / CE	Ni / Nb+Ta	Ti	Cu	Fe	MILL #
		TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RED. OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST TEMP. °C	HARDNESS HB			
BONNET	*A182 F22 Cl.3*	0,122	0,433	0,172	0,014	0,010	2,146	0,927	0,117	0,000			021591
		0,018			0,000			0,000					
R-M36	*65333*	557,00	424,00	26,40	72,00					195,00			
NUT	*A194 gr.4*	0,430	0,820	0,280	0,013	0,011		0,230					022342
	61366									269,00			
B/B STUDS	*A193 B16*	0,366	0,520	0,260	0,001	0,005	0,880	0,500					020459
		0,015			0,262								
	B06995	934,00	842,00	19,70	63,80					273,00			
STEM	*A479 Tp410*	0,106	0,460	0,420	0,023	0,019	12,090		0,340		0,108		021640
			0,023	0,055									
	445022	713,00	562,00	22,00	71,00					216,00			
DISC	*A479 Tp410*	0,112	0,390	0,450	0,023	0,017	12,130		0,420				021501
	440019	730,00	588,00	23,00	66,00					222,00			
SEAT	*A479 Tp410*	0,140	0,640	0,380	0,002	0,019	12,240	0,180	0,400		0,060		019714
		0,004		0,052									
	372586	668,00	458,00	27,20	73,00					197,00			
BODY	*A182 F22 Cl.3*	0,113	0,510	0,270	0,002	0,014	2,220	0,940					014112
IPG	*2150434*	535,00	386,00	34,60	77,00					165,00			

We declare that this product is in compliance with the directive 97/23/EC and was subjected to the conformity assessment procedure H (for Category III). The monitoring is performed by TÜV Italy srl Notified Body 0948.

- EACH SINGLE COMPONENT OF THE VALVE WICH IS MENTIONED IN THIS CERTIFICATE HAS BEEN MANUFACTURED, HEAT TREATED AND TESTED FULLY IN ACCORDANCE WITH ITS OWN MATERIAL SPECIFICATION AS ABOVE INDICATED

- THE REPORTED VALUES ARE STRICTLY IN ACCORDANCE WITH THE ORIGINAL MILL CERTIFICATES

Achilles STOOMWEZEN TÜV SÜDDEUTSCHLAND HPO APIQR REGISTERED FIRM ISO 9001 ISO REG. N°. 0357 ANSI-RAB QMS ACCREDITED

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
		L.V.F. S.p.A. Quality Control Dept.
DATE	DATE	DATE 11/05/2005

LVF FORGED STEEL VALVES

ULTRASONIC TEST REPORT
RAPPORTO ESAME ULTRASUONI

Mod. UTR Rev. B

Certificate n. 046601 / 003

GENERAL INFORMATION – *INFORMAZIONI GENERALI*

Customer *Cliente*	SIEKMANN ECONOSTO GMBH & CO.		
P. Order *Ordine*	9005644OP ZAGROS II -LURGI-	Position/s *Posizione/i*	3
LVF Job *Commessa LVF*	046601	Item/s *Item/s*	003
Quantity *Quantità*	1	TAG *TAG*	V 485 – 00050
Test subject *Oggetto di esame*	BODY – BONNET	Material(s) *Materiale(i)*	*ASTM A182 F22*
Test apparatus *Apparecchiatura di prova*	RP 3000	Manufacturer *Costruttpre*	Sirio
Couplant *Accoppiante*	Gel	Specification *Specifica*	LVF Procedure CQ 30

SURFACE CONDITIONS – *CONDIZIONI SUPERFICIALI*

☐ As welded *Come saldato*	☐ Sand blasted *Sabbiato*	☐ Ground *Molato*	☐ Machined *Lavorato di macchina*	☑ Forged *Forgiato*

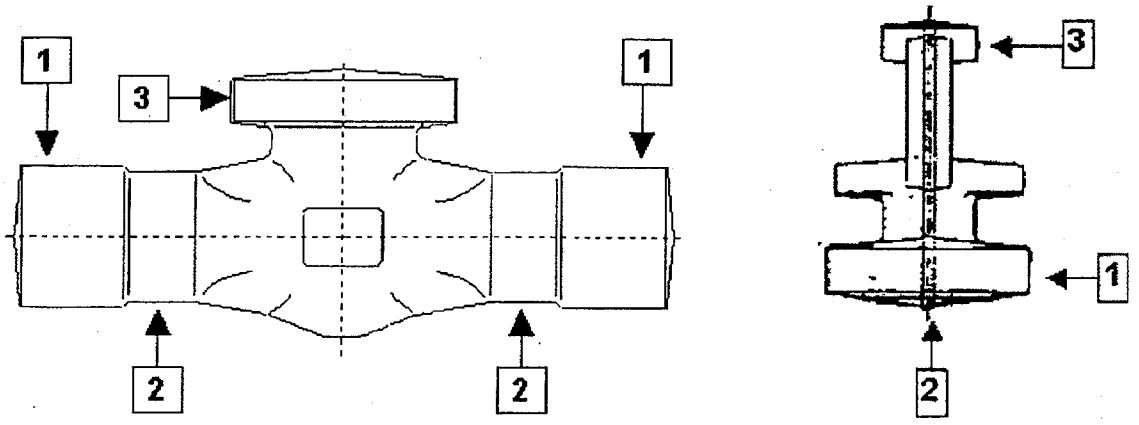
TECHNIQUE – *TECNICA*

☑ DAC Diagram *Diagramma DAC*	☐ AVG Scale *Scala AVG*	☐ Ref. point echo *Eco di riferimento*	☐ Back reflection *Riflesso di fondo*	☐ .....

TRANSDUCERS – *SONDE*

Model *Modello*	Frequency *Frequenza*	Type *Tipo*	Manufacturer *Costruttore*	Position *Posizione*
MSEB4H	4 MHz	Straight beam	Gilardoni	1 – 2 – 3
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

SKETCH OF EXAMINATION ZONE – *SCHIZZO DELLA ZONA D'ESAME*



EXAMINATION RESULT AND SIGNATURE – *ESITO DELL'ESAME E FIRME*

Date of execution *Data di esecuzione*	26/04/2005	Result *Risultato*	☑ Satisfactory *Soddisfacente*	☐ Unsatisfactory *Non soddisfacente*
Remarks *Note*				

Inspection Authority *Ente Ispettivo*	Customer Inspector *Ispettore Cliente*	Quality Control Operator *Operatore Controllo qualità*
		LVF S.p.A. LEVEL II NDE Nembrini C.

LVF FORGED STEEL VALVES

DATA SHEET FOR MAGNETIC PARTICLE EXAMINATION
SCHEDA DI CONTROLLO ESAME CON PARTICELLE MAGNETICHE

Mod. MPR Rev. B

MPR n. 046601/003

GENERAL INFORMATION – *INFORMAZIONI GENERALI*

Customer *Cliente*	SIEKMANN ECONOSTO GMBH & CO.		
P. Order *Ordine*	9005644OP ZAGROS II -LURGI-	Item/s *Item/s*	3
LVF Job *Commessa LVF*	046601	Position/s *Posizione/i*	003
Test subject *Oggetto di esame*	BODY - BONNET		
Quantity *Quantità*	1	TAG *TAG*	V 485 - 00050
Material(s) *Materiale(i)*	ASTM A182 F22		
Reference Specification *Specifica di riferimento*	LVF CQ 15 - ASME/ANSI B 16.34 Annex C		
Manufacturing stage *Stadio di fabbricazione*	AFTER MACHINED		
Date of execution *Data di esecuzione*	03/05/2005		

SURFACE CONDITIONS – *CONDIZIONI SUPERFICIALI*

☐ As welded *Come saldato* ☐ Sand blasted *Sabbiato* ☐ Ground *Molato* ☒ Machined *Lavorato di macchina* ☒ Forged *Forgiato*

MAGNETIZATION TECHNIQUE – *TECNICA DI MAGNETIZZAZIONE*

☐ Yoke *Giogo*	☐ Longitudinal *Longitudinale*	☐ Circular (direct contact) *Circolare (contatto diretto)*	☒ Multidirectional *Multidirezionale*
Current *Corrente* 220V 50hZ	Current *Corrente* HW Rectified	Current *Corrente* AC	Current *Corrente* HW Rectified / AC
Poles Spacing *Distanza poli* 100÷150mm	Ampere-turns *Ampere spire*	Ampere *Ampere*	Ampere *Ampere* 1700
			Ampere-turns *Ampere spire* 17000

EXAMINATION MEDIUM – *MEZZO DI ISPEZIONE*

Method *Metodo*	☒ Wet method		☐ Dry method	
Manufacturer *Produttore*	☒ CGM	☐ METAL-CEK	☐ NDT	☐ .....
Pre-cleaner *Pulitore*	Not necessary–*Non necessario*			
Trade Name *Marca*	R2.60 VELNET	MET-L-CHECK NPU	DR 61	
Particles' type *Tipo di particelle*	Fluorescent (suspension in water) – *Florescente (sospensione in acqua)*			
Trade Name *Marca*	PAD 755/50	FW1	DRY GR	
Equipment *Apparecchiatura*	HORIZ. UNIT CGM MAGISCOP CEMSA FOS 600 SN 10599			

EXAMINATION RESULT – *ESITO DELL'ESAME*

☒ Satisfactory *Soddisfacente* ☐ Unsatisfactory *Non soddisfacente*

Remarks *Note*: *Field adequacy verified by ASME M.P. field indicator according to ASME V art. 7 T-727*

SIGNATURE – *FIRME*

Inspection Authority *Ente Ispettivo*	Customer Inspector *Ispettore Cliente*	Quality Control Operator *Operatore Controllo qualità*
		LVF S.p.A. LEVEL II NDT Mazzoleni C

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4567581
Siekmann-Order-No.: 8034495

CERTIFICATE-NO.: 340-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
340	V361	1	2	

Siekmann Econosto GmbH&Co.KG

QM Meinold Oestreich 12.5.05

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
Germany

Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
Web: www.siekmann-econosto.de

HEAD OFFICE AND PLANT
Via G.Mazzini, 6
24060 S.Paolo D'Argon (BG) - ITALY
Tel +39.035.4255211 - Fax +39.035.959210
Internet: www.lvf.it - E-mail: info@lvf.it

FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 i.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBEL srl Reg.Imp. BG n° 02605260169

INSPECTION CERTIFICATE according to

[X] UNI EN 10204 - 3.1 B [ ]

