



HP Valves Oldenzaal BV

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COVERPAGE TO INSPECTION / TEST CERTIFICATE

Customer : CMI (HRSG + Energy Services)
Project : Yajva SBV
Customer P/O no : 203/2010/900588
Shop order no : 2010 0006
Item no : 170 / 000
Quantity : 1 pce

KKS No : 15HAH10AA102

Medium & high-pressure valves in
accordance with ASME, API, BS & DIN

Bank ABN-AMRO SWIFT-address ABNANL2A
EUR-account 59.55.41.437 IBAN-code NL88ABNA0595541437
USD-account 57.60.74.780
Trade register Enschede 060.567.50
VAT no NL 008671242B01

Member of Indutrade AB



FUNCTIONAL TEST REPORT

Customer : CMI (HRSG + Energy Services)			
Project : Yajva SBV			
Cust. P/O no : 203/2010/900588			
HP order reference : 2010 0006			
Item no : 170 / 000			
Qty	Nominal size	Description	
1 pce	1" / DN 25	Gate Valve, 1500lbs, Make: KVT Mat.ASTM SA182 SA105N. Incl. Limitorque actuator Type MX10 KKS No.: 15HAH10AA102 Serial no. Actuator : B0000230	
TEST DESCRIPTION		REMARKS	TESTED
FUNCTIONAL TEST		Closing or opening time	RESULTS
In case of actuating devices, closing and opening will be checked		at 50 Hz	✓ 12 sec
✓ = Test results were acceptable considering the applicable procedures and requirements.			
Signed HP VALVES BV :		Signed THIRD PARTY:	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> HP VALVES BV QUALITY CONTROL P. WOLTERS OLDENZAAL 26-07-2010 </div>			

TEST / INSPECTION CERTIFICATE

(EN 10204-3.1)

Client : HP VALVES

KEY VALVE TECHNOLOGIES LTD.

P.O. No. : P10 0043 / 2010 0006

Report No. : TIC100614-01-03

Date of Issue : 2010. 06. 14

Item Description : P.S.G. VALVE(MOV, SW ENDS)			CLASS :1500		MATERIAL : (S)A105N		
Serial No.	SN1000006	Size	1"	Q'ty	1	Set	

HYDRAULIC / PNEUMATIC TEST

Hydraulic Test	Shell	:	388	Barg	Pneumatic Test	Shell	:	N/A	Barg		
	Seat	:	285	Barg		Seat	:	N/A	Barg		
Dimension Inspection		GOOD		Visual Inspection		GOOD		Function Test		GOOD	

MATERIAL SPECIFICATION

Product Name	Material	ASTM	Heat No.	Code Marking	Remarks
Body	Forged Steel	(S)A105N	S65984	CM6	
Bonnet	Forged Steel	(S)A105N	S53296		
Seat Ring	13Cr Stainless Steel	A276-410			Stellite #12
Disc	13Cr Stainless Steel	A276-410			Stellite #6
Stem	13Cr Stainless Steel	A276-410			
		-BLANK-			

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	
	min.	-	0.10	0.600	-	-	-	-	-	-	-	
Heat No.	max.	0.35	0.35	1.050	0.035	0.040	0.40	0.40	0.30	0.12	0.08	0.020
S65984		0.180	0.220	0.910	0.012	0.012	0.070	0.030	0.040	0.010	0.001	0.000
S53296		0.230	0.274	0.951	0.017	0.013	0.121	0.062	0.180	0.025	0.002	0.002
						-BLANK-						

MECHANICAL PROPERTIES

Item	Tensile Strength min(Mpa)	Yield Strength min(Mpa)	Elongation min(%)	Reduction of Area min(%)	Hardness max(HB)	Remarks
	S.T.D					
S65984	485.0	250.0	22.0	30.0	187	
S53296	558.5	310.3	29.0	42.4	163	
	564.3	307.1	27.0	34.6	166	
			-BLANK-			

Notes 1. These Standards for inspection conform to ASME B16.34 / API-598

2. Hydrostatic test : Shell-holding time(15 sec), Seat-Holding time(15sec, leakage

HP VALVES	Medium & high pressure valves acc. ANSI, API, BS & DIN
Your ref. : 203/2010/900-588	
Q.No. : 2010 0006	Pos: 1/1000
Qty. : 1pc	

We here by certify that the result mentioned above are true correct in every detail.

