



HP Valves Oldenzaal BV

P.O. Box 151
7570 AD Oldenzaal
The Netherlands

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COVERPAGE TO INSPECTION / TEST CERTIFICATE

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

Customer : CMI (HRSG + Energy Services)
Project : Yajva SBV
Customer P/O no : 203/2010/900588
Shop order no : 2010 0006
Item no : 129 / 000
Quantity : 12 pcs

| | | | | | |
|--------------|---|--------------|--------------|--------------|--|
| KKS No | : | | | | |
| 15HAJ50AA134 | | 15LBB50AA107 | 15LBB50AA110 | 15LBB50AA113 | |
| 15HAJ50AA135 | | 15LBB50AA108 | 15LBB50AA111 | 15LBB50AA130 | |
| 15LBB50AA106 | | 15LBB50AA109 | 15LBB50AA112 | 15LBB50AA131 | |



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INSPECTION / TEST CERTIFICATE

EN 10204:2004 - 3.1

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

| | | | | | |
|--|--------------|--|--------------|-----------------|--------------|
| Customer : CMI (HRSG + Energy Services) | | | | | |
| Project : Yajva SBV | | | | | |
| Cust. P/O no : 203/2010/900588 | | | | | |
| HP order reference : 20100006 | | | | | |
| Item no : 129/000 | | | | | |
| Qty | Nominal size | Description | | | |
| 12 pcs | 1" / DN 25 | <p>Figure no : 11F49A3CBA06E</p> <p>900 lbs</p> <p>globe valve, straight pattern, bonnetless, floating backseat, c/w position indicator.</p> <p>body: ASTM A182 F91, stem: 17Cr, disc: stellite, seat: stellite, packing: graphite, bolting: A193 B7 / A194 2H, end-to-end: 230 mm.</p> <p>with SW-ends for pipe size 33,4 x 4,55mm acc. ASME B16.11</p> <p>Marking body : A678</p> | | | |
| Tests performed in accordance with : ASME B16.34 / API 598 / MSS SP 61 | | | | | |
| TEST DESCRIPTION | P bar | REMARKS | TESTED | RESULTS | |
| SHELL TEST | 233 | | ✓ | Accepted | |
| BACKSEAT TIGHTNESS TEST | N.A | | | | |
| HIGH PRESSURE CLOSURE TEST | 171 | In the appropriate direction only; except for gate valves | ✓ | Accepted | |
| LOW PRESSURE CLOSURE TEST (AIR) | N.A | In the appropriate direction only; except for gate valves | | | |
| FUNCTIONAL TEST In case of actuating devices, closing and opening will be checked | | Closing or opening time at 50 Hz | | N.A. | |
| DIMENSIONAL CHECK | SATISFACTORY | FUNCTIONAL CHECK | SATISFACTORY | VISUAL CHECK | SATISFACTORY |
| ✓ = Test results were acceptable considering the applicable procedures and requirements. General inspections have confirmed that workmanship and finish are in accordance with the acceptance criteria. | | | | | |
| Signed HP VALVES BV : | | <div style="border: 1px solid black; padding: 5px; display: inline-block;">HP VALVES BV QUALITY CONTROL F. WOLBERS</div> Signed THIRD PARTY: | | | |
| | | OLDENZAAL 07-07-2010 | | | |

Bank: ABN-AMRO BIC: ABNANL2A
EUR-account: 59.55.41.437 IBAN: NL88ABNA0595541437
USD-account: 57.60.74.780
Trade register Enschede: 060.567.50
VAT no: NL 008671242 B 01

Member of Indutrade AB



Abnahmeprüfzeugnis EN 10 204 / 3.1

Inspection certificate / Certified Material Test Report
Certificat de Réception
Certificato Collaudo materiali

KB Schmiedetechnik GmbH

Postfach 60 02 03 - 58138 Hagen-Halden
Gesensschmiede - Zerspanungstechnik
Telefon: 02331/3508-0, Telefax: 3508-30

KB Schmiedetechnik GmbH, Postfach 60 02 03, 58138 Hagen

HP Valves BV
Postbus 151
NL-7570 AD Oldenzaal
Niederlande

Prüf-Nr. - Inspection-no.
Certificat No. - No. di collaudo: **100403**

Blatt-Nr. - Sheet-no. - Page No. -
Pag No.: 1 von 2

Bestell-Nr. - Order-no. - No. de la
commande - No. dell'ordine: **P100161**

Vom - dated - date - in data: **02.02.2010**

Werks-Nr. - Works-no.
No. usine - Commesen No.: **100116**

Hersteller - Manufacturer - Fabrikant - Produttore: **KB Schmiedetechnik GmbH**

Prüfgegenstand - Article - Produit - Prodotto: **Gesensschmiedestück/drop forging**