CERTIFICATE N° **C 045931-010/01**

TEST PROCEDURE & SPECIFICATION

[X] API 598 [X] ANSI/ASME B 16.34 [ ]
[X] MSS SP.61 [X] BS 6755 [ ]
[ ] DIN 3230 T.3 [X] EN 12266-1 [ ]

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG
FREIGRAFENWEG 2
D-44357 DORTMUND ()

OUR JOB N°	POSITION	Q.TY
045931	010	1

YOUR P.O. N°
9004566OP/ZAGROS II -LURGI-

ITEM: 10

DESCRIPTION
GLOBE VALVE BB FB
WCB/1.4006 BW

GLOBE VALVE PARABOLIC DISC BW80 #300 2"

TAG: V 361 - 00340

Serial Number:

TEST PRESSURES
[X] BAR [ ] PSI

HYDROSTATIC		PNEUM.
BODY & BACKSEAT	SEAT	SEAT
80	60	6

TEST RESULT
TEST HYDROSTATIC AND PNEUMATIC [X] CONFORM [ ] NOT CONFORM
VISUAL AND DIMENSIONAL TEST [X] CONFORM [ ] NOT CONFORM

NOTES
REF.LURGI:4567580-000/1.69690
WEDGES OVERLAIED WITH 1,6[mm] THICKNESS OF 13Cr ON SURFACE
SEATS OVERLAIED WITH 1,6 [mm] THICKNESS OF STELLITED N°6 ON SURFACE

COMPONENT		CHEMICAL ANALYSIS											
PART NAME	MATERIAL	C	Mn	Si	S	P	Cr	Mo	Ni	Ti	Cu	Fe	MILL #
		Al	Co	N	V	Nb	Sn	CE	Nb+Ta				
		MECHANICAL PROPERTIES, IMPACT TESTS											
HEAT CODE	HEAT NR	TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RED. OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST TEMP. °C	HARDNESS HB			
BODY	A216 Gr.WCB	0,220	0,670	0,370	0,016	0,030	0,084	0,010	0,035		0,053		
		0,020			0,003	0,001							
	Y1754	577,00	281,00	23,00	36,00					154,00			
BONNET	A216 Gr.WCB	0,200	0,900	0,420	0,029	0,030	0,220	0,006	0,023		0,028		
		0,025			0,020	0,010							
	G0020	517,00	296,00	25,00	36,00					157,00			
WEDGE	A105	0,250	0,790	0,270	0,017	0,021	0,090	0,073	0,320		0,020		
		0,024			0,005	0,003							
	0406108	533,00	280,00	25,00	49,00								
STEM	EN 10272 (1.4006) X12Cr13	0,150	0,450	0,440	0,010	0,022	12,220	0,030	0,150		0,080		
		0,004		0,033									
	0404109	670,00	405,00	25,00	70,00					223,00			
SEAT	A105	0,200	0,690	0,210	0,025	0,012	0,060	0,076	0,140		0,180		
		0,020			0,030	0,001		0,383					
	0406104	525,00	395,00	23,00	60,00					175,00			
BOLTS	A193 Gr.B7	0,430	0,730	0,230	0,017	0,014	1,000	0,230	0,050				
	0404201	889,00	734,00	24,00	56,00					283,00			
NUT	A194 Gr.2H	0,420	0,510	0,220	0,009	0,006	0,150		0,070				
	0404201	724,00	426,00	25,00	56,00					242,00			

- EACH SINGLE COMPONENT OF THE VALVE WICH IS MENTIONED IN THIS CERTIFICATE HAS BEEN MANUFACTURED, HEAT TREATED AND TESTED FULLY IN ACCORDANCE WITH ITS OWN MATERIAL SPECIFICATION AS ABOVE INDICATED

- THE REPORTED VALUES ARE STRICTLY IN ACCORDANCE WITH THE ORIGINAL MILL CERTIFICATES

Achilles STOOMWEZEN TÜV SÜDDEUTSCHLAND IPO API 6A 6D API 6D API 600 APIQR REGISTERED FIRM ISO 9001 ISO REG. N°. 0357 ANSI-RAB QMS ACCREDITED

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
DATE	DATE	LVF S.p.A. Q.C. MANAGER C. Nembrini DATE 28/04/2005

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4567581
Siekmann-Order-No.: 8034495

CERTIFICATE-NO.: 350-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
350	V361	1		

Date 17.03.05
Siekmann Econosto GmbH&Co.KG

QM Meinold Oestreich

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
Germany

Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
Web: www.siekmann-econosto.de

350

VITAS
VALVITALIA S.p.A. • VITAS Division
Stabilimento / Plant: S.S. 11 Via Olmo, 31/33 • 36077 Altavilla Vicentina (VI) • Italy
Tel. +39 0444 337 111 • fax +39 0444 349 359
Ufficio Vendite / Sales Office: Via Tonale, 72 • 24061 Albano S. Alessandro (BG) • Italy
Tel +39 035 4521276 • telefax. +39 035 4521263
e-mail: quality@valvitalia.com • www.valvitalia.com

TEST CERTIFICATE (DECLARATION OF CONFORMITY)

N. 5000217/ 3 PAGE 1 OF 2

CUSTOMER CODE 20350

STEIGMANN ECONOSTO GMBH & CO.KG
FREIGRAFENWEG 2
44357 DORTMUND D

YOUR PURCHASE ORDER NO. 90045640P DATE 15/09/04 22/09/04

[X] PARTIAL ORDER
[ ] BALANCE ORDER

OUR JOB NO. 40330/ 1

REMARKS: LURGI PROJECT : ZAGROS 2

[X] API 598 [X] EN 10204 3.1 B
[ ] BS 5755 [ ]

MATERIAL TESTED				TEST (PSI / [X] BAR) HYDROSTATIC SHELL	HYDROSTATIC SEATS	PNEUM SEATS	COMPONENT / HEAT CODE/MATERIAL / HEAT NR./SUPPLIER	CHEMICAL ANALYSIS %	MECHANICAL PROPERTIES TENSILE N/mm2	YELD N/mm2	ELOGATION %	RED. OF AREA %	IMPACT TEST 1 JOULE	2 JOULE	3 JOULE	TEST TEMP °C	HARDNESS HB	HB	C.E.
ITEM	Q.TY	PART. N.	DESCRIPTION																
13,0	1	751939	030H 303 GEM AZ GLOBE VALVE 3" 300 LBS - BW THK 5,49mm - CASTINGS A216 WCB - F6 TRIM - STELLITE SEAT RING - PARABOLIC DISC - GASKET SW 316 + GRAPHITE - PACKING GRAFOIL + BRAIDED GRAPHITE - BOLTING B7/2H	78	57	7	1 BONNET 5001219 A216 WCB \3151	F											
								VITKOVICE SLEVARNY SPOL S.R.O (SEE ATTACHED NR. \40001-175)											
							1 BODY 5001636 A216 WCB \3160	F											
								VITKOVICE SLEVARNY SPOL S.R.O (SEE ATTACHED NR. \40001-396)											

MARCATURA/TAG.: V361 - 00350
AAVR21C

-VISUAL EXAMINATION ACCORDING TO MSS SP 55 : SATISFACTORY.
-DIMENSIONAL EXAMINATION HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT.

-ALL VALVES HAS BEEN MANUFACTURED ACCORDING TO RELEVANT VALVES SPECIFICATION.

-TRIM MATERIAL (DISC-SEAT-STEM) AND BOLTING ARE ACCORDING TO THE P.O. MATERIAL SPECIFICATION.

-ALL VALVES HAVE BEEN HYDROTESTED WITH SATISFACTORY RESULT.

-MAGNETIC PARTICLE INSPECTION HAS BEEN CARRIED OUT ON ALL ACCESSIBLE CASTING SURFACE ACCORDING TO CUSTOMER'S REQUIREMENTS.

-DYE PENETRANT INSPECTION HAS BEEN CARRIED OUT ON BUTT WELDING ENDS AFTER MACHINING WITH SATISFACTORY RESULTS.

FOLLOWING TEST RESULT	THIRD AUTHORITY	DATE	CLIENT INSPECTOR	DATE	INSPECTOR DEPT	DATE
HYDROSTATIC AND PNEUMATIC TEST: SATISFACTORY		/ /		/ /	LUIGI ROSSETTO	31.03.05

VITAS
VALVITALIA S.p.A. • VITAS Division
Stabilimento / Plant: S.S. 11 Via Olmo, 31/33 • 36077 Altavilla Vicentina (VI) • Italy
Tel. +39 0444 337 111 • fax +39 0444 349 359
Ufficio Vendite / Sales Office: Via Tonale, 72 • 24061 Albano S. Alessandro (BG) • Italy
Tel +39 035 4521278 • telefax. +39 035 4521263
e-mail: qualita@valvitalia.com • www.valvitalia.com

TEST CERTIFICATE (DECLARATION OF CONFORMITY)

N. 5000217/ 3 PAGE 2 OF 2

CUSTOMER CODE 20350

SIEKMANN ECONOSTO GMBH & CO.KG
FREIGRAFENWEG 2
44357 DORTMUND D

YOUR PURCHASE ORDER NO. 90045640P DATE 15/09/04 22/09/04

[X] PARTIAL ORDER
[ ] BALANCE ORDER

OUR JOB NO. 40330/ 1

REMARKS: LURGI PROJECT : ZAGROS 2

[X] API 598
[ ] BS 5755
[X] EN 10204 3.1 B
[ ]

TEST: [ ] PSI [X] BAR

MATERIAL TESTED				TEST			COMPONENT / HEAT CODE/MATERIAL / HEAT NR/SUPPLIER
ITEM	Q.TY	PART N.	DESCRIPTION	HYDROSTATIC SHELL	HYDROSTATIC SEATS	PNEUM SEATS	

-DYE PENETRANT INSPECTION HAS BEEN CARRIED OUT ON HARD-FACING (STELLITE) OF SEATS AND WEDGES ACCORDING TO CUSTOMER'S REQUIREMENTS.

-EC DECLARATION OF CONFORMITY.

-SUPPLIER: VITAS - DIVISION OF VALVITALIA SPA
VIA OLMO 31/33,ALTAVILLA VICENTINA (VICENZA)

-ACCORDING TO ANNEX VII OF DIRECTIVE 97/23/CE, HEREBY DECLARE THAT THE PRODUCTS DETAILED ABOVE ARE IN COMPLIANCE WITH THE DIRECTIVE 97/23/CE (CERT.N.01 202 I/Q-03-0710) AND HAVE BEEN MANUFACTURED IN ACCORDANCE WITH CONFORMITY ASSESSMENT MODULE H,CATEGORY III,FLUID GROUP 1.