Prepared by

[Signature]

Reviewed by

HP VALVES

Medium & high pressure valves acc. ANSI, API, BS & DIN


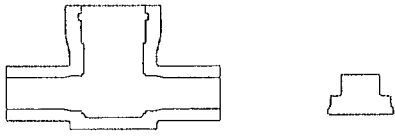
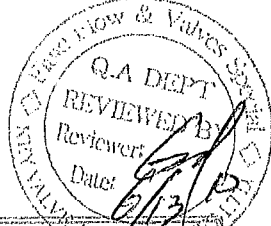
Reviewed

Witnessed

F. Wolbert - Q.C

Q-A Manager

[Signature]

 (주) 지.티.에스 Global Technology Service Co., Ltd.	<h2 style="text-align: center;">자분탐상검사보고서</h2> <h3 style="text-align: center;">Report of Magnetic Particle Examination</h3> <p style="text-align: center;">650-8 1-dong Sangnok-gu Ansan-si Gyeonggi-do, Korea 경기도 안산시 상록구 이동 650-8 TEL:(031)433-3861~2, FAX:(031)400-3863</p>		보고서번호 Report No. G10M-KVT-0006-01 쪽 번호 Page No. 1 of 2 검사일자 Date of 2010. 05. 27
발 주 처 Customer	HP VALVES	제 작 자 Manufacturer	KVT
제품명 / 번호 Item Name/No.	BODY & BONNET (All Surfaces)	공사명 / 번호 Project Name/No.	Yajvinskaya CAPP
재 질 / 두께 Material/Thickness	See Next Page - <input type="checkbox"/> mm <input type="checkbox"/> in.	Serial No.	See Next Page
전 처 리 Surface Preparation	SOLVENT CLEANING	표 면 상 태 Surface Condition	<input type="checkbox"/> As Welded <input type="checkbox"/> As Mchined <input checked="" type="checkbox"/> As Forged <input type="checkbox"/> As Casted
검 사 방 법 Examination Method	<input checked="" type="checkbox"/> 연속법(Continuous) <input type="checkbox"/> 잔류법(Residual)	시 형 온 도 Surface Temperature	22 <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F
자분종류 / 적용방법 Magnetic Particle / Application	제조사(Maker) : NAWOO 형 식(Model) : 14-AM 제조번호(Batch No.): 05MPB06	자 화 방 법 Magnetization Technique	<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> Prod <input type="checkbox"/> Coil <input type="checkbox"/> Head Shot 극 간 거 리 Pole Spacing: 3~6 <input type="checkbox"/> mm <input checked="" type="checkbox"/> in.
	종류 (Type) <input type="checkbox"/> 염색(Color) <input checked="" type="checkbox"/> 형광(Fluorescent) <input checked="" type="checkbox"/> 습식(Wet) <input type="checkbox"/> 건식(Dry) 적용방법(Application) <input checked="" type="checkbox"/> 분사(Spray) <input type="checkbox"/> 흘림(Flowing) <input type="checkbox"/> 침적(Immerse)		자화전류 (Magnetizing Current) <input checked="" type="checkbox"/> 교류(AC) <input type="checkbox"/> 직류(DC) Ampere 제조사 Maker: NAWOO 형식 Model: MY-2 일련번호 Serial No.: NW1089
탈 자 Demagnetization	<input type="checkbox"/> 유(Yes) <input checked="" type="checkbox"/> 무(No)	자 화 방 향 Magnetization Direction	<input checked="" type="checkbox"/> 선형(Longitudinal) <input type="checkbox"/> 원형(Circular)
자 외 선 등 Black Light	형 식 Model: UV-100	육안관찰등 Visible Light	형 식 Model: N/A
	일련번호 Serial No: NW0147	<input type="checkbox"/> 주 변 등 Ambient Light	일련번호 Serial No: N/A
강 도 Intensity	1250 $\mu W/cm^2$	<input type="checkbox"/> 보 조 등 Glow Lamp	강 도 Intensity: N/A Lux
총 검 사 수 량 Examination Q'ty	30 SETS	검 사 시 기 Examination Time	<input type="checkbox"/> 열처리 전(Before PWHT) <input checked="" type="checkbox"/> 열처리 후(After PWHT)
적 용 규 격 Code/Standard/Spec.	ASME B16.34 APPENDIX II/ GTS-QP-MA-02 Rev.4		
<div style="display: flex; justify-content: space-between;"> <div> <p>도 면 Sketch</p> <div style="text-align: center;">  <p>BODY BONNET</p> </div> </div> </div>			
검 사 자 Examined & Interpreted by I FVFI II <u>M. S. YUN</u> 책 임 자 Approved by LEVEL III <u>Y. C. CHIN</u>		<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Witnessed by <input type="checkbox"/> Reviewed by </div> <div style="text-align: center;">  Reviewer: <u>[Signature]</u> Date: <u>2010.05.27</u> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> HP VALVES Medium & high pressure acc. ANSI API, BS 5739 <input checked="" type="checkbox"/> Reviewed <input type="checkbox"/> Witnessed F. Weathers - Q.C. Date: <u>2010.05.27</u> </div>	