Prüfgrundlagen/Anforderungen - Technical requirements - Demand-Spécifications techniques - Norma di controllo/requisi
F 02.15-23 Rev. 4,
F 02.15-00 Rev. 1

Werkstoff - Material - Matière - Material: Entsprechend Ausgabe - according to Edition - suivant - accondo Edizione:
X 10 CrMoVNb 9-1 (1.4903) +
A 182 F 91 + SA 182 F 91
DIN EN 10222-2: 04/2000 +
ASTM A 182 (2007) + ASME Code II/A Ed.2007 Ad.2009

Lieferzustand - State of delivery - Etat de livraison - Stato di fornitura:
vergütet/normalized+tempered

Erschmelzungsart - Steelmaking process - Procédé d'élaboration - Procedimento di elaborazione:
E-VOD

Kennzeichnung - Marking - Marquage - Punzonatura:

A 678
4903
SA 182 F 91
S 13
H 82

Herstellerzeichen - Brand of Manufacturer -
Marque du fabricant - Marchio del produttore:

Stempel des Sachverständigen - Inspector's stamp -
Poinçon de l'expert - Marchio del collaudatore:

KB
WBA

| Pos.-Nr. Item-No. Poste-No. No. pos. | Stückzahl Pice number Ote Numero pezzi | Gegenstand Article Désignation du produit Tipo di prodotto | Schmelze-Nr. Heat-No. No. de coulée No colata | Probe-Nr. Test-no. No. d'éprouvette No di provaa |
|---|---|---|--|---|
| 1 | 189 | Gehäuse/body 20-25 MM PN 640 Artikel Nr.: 08647.2034.001 Gesenknr. Rev.: /die-rev.: 08647-A Ihre Art.-Nr.: H824900000000 Rohteil-Zeichnung: /drawing-no.: H824900000000 Gewicht (kg): 5,400 <div><div>HP VALVES Medium & high pressure valves acc. ANSI, API, BS & DIN</div><div><input checked="" type="checkbox"/> Reviewed <input type="checkbox"/> Witnessed <input type="checkbox"/></div><div>F. Wolter - G.G. Date 25.5.10</div></div> | 301445 | 615 |

Die gestellten Anforderungen sind lt. Anlage erfüllt.
The Requirements are fulfilled as per annex.
Les conditions imposées sont satisfaites suivant.
I risultati sono conformi ai requisiti richiesti come da allegati.

KB Schmiedetechnik GmbH

Der Werkssachverständige - Works-Surveyor
L'expert d'usine - L'ispettore del commessa

58093 Hagen, Buschmühlenstr. 62

19.05.2010

(Ort - Location - Lieu - Località)

(Datum - Date - data)

Mathias Wolter

Ergebnis der Prüfungen
Test Results
Résultats des Essais
Risultati delle Prove

KB Schmiedetechnik GmbH

Postfach 60 02 03 - 58138 Hagen-Halden
 Gesenkschmiede - Zerspanungstechnik
 Telefon: 02331/3508-0, Telefax: 3508-30

Anlage - Annex - Annexe - Allegato

Prüf-Nr.
 Inspection No.
 Certificat No.
 No. di collaudo

100403

Blatt-Nr.
 Sheet-No.
 Page No.
 Pag. No.