-SIGNED : .....

-PRINT NAME : D.BALZAROTTI
-TITLE : GENERAL MANAGER

CHEMICAL ANALYSIS: % % % % % % % % % % %

MECHANICAL PROPERTIES

TENSILE N/mm2	YIELD N/mm2	ELOGATION %	RED OF AREA %	IMPACT TEST 1 JOULE	2 JOULE	3 JOULE	TEST TEMP °C	HARDNESS HB	HB	C.E.

TEST RESULT
HYDROSTATIC AND PNEUMATIC TESTS: SATISFACTORY

THIRD AUTHORITY DATE / /

CLIENT INSPECTOR DATE / /

INSPECTOR DEPT LUIGI DATE 31 03/05

Rev. 1 10/04 3/3

П. 13

Výrobce: Manufacturer/Hersteller	Vítkovické slévárny s.r.o. Ostrava - Vítkovice	**MATERIÁLOVÉ OSVĚDČENÍ** **Report of material tests** **Abnahmeprüfzeugnis**	Číslo: 40001-175 No./Nr.
Zákazník: Customer/Besteller	VITAS Division of VALVITALIA S.p.A.	dle/acc.to/nach EN 10204 3.1.B	Datum: 11.10.2004 Date/Datum
Objednávka: Order No./Bestellung	040760 O52323/108		Dod. podmínky: QCP n° 040188 Delivery terms/Lieferbedingungen

Značka výrobce: Mark of the manufacturer Zeichen des Herstellers: VS

Značka zvalce: Inspector stamp Stempel des Sachverständigen

Název: Part name: Bezeichnung:	Počet: Quantity: Stückzahl:	Materiál: Material: Werkstoff:	Melt No.: Charge Nr.:	Piece No.: Stück Nr.:	Heat treatment: Wärmebehandlung:	Remark: Bemerkungen:
BONNET GLOBE 3/300	26	A216 WCB	3151	TEST BAR No 594	Norm. 920°C - Temp.620°C	ASTM E 446 MT According to ANSI B16.34 annex C VISUAL:ACC.MSS SP 55 DIMENSIONS:SATISFACTORY

Chemické analýza - Chemical analysis - Chemische Analyse

Tavba Melt No.: Charge Nr.:		C %	Mn %	Si %	P %	S %	Cr %	Ni %	Mo %	Cu %	V %	W %	Ceq
	max.	0,25	1,28	0,6	0,04	0,045	0,5	0,5	0,2	0,3	0,03		
	min.												
3151		0,19	0,92	0,41	0,02	0,01	0,03	0,04	0,03	0,02	0,000		0,36

Mechanické hodnoty-Mechanical properties-Mechanische Eigenschaften

Tavba Melt No.: Charge Nr.:		Rp0,2 N.mm-2	Rm N.mm-2	A %	Z %	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°) ø	HB
	max.	250	655 485	22	35	21	21	21	27	
	min.	305	512	30	52	40	38	39	39	167
3151										

Rm-Pevnost v tahu-Tensile strength/Zugfestigkeit
Rp0,2- Mez tluzu-Yield point/Streckgrenze
A - Tažnost-Elongation/Bruchdehnung
Z - Zúžení-Reduction of area/ Brucheinschnürung

Potvrzujeme, že dodávka odpovídá podmínkám objednávky.
We hereby certify that the material described above has been tested and complies the terms of the contract.
Wir bestätigen, dass die Lieferung den Bestellungsbedingungen entspricht.

Podnikový znalec výrobce:
Sachverständinger des Herstellers:
Producer's works expert:

Division of VALVITALIA S.p.A. QUALITY CONTROL

Razítko výrobce (Stempel von Hersteller)

Tento dokument má platnost originálu. This dokument is valid as an original. Dieses Dokument ist als Original gültig.

Výrobce: Manufacturer/Hersteller	Vítkovické slévárny a.s. Ostrava - Vítkovice	**MATERIÁLOVÉ OSVĚDČENÍ** **Report of material tests** **Abnahmeprüfzeugnis**	Číslo: No./Nr. 40001-396
Zákazník: Customer/Besteller	VITAS Division of VALVITALIA S.p.A.	dle/acc.to/nach EN 10204 3.1.B	Datum: Date/Datum 12.03.2004
Objednávka: Order No./Bestellung	041289 O52852/108		Dod. podmínky: Delivery terms/Lieferbedingungen QCP n° 40099

Značka výrobce: Mark of the manufacturer Zeichen des Herstellers **VS**

Značka znalce: Inspector stamp Stempel des Sachverständigen

Název: Part name: Bestandteil:	Počet: Quantity: Stückzahl:	Materiál: Material: Werkstoff:	Melt No.: Charge Nr.:	Piece No.: Stück Nr.:	Heat treatment: Wärmebehandlung:	Remark: Bemerkungen:
BODY GLOBE 3/300	22	A216 WCB	3160	TEST BAR No 579	Norm. 920°C - Temp.620°C	ASTM E 446 MT According to ANSI B16.34 annex C VISUAL:ACC.MSS SP 55 DIMENSIONS:SATISFACTORY

Chemické analýza - Chemical analysis - Chemische Analyse

Tavba Melt No.: Charge Nr.:	C %	Mn %	Si %	P %	S %	Cr %	Ni %	Mo %	Cu %	V %	W %	Ceq
max.	0,25	1,28	0,6	0,04	0,045	0,5	0,5	0,2	0,3	0,03		
min.												
3160	0,2	0,9	0,41	0,02	0,02	0,05	0,06	0,04	0,03	0,01		0,38

Mechanické hodnoty-Mechanical properties-Mechanische Eigenschaften

Tavba Melt No.: Charge Nr.:	Rp0,2 N.mm-2	Rm N.mm-2	A %	Z %	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°) ø	HB
max.		655							
min.	250	485	22	35	21	21	21	27	
3160	305	500	28	51	40	39	40	40	160

Potvrzujeme, že dodávka odpovídá podmínkám objednávky.
We hereby certify that the material described above has been tested and complies the terms of the contact.
Wir bestätigen, dass die Lieferung den Bestellungsbedingungen entspricht.

Rm-Pevnost v tahu-Tensile strength/Zugfestigkeit
Rp0,2- Mez kluzu-Yield point/Streckgrenze
A - Tažnost-Elongation/Bruchdehnung
Z - Zúžení-Reduction of area/ Brucheinschnürung

Podnikový znalec výrobce:
Sachverständiger des Herstellers:
Producer's works expert:

VITAS Division of VALVITALIA S.p.A. QUALITY CONTROL

Razítko výrobce (Stamp/Cachet/Stempel von Hersteller)
vítkovické slévárny Hlavnova 2804/1 CZ 708 00 Ostrava-Vítkovice IČ 62304662, DIČ: CZ62304662

Tento dokument má platnost originálu. This document is valid as an original. Dieses Dokument ist als Original gültig.

KRÁLOVOPOLSKÁ
Křižíkova 68, CZ-660 90 Brno, tel.: +420 5 712 1700
fax: +420 5 712 1723

REPORT OF RADIOGRAPHIC EXAMINATION NDT

Report No. 03/33/05
Page 1 - 2

Customer	VITAS	Project No	Boby VS 3"300 Bw
Const & MFR		Item Name	040330 IT 13
Project Name	Boby VS 3"300 Bw	Material-Thickness	ASTM-A-216-WCB-TH 30 mm
Item No.	040330 IT 13	Dwg. No.	Rev
Material Form	Weld Casting ✓ Other	I.Q.I	ASME ✓ 25 ASTM
X-Ray Equip	No. / kvp mA Actual : N/A	I.Q.I Placement-Sensitivity	S.Side F.Side ✓
Radioisotope	IR. 192 20 u	Film	GEVAERT D7
Focal size	2x1	Screen	Pb
Exposure Time		Shim Thickness	0.10 mm
FFD / SFD		Development Condition	AUTOMATIC +25°C.
Density	Single 1.8÷4 Double : 2÷4	Procedure	ASME V ART 2
EXP.TECHNIQUE	SWSV DWDV DWSV PANORAMIC		AHSI B16.34

Discontinuity type and category AHSI B16.34 AMHFx B	BLOW HOLE	SLAG	SAND INCL.	SHRINKAGE type CA	CB	CC	CD	CRACK	HOT TEAR	INSERT	MOTT LING	SURFACE DEFECT	Grade	Note
Accepted severity level	2	—	3	2	3	3	3	NA	NA	NA	NA			
Casting N. / Progressive N. Films														
SB 9145 / 1-2			✓										A1	
HEAT/3160 / 2-3	✓												A1	
3-1	✓												A1	
4-5	✓												A1	
5-6	✓												A1	
6-A	✓												A1	

Examined by

Approved by

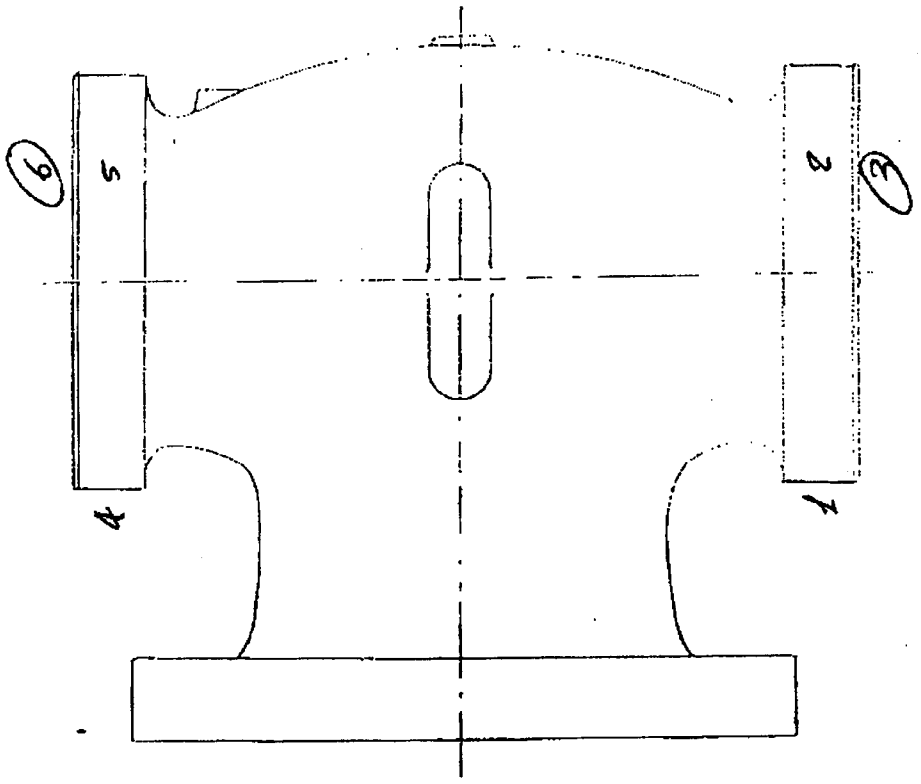
Vitas
DIVISION of VALVITALIA S.p.A.
GIOCONDO ORFANO
II° LIVELLO MT-PT-UT-RT
23/04/05
Level II