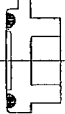

경기도 안산시 상록구 이동 650-8 TEL:031)433-3861~2, FAX:031)499-3860

G10M-KVT-0006-01

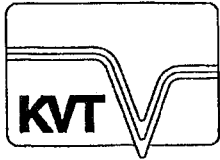
2 of 2

2010. 05. 27

Q.A. DEPT
REVISED BY
Reviewer: *[Signature]*
Date: *6/13/10*

 (주) 지.티.에스 Global Technology Service Co., Ltd.	침투탐상검사보고서 <i>Report of Liquid Penetrant Examination</i>		보고서번호 Report No.	G10P-KVT-0006-01	
	650-8 I-dong Sangnok-gu Ansan-si Gyeonggi-do, Korea 경기도 안산시 상록구 이동 650-8 TEL:031)433-3861~2, FAX:031)433-3865		쪽 번호 Page No.	1 of 2	
발 주 처 Customer	HP VALVE	제 작 자 Manufacturer	KVT		
제품명 / 번호 Item Name/No.	DISC / SEAT RING	공사명 / 번호 Project Name/No.	Yajvinskaya CCPP		
재 질 / 두께 Material/Thickness	- / - <input type="checkbox"/> mm <input type="checkbox"/> in.	Tag No.	See Next Page		
전 처 리 Surface Preparation	N/A	표 면 상 태 Surface Condition	<input type="checkbox"/> As Welded <input type="checkbox"/> As Formed <input checked="" type="checkbox"/> Hard Facing <input type="checkbox"/> As Casted		
침 투 제 Penetrant Type	<input checked="" type="checkbox"/> 염색(Color) <input type="checkbox"/> 형광(Fluorescent)	시 험 온 도 Surface Temperature	15 <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F		
침투제(Penetrant) 제조사(Maker): NAWOO 형 식(Model): NPP-2 제조번호(Batch No.): 05NPP06		세척제(Remover) 제조사(Maker): NAWOO 형 식(Model): NPR-1-3 제조번호(Batch No.): 05NPR06		현상제(Developer) 제조사(Maker): NAWOO 형 식(Model): NPD-4 제조번호(Batch No.): 05NPD06	
종류 (Type) 적용방법(Application) <input type="checkbox"/> 수세성 (W/W) <input checked="" type="checkbox"/> 분사(Spray) <input type="checkbox"/> 후유화성 (P/E) <input type="checkbox"/> 솔질(Brush) <input checked="" type="checkbox"/> 용제제거성(S/R) <input type="checkbox"/> 침적(Immerse)		종류 (Type) 적용방법(Application) <input checked="" type="checkbox"/> 용제(Solvent) <input checked="" type="checkbox"/> 닦음(Wiping) <input type="checkbox"/> 물 (Water) <input type="checkbox"/> 분사(Water Spray) <input type="checkbox"/> 침적(Water Immerse)		종류 (Type) 적용방법(Application) <input type="checkbox"/> 건 식 (Dry) <input checked="" type="checkbox"/> 분사(Spray) <input type="checkbox"/> 습 식 (Aqueous) <input type="checkbox"/> 솔질(Brush) <input checked="" type="checkbox"/> 속건식 (Nonaqueous) <input type="checkbox"/> 침적(Immerse)	
침투시간(Dwell Time): 10 분(Min.)		현상시간(Bleed-out Time): 20 분(Min.)			
자 외 선 등 Black Light	형 식 Model	N/A		형 식 Model	N/A
	일련번호 Serial No	N/A		일련번호 Serial No.	N/A
	강 도 Intensity	N/A $\mu W/cm^2$		강 도 Intensity	1200 Lux
적 용 규 격 Code/Standard/Spec.	ASME B16.34 APPENDIX III / GTS-QP-PA-02 Rev.4		검 사 시 기 Examination Time	<input type="checkbox"/> 열처리 전(Before PWHT) <input checked="" type="checkbox"/> 열처리 후(After PWHT)	
총 검 사 수 량 Examination Q'ty	30 SETS		검 사 결 과 Results	<input checked="" type="checkbox"/> 합 격 (Accept) <input type="checkbox"/> 불 합 격 (Reject)	
도 면 Sketch					
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  GATE SEAT RING </div> <div style="text-align: center;">  GATE DISC </div> </div>					
검 사 자 Examined & Interpreted by LEVEL II M. S. YUN			<input type="checkbox"/> Witnessed by		
책 임 자 Approved by LEVEL III Y. C. CHIN			<div style="text-align: center;">  Date: </div>		
			<input type="checkbox"/> Reviewed by HP VALVES Medium & high pressure valves acc. API 5L, API 6B & DIN <input checked="" type="checkbox"/> Reviewed F. Weathers - Q.C. <input type="checkbox"/> Witnessed Date: 2010.05.27		