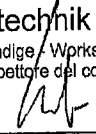
2 von 2

Mechanische Prüfungen - Mechanical tests - Essais mecaniques - Prove meccaniche

| Prüffart - Test type - Type d'essai - Tipo di prove: Probeart - Specimen type - Type de l'éprouvette - Tipo di provetta: Probenzustand - State of delivery of specimen - traitement de l'éprouvette - Stato delle provette: | | | | ZUGVERSUCH RUNDPROBE DIN EN 10002 | | | | KERBSCHLAGBIEGEVERS. KV-Charpy-V DIN EN 10045 | | | | | |
|---|---|---|---|---|---|--|--|--|----------|-----|-----|-----|--|
| Probe-Nr. Test No. No. d'éprouvette No. di prova | Probenabmessung Dim. of specimen Dim. de l'éprouvette Dim. della provetta | | Prüftemperatur Test temperature Température d'essai Temperatura di prova °C | Streck-/Dehngrenze Yield point Proof stress Limite d'élasticité Lim. di snervamento Rp 0,2 N/mm ² | Zugfestigkeit Tensile strength Résistance à la traction Carico di rottura N/mm ² | Bruchdehnung Elongation Allongement Allungamento Lo= 5d/4d % | Bruchreinschnürung Reduction of area Striction/Strizione Z % | 1 = Schlagarbeit - Energy of Impact [J] Energie de rupture - Energia di rottura 2 = Krist. Bruchanteil - Cryst proportion [%] Partie cristalline - Proporzione cristallina 3 = Breitung - Expansion - Elargissement [mm] | | | | | |
| | Richtung Direction Sensio | Breite Ø Width Ø Largeur Ø Largh Ø mm | | | | | | Werte - Values - Valeurs - Valon °C Typ 1 2 3 Sum/n | | | | | |
| Anforderungen Requirements | Q L | | 20 | 450 | 630-730 | 20 20 | 40 | 20 | 41 68 | | | | |
| 615 | L | 12,50 | 20 | 511 | 669 | 22/24 | 75 | 20 | 1 | 233 | 230 | 235 | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Wambehandlung - Heat treatment: vergütet/normalized+tempered 1060°C-1h-Luft/air+760°C-2h-Luft/air | | | | | | | | | | | | | |
| Spektroskopische Werkstoffverwechslungsprüfung - ohne Beanstandung / spectroscopic check for mix up of material - without objection Härteprüfung/hardness test HBW 10/3000 = 207-212 / HV 10 = 221 Oberflächenriß-Prüfbericht - siehe Anlage/surface-crack-testreport - see annex | | | | | | | | | | | | | |
| Besichtigung u. Ausmessung: ohne Beanstandung / satisfactory Inspection and control of dimension: Examen et controle dimensionnel: | | | | | | | | | | | | | |
| Schmelze-Nr. Heat-No. No. Coolea Colata No. | Analyse nach Werkstoffherstellangaben / analysis acc. to data of material-manufacturer | | | | | | | | | | | | |
| 301445 | C: 0,103%, Si: 0,41%, Mn: 0,43%, P: 0,015%, S: 0,0008%, Cr: 8,70%, Ni: 0,27%, Mo: 0,95%, Al: 0,003%, Cu: 0,05%, V: 0,200%, Ti: 0,002%, Nb: 0,076%, N: 0,0510%, Zr: 0,003% | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

KB Schmiedetechnik GmbH

Der Werksachverständige / Works-Surveyor
 L'expert d'usine - L'ispettore del commessa



Mathias Wolter

58093 Hagen, Buschmühlenstr. 62

(Ort - Location - Lieu - Località)

19.05.2010

(Datum - Date - data)

Abnahmeprüfzeugnis/inspection certificate DIN EN 10204 / 3.1

KB Schmiedetechnik GmbH
HAGEN-HALDEN

Hagen, den 19.05.2010

Oberflächenriß-Prüfbericht
Surface-crack test-report

Nr./no. 100116

Pos./item 1

Kommission/Com.-no.: 100116 Besteller/purchaser: H.P. Valves BV, NL-OLDENZAAL
 Bestell-Nr./order-no.: P100161
 Anforderungen/requirements: F 02.15-23 Rev. 4
 ASTM A 275
 DIN EN 10228-01 QC 3 acc. ASME B16.34 appendix II

Prüfumfang/range of test: % H Stück geprüft/pieces tested
 Oberfläche bearbeitet/surface machined: ☐ ja/yes ☒ nein/no ☒ gestrahlt/blasted
 Warmbehandlung/heat treatment: ja/yes
 Beurteilung/valuation: rißfrei/free of cracks

MAGNETPULVERPRÜFUNG / magnetic particle test

Magnetisierungsart / magnetization kind: Jochmagnetisierung / yoke method
 Selbstdurchflutung / prod method
 Prüfgerät / test detector: UW 600 Fa. Deutsch
 Prüfmittel / test medium: HRS 9306 - fluoreszierend / fluorescent
 Feldstärke / field strenght: > 2,5 kA/m
 Restmagnetismus/remainder-magnetism: < 800 A/m
 Betrachtungsbedingungen/observing conditions: Hintergrundbeleuchtung/lighting-background < 20 lx
 Bestrahlungsstärke auf der Oberfläche/ray-treatment-strength on the surface: > 10 W/qm

| Pos./ item | Gegenstand/ Produkt | Gesenk-Nr./ die-no. | Werkstoff/ material | Schmelze/ heat-no. | Kennz./ marking: |
|---------------|---|------------------------|------------------------|-----------------------|---------------------|
| 1 | 189 Gehäuse/bodies H 82.4900.000000 KB-Art.: 08647-A.2034.001 | 8647 | 1.4903 (S)A182 F91 | 301445 | A 678 |
| 1 | 417 Gehäuse/bodies H 82.4900.000000 KB-Art.: 08647-A.2034.001 | 8647 | 1.4903 (S)A182 F91 | 301114 | A 6789 |

Sachverständiger/inspector:

Prüfaufsicht/examination supervisor:

Hersteller/manufacture:

Unterschrift/signature

Unterschrift/signature



A handwritten signature in black ink, appearing to be 'L. J.' or similar, written over a horizontal line.