Date of Examination

☐ Witnessed by

☐ Reviewed by

Body US 8" 300 BW
RT H- 5B-9145



VTIAS
Division of VALVITALIA S.p.A.
GIOCONDO ORFANO
II° LIVELLO MT-PT-UT-RT
20/01/05

Firma Signature	UFFICIO CONTROLLO QUALITÀ Quality Control Department	Rev. Rev.	Sez. Sec.
Data Date		pag. 2 di 2 pag. of	

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4567581
Siekmann-Order-No.: 8034495

CERTIFICATE-NO.: 360-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
360	V362	7	2,3	

Siekmann Econosto GmbH&Co.KG

QM Meinold Oestreich 12.5.05

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
Germany

Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
Web: www.siekmann-econosto.de

HEAD OFFICE AND PLANT
Via G.Mazzini, 6
24060 S.Paolo D'Argon (BG) - ITALY
Tel +39.035.4255211 - Fax +39.035.959210
Internet: www.lvf.it - E-mail: info@lvf.it

FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 I.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBEL srl Reg.Imp. BG n° 02805260169

INSPECTION CERTIFICATE according to
[X] UNI EN 10204 - 3.1 B [ ]

CERTIFICATE
N° **C 045931-011/01**

TEST PROCEDURE & SPECIFICATION
[X] API 598 [X] ANSI/ASME B 16.34 [ ]
[X] MSS SP.61 [X] BS 6755 [ ]
[ ] DIN 3230 T.3 [X] EN 12266-1 [ ]

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG
FREIGRAFENWEG 2
D-44357 DORTMUND ()

OUR JOB N°	POSITION	Q.TY
045931	011	7

YOUR P.O. N°
9004566OP/ZAGROS II -LURGI-

ITEM: 11

DESCRIPTION
GLOBE VALVE BB FB FL
WCB/1.4006/1.4006* RFS

GLOBE VALVE PARABOLIC DISC SM.F. #600 2"

TAG: V 362 - 00360

Serial Number:

TEST PRESSURES
[X] BAR [ ] PSI

HYDROSTATIC BODY & BACKSEAT	HYDROSTATIC SEAT	PNEUM. SEAT
155	115	6

TEST RESULT
TEST HYDROSTATIC AND PNEUMATIC [X] CONFORM [ ] NOT CONFORM
VISUAL AND DIMENSIONAL TEST [X] CONFORM [ ] NOT CONFORM

NOTES
* HARD FACING OVERLAY: AWS R Co Cr A (STELLITE GR. 6)
REF.LURGI:4567580-000/1.69690
WEDGES OVERLAIED WITH 1,6[mm] THICKNESS OF STELITED N°6 ON SURFACE
SEATS OVERLAIED WITH 1,6 [mm] THICKNESS OF STELLITED N°6 ON SURFACE

COMPONENT		CHEMICAL ANALYSIS											
PART NAME	MATERIAL	C	Mn	Si	S	P	Cr	Mo	Ni	Tl	Cu	Fe	MILL #
		Al	Co	N	V	Nb	Sn	CE	Nb+Ta				
		MECHANICAL PROPERTIES, IMPACT TESTS											
HEAT CODE	HEAT NR	TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RED. OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST. TEMP. °C	HARDNESS HB			
BODY	A216 Gr.WCB	0,190	0,770	0,440	0,026	0,024	0,500	0,006	0,021		0,037		
		0,020			0,003	0,001							
	L3014	502,00	301,00	23,00	40,00					146,00			
BODY	A216 Gr.WCB	0,190	0,700	0,390	0,023	0,024	0,027	0,006	0,022		0,034		
		0,020			0,003	0,001							
	L4075	494,00	278,00	24,00	41,00					144,00			
BONNET	A216 Gr.WCB	0,190	0,700	0,390	0,023	0,024	0,027	0,006	0,022		0,034		
		0,025			0,020	0,010							
	L4075	494,00	278,00	24,00	41,00					144,00			
WEDGE	A105	0,250	0,790	0,270	0,017	0,021	0,090	0,081	0,320		0,02		
		0,024			0,005	0,003							
	0406108	498,00	280,00	25,00	49,00								
STEM	EN 10272 (1.4006) X12Cr13	0,090	0,450	0,440	0,010	0,022	12,22	0,030	0,150		0,080		
		0,004		0,033									
	0404109	670,00	405,00	25,00	70,00					223,00			
SEAT	A105	0,200	0,690	0,210	0,025	0,012	0,060	0,075	0,140		0,180		
		0,020			0,030	0,001		0,383					
	0406104	525,00	395,00	23,00	60,00					175,00			
BOLTS	A193 Gr.B7	0,430	0,730	0,230	0,022	0,014	1,000	0,230					
	0404201	889,00	734,00	20,00	56,00					283,00			

- EACH SINGLE COMPONENT OF THE VALVE WICH IS MENTIONED IN THIS CERTIFICATE HAS BEEN MANUFACTURED, HEAT TREATED AND TESTED FULLY IN ACCORDANCE WITH ITS OWN MATERIAL SPECIFICATION AS ABOVE INDICATED

- THE REPORTED VALUES ARE STRICTLY IN ACCORDANCE WITH THE ORIGINAL MILL CERTIFICATES

Achilles STOOMWEZEN TÜV SÜDDEUTSCHLAND ISO 9001 API 6A/6D/11S API 6D 6251 API 509 9003 APIQR REGISTERED FIRM ISO 9001 ISO REG. N°. 0357 ANSI-RAB QMS ACCREDITED

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
DATE	DATE	DATE 28/04/2005

LVF S.p.A.
Q.C. MANAGER
C. Nembrini

HEAD OFFICE AND PLANT
Via G.Mazzini, 6
24060 S.Paolo D'Argon (BG) - ITALY
Tel +39.035.4255211 - Fax +39.035.959210
Internet: www.lvf.it - E-mail: info@lvf.it

FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 i.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBEL srl Reg.Imp. BG n° 02605260169

INSPECTION CERTIFICATE according to
☒ UNI EN 10204 - 3.1 B ☐

CERTIFICATE
N° **C 045931-011/01**

TEST PROCEDURE & SPECIFICATION

☒ API 598	☒ ANSI/ASME B 16.34	☐
☒ MSS SP.61	☒ BS 6755	☐
☐ DIN 3230 T.3	☒ EN 12266-1	☐

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG
FREIGRAFENWEG 2
D-44357 DORTMUND ()

OUR JOB N°	POSITION	Q.TY
045931	011	7

YOUR P.O. N°
9004566OP/ZAGROS II -LURGI-

ITEM: **11**

DESCRIPTION
GLOBE VALVE BB FB FL
WCB/1.4006/1.4006* RFS

GLOBE VALVE PARABOLIC DISC SM.F. #600 2"

TAG: V 362 - 00360

Serial Number:

TEST PRESSURES
☒ BAR ☐ PSI

HYDROSTATIC		PNEUM.
BODY & BACKSEAT	SEAT	SEAT
155	115	6

TEST RESULT

TEST HYDROSTATIC AND PNEUMATIC	☒ CONFORM ☐ NOT CONFORM
VISUAL AND DIMENSIONAL TEST	☒ CONFORM ☐ NOT CONFORM

NOTES
* HARD FACING OVERLAY: AWS R Co Cr A (STELLITE GR. 6)
REF.LURGI:4567580-000/1.69690
WEDGES OVERLAIED WITH 1,6[mm] THICKNESS OF STELITED N°6 ON SURFACE
SEATS OVERLAIED WITH 1,6 [mm] THICKNESS OF STELLITED N°6 ON SURFACE

COMPONENT		CHEMICAL ANALYSIS											
PART NAME	MATERIAL	C	Mn	Si	S	P	Cr	Mo	Ni	Ti	Cu	Fe	MILL #
		Al	Co	N	V	Nb	Sn	CE	Nb+Ta				
		MECHANICAL PROPERTIES, IMPACT TESTS											
HEAT CODE	HEAT NR	TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RED. OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST TEMP. °C	HARDNESS HB			
NUT	*A194 Gr.2H*	0,42	0,51	0,220	0,025	0,006	0,150		0,070				
	0404201	*724,00*	*426,00*	*22,00*	*56,00*					241,00			

- EACH SINGLE COMPONENT OF THE VALVE WICH IS MENTIONED IN THIS CERTIFICATE HAS BEEN MANUFACTURED, HEAT TREATED AND TESTED FULLY IN ACCORDANCE WITH ITS OWN MATERIAL SPECIFICATION AS ABOVE INDICATED

- THE REPORTED VALUES ARE STRICTLY IN ACCORDANCE WITH THE ORIGINAL MILL CERTIFICATES

Achilles · STOOMWEZEN · TÜV SÜDDEUTSCHLAND · API · APIQR REGISTERED FIRM ISO 9001 · ANSI-RAB QMS ACCREDITED

ISO REG. N°. 0357

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
DATE	DATE	LVF S.p.A. Q.C. MANAGER C. Nembrini DATE 28/04/2005

Siekmann - Econosto GmbH & Co KG Freigrafenweg 2 D-44357 Dortmund	**Certificate** **DIN EN 10204 / 3.1B**	Page 1 of 2 SIEKMANN ECONOSTO ROYAL ECONOSTO GROUP

Client	: Lurgi Öl, Gas, Chemie GmbH
Order No.	: 4567581-000/1.69690 Zagros
Our Order No.:	8034495

Code : V 362 Item : 00370 QTY : 4 PCS	Description : 3 " 600LB Globe Valve, WCB Body, API Trim No.5, RF ends	

Applicable Standard :	**Test according to API 598 / BS EN 12266**			
Basic Design: BS1873	Rating 600LB	Pres.(MPa)	Time (S)	RSLT.
Face to Face Dimension: ASME/ANSI B16.10	Hyd. Shell Test	15,4	60	OK
End Flange Dimension: ASME/ANSI B16.5	Hyd.Seat/Backseat	11,4	60	OK
	Air seat Test	0,6	60	OK
	Other Inspection	View – Dim. – Oper.		OK

Serial No.:	Body Heat No.	Bonnet Heat No.	Wedge/Disk Heat No.
C305-130-1	DT754	TD339	K0142
C305-130-2	DT754	TD361	K0142
C305-130-3	DT892	TD335	K0142
C305-130-4	TD254	TD320	K0142

Remarks: _____

Datum, 15/02/2005
Siekmann Econosto GmbH & Co. KG

S1 QS

QM Meinold Oestreich

We hereby certify, that all tests were satisfactory and that the material described above complies with the order contract. This copy is true copy of the original certificate.