[illegible]



INSPECTION REPORT

DOC.NO. : DIR100614-01

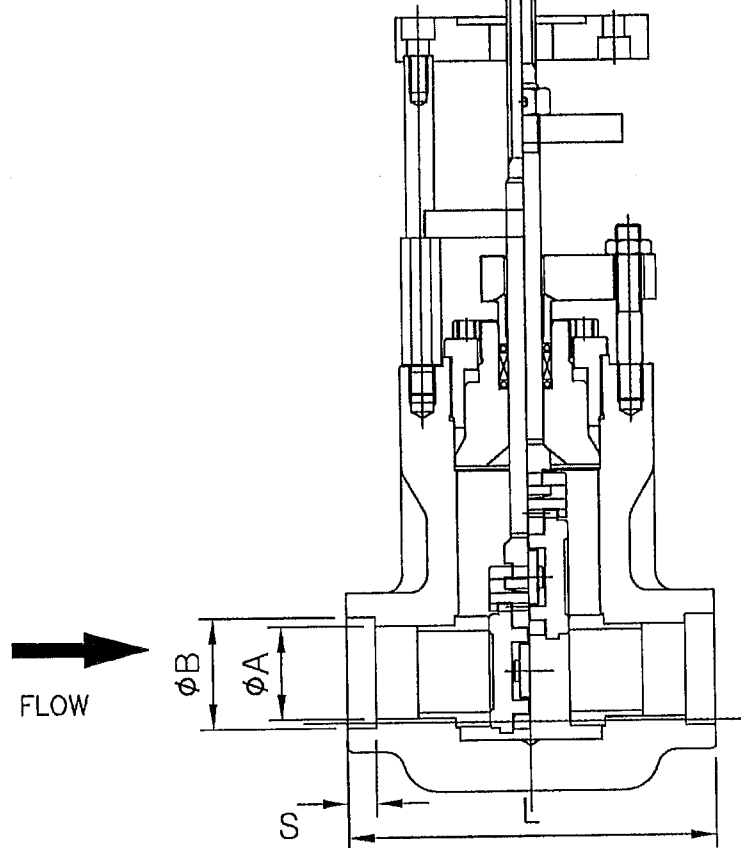
REV. NO. : 0

PAGE 3 OF 11

□ 외 형 도 (OUTLINE DIMENSION)

P.S.G. V/V 1"-CL1500 SW Sch. 33.4x6.35

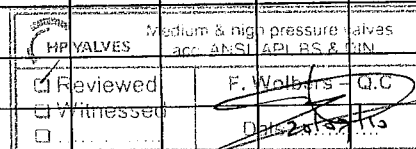
(S)A105N 1EA MOV



□ 치 수 검 사 (DIMENSION INSPECTION)

UNIT:mm

구 분 (DIVISION)	L ±1.5	φA ± 0.3	φB ± 0.3	S										
STANDARD	130	26.3	33.8	12.7										
SN1000006	130.1	28.4	33.8	12.7										



REMARK

1. DIMENSION CHECK

□ SAMPLING CHECK

■ 100% CHECK

PRE'D BY (QA.ENG'R)

VER'D BY (QA.MANAGER)

KEY VALVE TECHNOLOGIES LTD.