Siekmann - Econosto
GmbH & Co KG
Freigrafenweg 2
D-44357 Dortmund

Certificate
DIN EN 10204 / 3.1B

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Code : V 362 Item : 00370 QTY : 4 PCS	Description : 3 " 600LB Globe Valve, WCB Body, API Trim No.5, RF ends	

Part Name	Mat.	Heat No.	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	C.E	MPa TS	MPa YS	E %	R %	HB
Body	WCB	DT754	0,220	0,930	0,400	0,024	0,027	0,027	0,027	0,007	0,010	0,001	0,380	578	336	37	53	159
Body	WCB	DT892	0,210	0,920	0,500	0,026	0,024	0,029	0,030	0,009	0,030	0,020	0,380	530	328	32	43	144
Body	WCB	TD254	0,210	0,930	0,440	0,023	0,027	0,029	0,027	0,012	0,020	0,001	0,380	520	313	29	39	148
Bonnet	WCB	TD339	0,210	0,920	0,460	0,024	0,026	0,030	0,027	0,007	0,020	0,001	0,370	520	313	30	41	148
Bonnet	WCB	TD361	0,210	0,960	0,450	0,024	0,025	0,027	0,025	0,008	0,020	0,001	0,380	533	325	32	42	147
Bonnet	WCB	TD335	0,190	0,950	0,480	0,021	0,025	0,027	0,029	0,006	0,020	0,001	0,360	523	321	31	42	149
Bonnet	WCB	TD320	0,200	0,940	0,420	0,022	0,025	0,031	0,030	0,008	0,020	0,001	0,370	515	305	29	39	154
Disc	F6a-III	K0142	0,120	0,410	0,430	0,016	0,019	12,120	0,220					824	682	28	52	256

Siekmann - Econosto GmbH & Co KG Freigrafenweg 2 D-44357 Dortmund	**Certificate** **DIN EN 10204 / 3.1B**	Page 1 of 2 SIEKMANN ECONOSTO ROYAL ECONOSTO GROUP

Client	: Lurgi Öl, Gas, Chemie GmbH
Order No.	: 4567581-000/1.69690 Zagros
Our Order No.:	8034495

Code : V 362 Item : 00380 QTY : 1 PCS	Description : 4 " 600LB Globe Valve, WCB Body, API Trim No.5, RF ends	

Applicable Standard :	**Test according to API 598 / BS EN 12266**			
Basic Design: BS1873	Rating 600LB	Pres.(MPa)	Time (S)	RSLT.
Face to Face Dimension: ASME/ANSI B16.10	Hyd. Shell Test	15,4	60	OK
End Flange Dimension: ASME/ANSI B16.5	Hyd.Seat/Backseat	11,4	60	OK
	Air seat Test	0,6	60	OK
	Other Inspection	View – Dim. – Oper.		OK

Serial No.:	Body Heat No.	Bonnet Heat No.	Wedge/Disk Heat No.
C305-140-1	DT754	DT761	K0124

Remarks: _____

Datum, 15/02/2005
Siekmann Econosto GmbH & Co. KG

S1 QS

QM Meinold Oestreich

We hereby certify, that all tests were satisfactory and that the material described above complies with the order contract. This copy is true copy of the original certificate.

Siekmann - Econosto
GmbH & Co KG
Freigrafenweg 2
D-44357 Dortmund

Certificate
DIN EN 10204 / 3.1B

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Code : V 362 Item : 00380 QTY : 1 PCS	Description : 4 " 600LB Globe Valve, WCB Body, API Trim No.5, RF ends	

Part Name	Mat.	Heat No.	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	C.E	MPa TS	MPa YS	E %	R %	HB
Body	WCB	DT754	0,220	0,930	0,400	0,024	0,027	0,027	0,027	0,007	0,010	0,001	0,380	578	336	37	53	159
Bonnet	WCB	DT761	0,190	1,110	0,530	0,024	0,027	0,026	0,023	0,007	0,020	0,001	0,380	559	334	34	48	141
Disc	F6a-III	K0124	0,120	0,640	0,550	0,007	0,031	12,200	0,200					810	680	35	44	258

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4567581
Siekmann-Order-No.: 8034495

CERTIFICATE-NO.: 390-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
390	V331	1		

Date 17.03.05
Siekmann Econosto GmbH&Co.KG

S1 QS

QM Meinold Oestreich

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
Germany

Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
Web: www.siekmann-econosto.de

390

VALVITALIA S.p.A. • VITAS Division
Stabilimento / Plant: S.S. 11 Via Olmo, 31/33 • 36077 Altavilla Vicentina (VI) • Italy
Tel. +39 0444 337 111 • fax +39 0444 349 359
Ufficio Vendite / Sales Office: Via Tonale, 72 • 24061 Albano S. Alessandro (BG) • Italy
Tel +39 035 4521276 • telefax. +39 035 4521263
e-mail: qualita@valvitalia.com • www.valvitalia.com

TEST CERTIFICATE (DECLARATION OF CONFORMITY)

N. 5000218/ 3 PAGE 1 OF 2

CUSTOMER CODE 20350

STEIKMANN ECONOSTO GMBH & CO.KG
FREIGRAFENWEG 2
44357 DORTMUND D

YOUR PURCHASE ORDER NO. 9004564OP DATE 15/09/04 22/09/04

[X] PARTIAL ORDER
[ ] BALANCE ORDER

OUR JOB NO 40330/ 1

REMARKS: LURGI PROJECT : ZAGROS 2

[X] API 598 [X] EN 10204 3.1 B
[ ] BS 6755 [ ]

MATERIAL TESTED				TEST [ ] PSI [X] BAR			COMPONENT / HEAT CODE/MATERIAL / HEAT NR./SUPPLIER	CHEMICAL ANALYSIS %	%	%	%	%	%	%	%	%	%	%
ITEM	Q.TY	PART.N	DESCRIPTION	HYDROSTATIC SHELL	HYDROSTATIC SEATS	PNEUM SEATS		MECHANICAL PROPERTIES: TENSILE N/mm2	YELD N/mm2	ELOGATION %	RED. OF AREA %	IMPACT TEST 1 JOULE	2 JOULE	3 JOULE	TEST TEMP. °C	HARDNESS HB	HB	C.E.
14,0	1	751941	150R 303 CBM AZ GLOBE VALVE 3" 1500 LBS - BW THK 15,24mm - CASTINGS A216 WCB - F6 TRIM - STELLITE SEAT RING - PARABOLIC DISC - GASKET RJ SOFT IRON - PACKING GRAFOIL + BRAIDED GRAPHITE - BOLTING B7/2H	385	285	7	1 BONNET 5001632 A216 WCB \0117	F										
								VITKOVICE SLEVARNY SPOL S.R.O (SEE ATTACHED NR. \40001-402)										
							1 BODY 5002545 A216 WCB \0117	F										
								VITKOVICE SLEVARNY SPOL S.R.O (SEE ATTACHED NR. \40001-305)										

MARCATURA/TAG.: V331 - 00390
AAVR21D

-VISUAL EXAMINATION ACCORDING TO MSS SP 55 : SATISFACTORY.
-DIMENSIONAL EXAMINATION HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT.

-ALL VALVES HAS BEEN MANUFACTURED ACCORDING TO RELEVANT VALVES SPECIFICATION.

-TRIM MATERIAL (DISC-SEAT-STEM) AND BOLTING ARE ACCORDING TO THE P.O. MATERIAL SPECIFICATION.

-ALL VALVES HAVE BEEN HYDROTESTED WITH SATISFACTORY RESULT.

-MAGNETIC PARTICLE INSPECTION HAS BEEN CARRIED OUT ON ALL ACCESSIBLE CASTING SURFACE ACCORDING TO CUSTOMER'S REQUIREMENTS.

-DYE PENETRANT INSPECTION HAS BEEN CARRIED OUT ON BUTT WELDING ENDS AFTER MACHINING WITH SATISFACTORY RESULTS.

FOLLOWING TEST RESULT	THIRD AUTHORITY	DATE	CLIENT INSPECTOR	DATE	INSPECTOR DEPT	DATE
HYDROSTATIC AND PNEUMATIC TESTS SATISFACTORY		/ /		/ /	LUIGI ROSSI	31.08.05

VITAS
VALVITALIA S.p.A. • VITAS Division
Stabilimento / Plant: S.S. 11 Via Olmo, 31/33 • 36077 Altavilla Vicentina (VI) • Italy
Tel. +39 0444 337 111 • fax +39 0444 349 359
Ufficio Vendita / Sales Office: Via Tonale, 72 • 24061 Albano S. Alessandro (BG) • Italy
Tel +39 035 4521276 • telefax. +39 035 4521263
e-mail: qualita@valvitalia.com • www.valvitalia.com

TEST CERTIFICATE (DECLARATION OF CONFORMITY)

N. 5000218/ 3 PAGE 2 OF 2

CUSTOMER CODE 20350

STEIGMANN ECONOSTO GMBH & CO.KG
FREIGRAFENWEG 2
44357 DORTMUND D

YOUR PURCHASE ORDER NO. 90045640P DATE 15/09/04 22/09/04

[X] PARTIAL ORDER
[ ] BALANCE ORDER

OUR JOB NO. 40330/ 1

REMARKS: LURGI PROJECT : ZAGROS 2

[X] API 598 [X] EN 10204 3.1 B
[ ] BS 6755 [ ]

MATERIAL TESTED				TEST [ ] PSI [X] BAR			COMPONENT / HEAT CODE/MATERIAL / HEAT NR/SUPPLIER	CHEMICAL ANALYSIS											
				HYDROSTATIC		PNEUM		%	%	%	%	%	%	%	%	%	%	%	
								MECHANICAL PROPERTIES											
ITEM	Q.TY	PART. N.	DESCRIPTION	SHELL	SEATS	SEATS		TENSILE N/mm2	YIELD N/mm2	ELOGATION %	RED OF AREA %	IMPACT TEST 1.JOULE	2.JOULE	3.JOULE	TEST TEMP °C	HARDNESS HB	HB	C.E.
			-DYE PENETRANT INSPECTION HAS BEEN CARRIED OUT ON HARD-FACING (STELLITE) OF SEATS AND WEDGES ACCORDING TO CUSTOMER'S REQUIREMENTS.															
			-EC DECLARATION OF CONFORMITY.															
			-SUPPLIER: VITAS - DIVISION OF VALVITALIA SPA VIA OLMO 31/33,ALTAVILLA VICENTINA (VICENZA)															
			-ACCORDING TO ANNEX VII OF DIRECTIVE 97/23/CE, HEREBY DECLARE THAT THE PRODUCTS DETAILED ABOVE ARE IN COMPLIANCE WITH THE DIRECTIVE 97/23/CE (CERT.N.01 202 I/Q-03-0710) AND HAVE BEEN MANUFACTURED IN ACCORDANCE WITH CONFORMITY ASSESSMENT MODULE H,CATEGORY III,FLUID GROUP 1.														
			-SIGNED :															
			-PRINT NAME : D.BALZAROTTI															
			-TITLE : GENERAL MANAGER															

TEST RESULT	THIRD AUTHORITY	DATE	CLIENT INSPECTOR	DATE	INSPECTOR DEPT.	DATE
HYDROSTATIC AND PNEUMATIC TEST: SATISFACTORY		/ /		/ /	LUIGI ROSSETTO	31/03/05

L1 14

Výrobce: Vítkovické slévárny s r.o.
Manufacturer/Hersteller: Ostrava - Vítkovice

MATERIÁLOVÉ OSVĚDČENÍ
Report of material tests
Abnahmeprüfzeugnis
dle/acc.to/nach EN 10204 3.1.B

Číslo: 40001-402
No./Nr.

Datum: 12.03.2004
Date/Datum

Dod. podmínky: QCP n° 40099
Delivery terms/Lieferbedingungen

Značka výrobce:
Mark of the manufacturer VS
Zeichen des Herstellers

Značka zmlce:
Inspector stamp
Stempel des Sachverständigen

Zákazník: VITAS Division of VALVITALIA S.p.A
Customer/Besteller

Objednávka: 041289 O52852/106
Order No./Bestellung

Název: Part name: Bestandteil:	Počet: Quantity: Stückzahl:	Materiál: Material: Werkstoff:	Melt No.: Charge Nr.:	Piece No.: Stück Nr.:	Heat treatment: Wärmebehandlung:	Remark: Bemerkungen:
BONNET GLOBE 3/1500	16	A216 WCB	O117	TEST BAR No 593	Norm. 920°C - Temp.620°C	ASTM E 446 MT According to ANSI B16.34 annex C VISUAL:ACC.MSS SP 55 DIMENSIONS:SATISFACTORY

Chemická analýza - Chemical analysis - Chemische Analyse

Tavba Melt No.: Charge Nr.:		C %	Mn %	Si %	P %	S %	Cr %	Ni %	Mo %	Cu %	V %	W %	Ceq
	max.	0,25	1,28	0,6	0,04	0,045	0,5	0,5	0,2	0,3	0,03		
	min.												
O117		0,18	0,92	0,48	0,02	0,02	0,06	0,04	0,05	0,03	0		0,36

Mechanické hodnoty-Mechanical properties-Mechanische Eigenschaften

Rp0,2 N.mm⁻²	Rm N.mm⁻²	A %	Z %	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°) ø	HB
	655							
250	485	22	35	21	21	21	27	
305	515	28	50	40	43	37	40	167

Potvrzujeme, že dodávka odpovídá podmínkám objednávky.
We hereby certify that the material described above has been tested and complies the terms of the contact.
Wir bestätigen, dass die Lieferung den Bestellungsbedingungen entspricht.

Rm-Pevnost v tahu-Tensile strength/Zugfestigkeit
Rp0,2- Mez kluzu-Yield point/Streckgrenze
A - Tažnost-Elongation/Bruchdehnung
Z - Zúžení-Reduction of area/ Brucheinschnürung

Podnikový zástec výrobce:
Sachverständiger des Herstellers:
Producer's works expert:

VITAS
Division of VALVITALIA S.p.A.
QUALITY CONTROL

vítkovické slévárny
Heinzova 2004/1
CZ 708 02 Ostrava-Vítkovice
tel.: + 420 595 934 508

Razítko výrobce (Stempel von Hersteller)

Tento dokument má platnost originálu. This document is valid as an original. Diese Dokument ist als Original gültig.

Výrobce: Manufacturer/Hersteller: **Vítkovické slévárny s.r.o.** Ostrava - Vítkovice

MATERIÁLOVÉ OSVĚDČENÍ
Report of material tests
Abnahmeprüfzeugnis

dle/acc.to/nach EN 10204 3.1.B

Číslo: No./Nr. 40001-395

Datum: Date/Datum 12.03.2004

Značka výrobce: Mark of the manufacturer Zeichen des Herstellers VS

Zákazník: Customer/Besteller VITAS Division of VALVITALIA S.p.A.

Objednávka: Order No./Bestellung 041289 O52852/108

Dod. podmínky: Delivery terms/Lieferbedingungen QCP n° 40099

Značka znalce: Inspector stamp Stempel des Sachverständigen

Název: Part name: Bestandteil:	Počet: Quantity: Stückzahl:	Materiál: Material: Werkstoff:	Melt No.: Charge Nr.:	Place No.: Stück Nr.:	Heat treatment: Wärmebehandlung:	Remark: Bemerkungen:
BODY GLOBE 3/1500	16	A216 WCB	O117	TEST BAR No 593	Norm. 920°C - Temp.620°C	ASTM E 446 MT According to ANSI B16.34 annex C VISUAL:ACC.MSS SP 55 DIMENSIONS:SATISFACTORY

Chemická analýza - Chemical analysis - Chemische Analyse

Tavba Melt No.: Charge Nr.:		C %	Mn %	Si %	P %	S %	Cr %	Ni %	Mo %	Cu %	V %	W %	Ceq
	max.	0,25	1,28	0,6	0,04	0,045	0,5	0,5	0,2	0,3	0,03		
	min.												
O117		0,18	0,92	0,48	0,02	0,02	0,06	0,04	0,05	0,03	0		0,38

Mechanické hodnoty-Mechanical properties-Mechanische Eigenschaften

Rp0,2 N.mm⁻²	Rm N.mm⁻²	A %	Z %	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°)	ISO-V (+20°) ø	HB
	655							
250	485	22	35	21	21	21	27	
305	515	28	50	40	43	37	40	167

Potvrzujeme, že dodávka odpovídá podmínkám objednávky.
We hereby certify that the material described above has been tested and complies the terms of the contact.
Wir bestätigen, dass die Lieferung den Bestellungsbedingungen entspricht.

Rm-Pevnost v tahu-Tensile strength/Zugfestigkeit
Rp0,2- Mez kluzu-Yield point/Streckgrenze
A - Tažnost-Elongation/Bruchdehnung
Z - Zúžení-Reduction of area/ Brucheinschnürung

Podnikový znalec výrobce:
Sachverständinger des Herstellers:
Producer's works expert:

VITAS Division of VALVITALIA S.p.A. QUALITY CONTROL

Razítko výrobce (stampiglia del costruttore/Stempel von Hersteller)

vítkovické slévárny
Heřmanova 2804/1
CZ 708 02 Ostrava-Vítkovice
tel.: + 420 596 994 508

Tento dokument má platnost originálu. This document is valid as an original. Dieses Dokument ist als Original gültig.

KRÁLOVOPOLSKÁ
Křižíkova 68, CZ-660 90 Brno, tel.: +420 5 712 1700
fax: +420 5 712 1723

REPORT OF RADIOGRAPHIC EXAMINATION N D T

Report No 03/34/05
Page 1 - 3

Customer	VITAS	Project No	BODY VS 3" 1500 BW
Const & MFR		Item Name	040330 iT 14
Project Name	BODY VS 3" 1500 BW	Material-Thickness	ASTM A-216 WCB - TH. 30
Item No.	040330 iT 14	Dwg. No.	Rev
Material Form	Weld Casting ✓ Other	I.Q.I	ASME ✓ 25 ASTM
X-Ray Equip	No. / kvp mA Actual : N/A -	I.Q.I Placement Sensitivity	S.Side F.Side ✓
Radioisotope	IR 192 20 ci	Film	GEVAERT D7
Focal size	2x1	Screen	Pb
Exposure Time		Shim Thickness	0.10 mm
FFD / SFD		Development Condition	AUTOMATIC +25 °C
Density	Single 1.8÷4 Double 2÷4	Procedure	ASME V ART. 2
EXP.TECHNIQUE	SWSV DWDV DWSV PANORAMIC		ANSI B16-34

Discontinuity type and category	BLOW HOLE	SLAG	SAND INCL.	SHRINKAGE type CA	CB	CC	CD	CRACK	HOT TEAR	INSERT	MOTTLING	SURFACE DEFECT	Grade	Note
ANSI B16-34 ANNEX B														
Accepted severity level	2	/	3	2	3	3	3	NA	NA	NA	NA			

Casting N.	Progressive N. Films	BLOW HOLE	SLAG	SAND INCL.	CA	CB	CC	CD	CRACK	HOT TEAR	INSERT	MOTTLING	SURFACE DEFECT	Grade	Note
SB 9149	1-2			✓										A1	
HEAT/0417	2-3			✓										A1	
	3-1	✓												A1	
	4-5	✓												A1	
	5-6	✓												A1	
	6-4			✓										A1	
	7-8			✓										A1	
	8-9			✓										B2	

Examined by VITAS Division of VALVITALIA S.p.A. GIOCONDO ORFANO II° LIVELLO MT-PT-UT-RT 20/05/05 Level I

Approved by Level II

Date of Examination

☐ Witnessed by

☐ Reviewed by

KRÁLOVOPOLSKÁ SLÉVÁRNA, s. r. o., Křižíkova 68, CZ-660 90 Brno, tel.: +420 5 712 1700
fax: +420 5 712 1723

REPORT OF RADIOGRAPHIC EXAMINATION N D T

Report No. 09/34/05

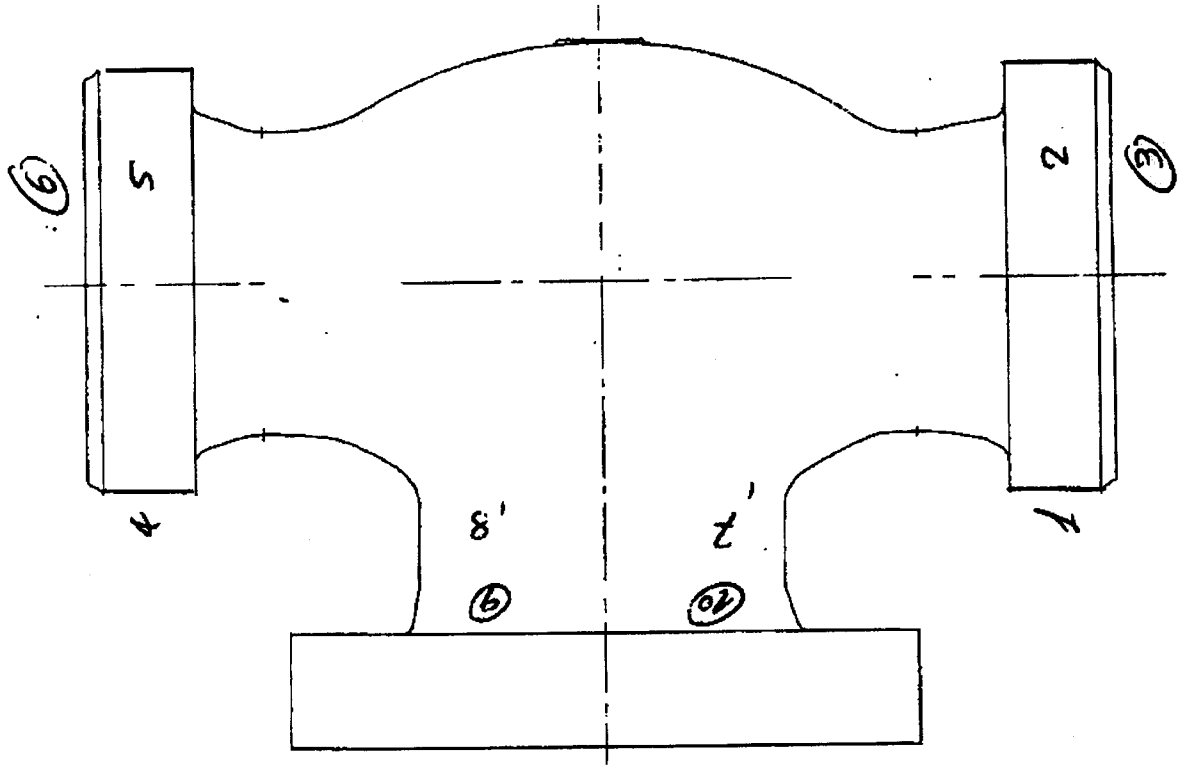
Page 2 - 3

Casting N.	Progressive N. Films	BLOW HOLE	SLAG	SAND INCL.	SHRINKAGE CA	SHRINKAGE CB	SHRINKAGE CC	SHRINKAGE CD	CRACK	HOT TEAR	INSERT	MOTT LING	SURFACE DEFECT	Grade	Remarks
		2	–	3	2	3	3	3	NA	NA	NA	NA			
SB-9149	9-10			✓										B2	
HEAT/0111	10-7	✓		✓										A1/B1	

VITAS
Divisione di VALVITALIA S.p.A.
GIOCONDO ORFANO
II° LIVELLO MT-PT-UT-RT
29/06/05

BONNET VS 3" 1500 BW

PX · H. 5B- 9149



VITAS
Division of VALVITALIA S.p.A.
GIOCONDO ORFANO
II° LIVELLO MT-PT-UT-RT
22/06/05

Firma Signature	UFFICIO CONTROLLO QUALITÀ Quality Control Department	Rev. Rev.	Sez. Sec.
Data Date		pag. 3 pag.	di 3 of

tsm

KRÁLOVOPOLSKÁ
Křižíkova 68, CZ-660 90 Brno, tel.: +420 5 712 1700
fax: +420 5 712 1723

REPORT OF RADIOGRAPHIC EXAMINATION N D T

Report No: 03/35/05
Page: 1 - 2

Customer	VITAS	Project No.	BONNET VS 3" 1500
Const & MFR		Item Name	040330 IT-14
Project Name	BONNET VS 3" 1500	Material-Thickness	ASTM A-216 WCB TH 5 0 2
Item No.	040330 IT-14	Dwg. No.	Rev
Material Form	Weld Casting ✓ Other	I.Q.I	ASME ✓ 35 ASTM
X-Ray Equip	No. / Actual: kvp N/A mA	I.Q.I Placement-Sensitivity	S.Side ✓ F.Side
Radioisotope	IR 192 20 u	Film	GEVAERT D7
Focal size	2 x 1	Screen	Pb
Exposure Time		Shim Thickness	0.10 Z
FFD / SFD		Development Condition	AUTOMATIC + 25°C
Density	Single 1.8 ÷ 4 Double 2 ÷ 4	Procedure	ASME V ART 2
EXP.TECHNIQUE	SWSV DWDV DWSV PANORAMIC		ANSI B16-34

Discontinuity type and category AHSI B16-34-ANNEX B	BLOW HOLE	SLAG	SAND INCL.	SHRINKAGE type CA	CB	CC	CD	CRACK	HOT TEAR	INSERT	MOTTLING	SURFACE DEFECT	Grade	Note
Accepted severity level	2	–	3	2	3	3	3	NA	NA	NA	NA			
Casting N. / Progressive N. Films														
SB-91 09/1 / 1-2			✓										B2	
HEAT/0117 / 2-3			✓										B1	
3-1			✓										A1	

Examined by

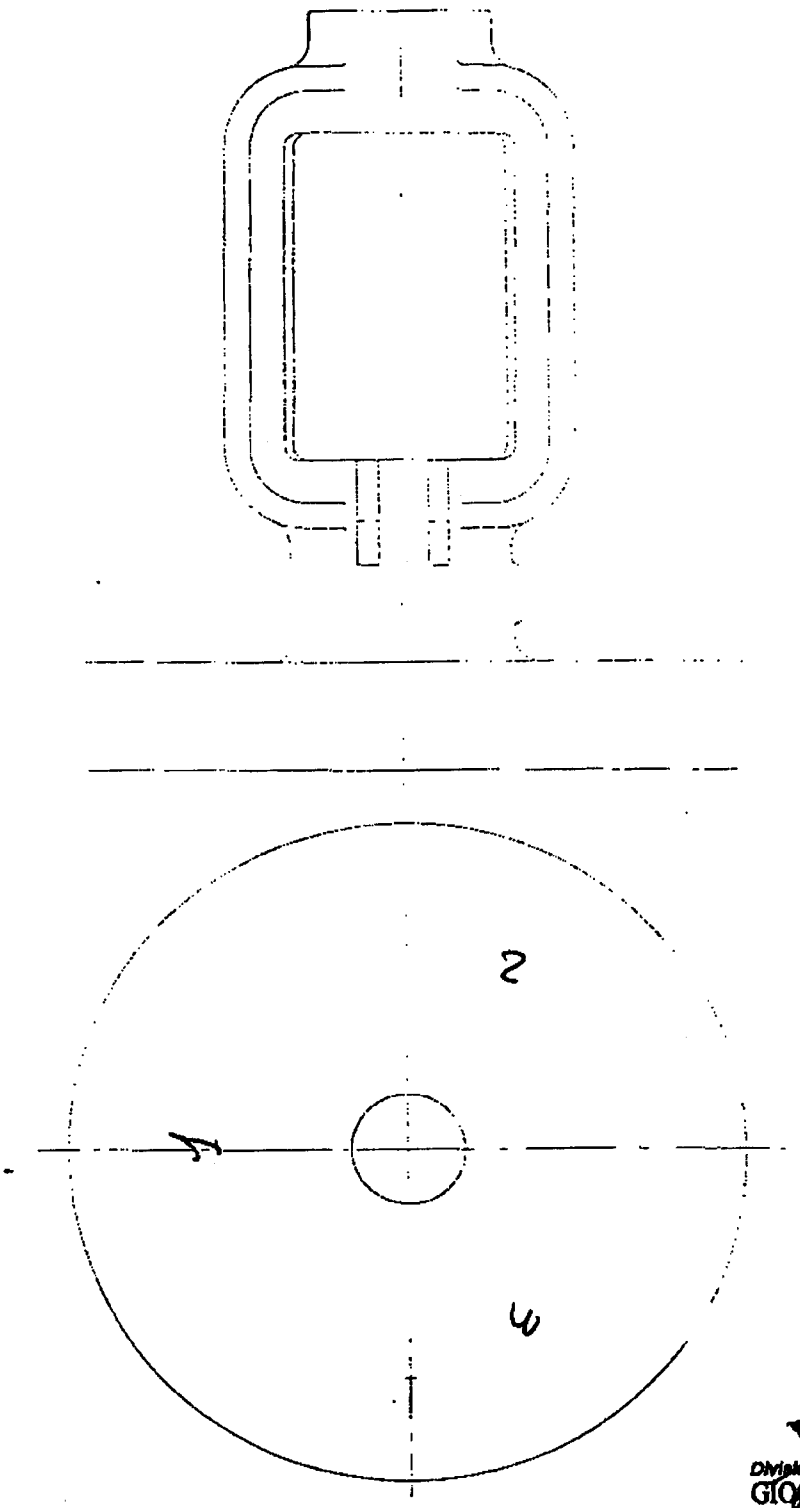
VITAS Division of VALVITALIA S.p.A
GIOCONDO ORFANO
II° LIVELLO MT-PT-UT-RT
29/11/05

Approved by Level II

Date of Examination

☐ Witnessed by
☐ Reviewed by

BONNET VS 3" 1500



VITAS
Division of VALVITALIA S.p.A.
GIOCONDO ORFANO
II° LIVELLO MT-PT-UT-RT
29/6/05

Firma Signature	UFFICIO CONTROLLO QUALITÀ Quality Control Department	Rev. Rev.	Sez. Sec.
Data Date		pag. 2 pag.	di 2 of

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4567581
Siekmann-Order-No.: 8034495

CERTIFICATE-NO.: 400-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
400	V421	6		

Date
Siekmann Econosto GmbH&Co.KG

S1 QS

QM Meinold Oestreich

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
Germany

Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
Web: www.siekmann-econosto.de

HEAD OFFICE AND PLANT
Via G.Mazzini, 6
24060 S.Paolo D'Argon (BG) - ITALY
Tel +39.035.4255211 - Fax +39.035.959210
Internet: www.lvf.it - E-mail: info@lvf.it

FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 i.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBES srl Reg.Imp. BG n° 02805260169

INSPECTION CERTIFICATE according to

[X] UNI EN 10204 - 3.1 B [ ]

CERTIFICATE N° **C 045931-012/01**

TEST PROCEDURE & SPECIFICATION

[X] API 598 [X] ANSI/ASME B 16.34 [ ]
[X] MSS SP.61 [X] BS 6755 [ ]
[ ] DIN 3230 T.3 [X] EN 12266-1 [ ]

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG

FREIGRAFENWEG 2
D-44357 DORTMUND ()

10. MRZ 2005

OUR JOB N°	POSITION	Q.TY
045931	**012** 40	**6**

YOUR P.O. N°
9004566OP/ZAGROS II -LURGI-

ITEM: **12**

DESCRIPTION
GLOBE VALVE OS#Y BB FB
2" F11/F6/F6* 1500 LBS BW80

15BP 208 BW80 sc.368 R.1

TAG: V 421 - 00400

Serial Number:

TEST PRESSURES

[X] BAR [ ] PSI

HYDROSTATIC BODY & BACKSEAT	HYDROSTATIC SEAT	PNEUM. SEAT
390	**285**	**6**

TEST RESULT

TEST HYDROSTATIC AND PNEUMATIC	[X] CONFORM [ ] NOT CONFORM
VISUAL AND DIMENSIONAL TEST	[X] CONFORM [ ] NOT CONFORM

NOTES
* HARD FACING OVERLAY: AWS R Co Cr A (STELLITE GR. 6)
REF. LURGI : 4567580-000/1.69690

COMPONENT / CHEMICAL ANALYSIS

PART NAME	MATERIAL	C / Al	Mn / Co	Si / N	S / V	P / Nb	Cr / Sn	Mo / CE	Ni / Nb+Ta	Ti	Cu	Fe	MILL #
MECHANICAL PROPERTIES, IMPACT TESTS													
HEAT CODE	HEAT NR	TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RED. OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST TEMP °C	HARDNESS HB			
BONNET	*A182 F11c.2*	0,133	0,529	0,577	0,008	0,011	1,129	0,458	0,145		0,153		019046
R-L61	*52992*	508,00	374,00	29,00	61,00					171,00			
NUT	*A194 gr.4*	0,416	0,789	0,175	0,028	0,012		0,275					021254
	014606					46	38	43	-101,00	245,00			
B/B STUDS	*A193 B16*	0,366	0,520	0,260	0,001	0,005	0,880	0,500					020459
		0,015			0,262								
	B06995	934,00	842,00	19,70	63,80					273,00			
STEM	*A479 Tp410*	0,106	0,460	0,420	0,023	0,019	12,090		0,340		0,108		021640
			0,023	0,055									
	445022	713,00	562,00	22,00	71,00					216,00			
DISC	*A479 Tp410*	0,112	0,390	0,450	0,023	0,017	12,130		0,420				021501
	440019	730,00	588,00	23,00	66,00					222,00			
SEAT	*A479 Tp410*	0,140	0,640	0,380	0,002	0,019	12,240	0,180	0,400		0,060		019714
		0,004		0,052									
	372586	668,00	458,00	27,20	73,00					197,00			
BODY	*A182 F11c.2*	0,110	0,450	0,580	0,001	0,009	1,250	0,500					021380
IR-ACB	*55579*	489,00	322,00	35,80	74,00					155,00			

We declare that this product is in compliance with the directive 97/23/EC and was subjected to the conformity assessment procedure H (for Category III). The monitoring is performed by TÜV Italy srl Notified Body 0948.

- EACH SINGLE COMPONENT OF THE VALVE WICH IS MENTIONED IN THIS CERTIFICATE HAS BEEN MANUFACTURED, HEAT TREATED AND TESTED FULLY IN ACCORDANCE WITH ITS OWN MATERIAL SPECIFICATION AS ABOVE INDICATED

- THE REPORTED VALUES ARE STRICTLY IN ACCORDANCE WITH THE ORIGINAL MILL CERTIFICATES

Managing Director - L.V.F. S.p.A.

Achilles STOOMWEZEN TÜV SÜDDEUTSCHLAND HPO API 6A 6D API 6D API 600 APIQR REGISTERED FIRM ISO 9001 ISO REG. N°. 0357 ANSI-RAB QMS ACCREDITED

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
DATE	DATE	DATE 09/03/2005

SIEKMANN ECONOSTO
ROYAL ECONOSTO GROUP

Material & Test Certificates
Valves

Client : Lurgi Oel und Gas Chemie GmbH
Lurgi-Order-No. : 4567581
Siekmann-Order-No.: 8034495

CERTIFICATE-NO.: 410-1

Lurgi-Item-No.	Lurgi-I.D.	Quantity	Page	Remarks
410	V485	6		

Date
Siekmann Econosto GmbH&Co.KG

S1 QS

QM Meinold Oestreich

If you need any Spare Parts or
technical support please contact:

Siekmann Econosto GmbH & Co. KG
P.O. Box 150440, D-44344 Dortmund
Freigrafenweg 2, D-44357 Dortmund
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Tel.: 0049 - 231 937 50
Fax : 0049 - 231 937 5188
E-mail: info@siekmann-econosto.de
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HEAD OFFICE AND PLANT
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FORGED STEEL VALVES

Cod.Fisc. e P.IVA 03076750169 - Cap. Soc. € 8.000.000,00 i.v.
Registro Imprese BG 03076750169 - R.E.A. 347477
VAT Registration Number: IT 03076750169
Soggetta all'attività di direzione e coordinamento da parte della società ALLBEL srl - reg.Imp. BG n° 02805260169

INSPECTION CERTIFICATE according to

[X] UNI EN 10204 - 3.1 B [ ]

CERTIFICATE N° **C 045931-013/01**

Page No. 001 / 001

TEST PROCEDURE & SPECIFICATION

[X] API 598 [X] ANSI/ASME B 16.34 [ ]
[X] MSS SP.61 [X] BS 6755 [ ]
[ ] DIN 3230 T.3 [X] EN 12266-1 [ ]

CUSTOMER
SIEKMANN ECONOSTO GMBH & CO. KG

FREIGRAFENWEG 2
D-44357 DORTMUND ()

10. MRZ 2005

OUR JOB N°	POSITION	Q.TY
045931	**013** 41	**6**

YOUR P.O. N°
9004566OP/ZAGROS II -LURGI-

ITEM: **13**

DESCRIPTION
GLOBE VALVE OS#Y BB FB
2" F22/F6/F6* 1500 LBS BW160

15BP 208 BW160 sc.368 R.1

TAG: V 485 - 00410

Serial Number:

TEST PRESSURES

[X] BAR [ ] PSI

HYDROSTATIC BODY & BACKSEAT	HYDROSTATIC SEAT	PNEUM. SEAT
390	**285**	**6**

TEST RESULT

TEST HYDROSTATIC AND PNEUMATIC	[X] CONFORM	[ ] NOT CONFORM
VISUAL AND DIMENSIONAL TEST	[X] CONFORM	[ ] NOT CONFORM

NOTES
* HARD FACING OVERLAY: AWS R Co Cr A (STELLITE GR. 6)
REF. LURGI : 4567580-000/1.69690

COMPONENT / CHEMICAL ANALYSIS / MECHANICAL PROPERTIES. IMPACT TESTS

PART NAME / HEAT CODE	MATERIAL / HEAT NR	C / Al	Mn / Co	Si / N	S / V	P / Nb	Cr / Sn	Mo / CE	Ni / Ni+Ta	Ti	Cu	Fe	MILL #
		TENSILE N/mm2	Yeld N/mm2	ELONGATION %	RED. OF AREA %	1 JOULE	2 JOULE	3 JOULE	TEST TEMP. °C	HARDNESS HB			
BONNET	A182 F22 Cl.3	0,129	0,425	0,168	0,006	0,008	2,130	0,910					018256
R-L33	59453	61,00	504,00	24,00	75,20					207,00			
NUT	A194 gr.4	0,416	0,789	0,175	0,028	0,012		0,275					021254
	014606					46	38	43	101,00	245,00			
B/B STUDS	A193 B16	0,366	0,520	0,260	0,001	0,005	0,880	0,500					020459
		0,015			0,262								
	B06995	954,00	842,00	19,70	63,80					273,00			
STEM	A479 Tp410	0,106	0,460	0,420	0,023	0,019	12,090		0,340		0,108		021640
			0,023	0,055									
	445022	713,00	562,00	22,00	71,00					216,00			
DISC	A479 Tp410	0,112	0,390	0,450	0,023	0,017	12,130		0,420				021501
	440019	730,00	588,00	23,00	66,00					222,00			
SEAT	A479 Tp410	0,140	0,640	0,380	0,002	0,019	12,240	0,180	0,400		0,060		019714
		0,004		0,052									
	372586	608,00	458,00	27,20	73,00					197,00			
BODY	A182 F22 Cl.3	0,113	0,510	0,270	0,002	0,014	2,220	0,940					014112
IPG	2150434	525,00	386,00	34,60	77,00					165,00			

We declare that this product is in compliance with the directive 97/23/EC and was subjected to the conformity assessment procedure H (for Category III). The monitoring is performed by TÜV Italy srl Notified Body 0948.

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Managing Director - L.V.F. Spa A.

Achilles STOOMWEZEN TÜV SÜDDEUTSCHLAND IPQ APIQR REGISTERED FIRM ISO 9001 ISO REG. N°. 0357 ANSI-RAB QMS ACCREDITED

THIRD AUTHORITY	CLIENT INSPECTION DEPT	INSPECTION DEPT.
DATE	DATE	DATE 09/03/2005