

Travel Sheet

Authorized Inspector to be given travel sheet prior to construction so that he can indicate hold points and Inspection Points.

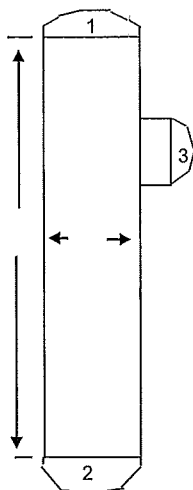
"A"-Hold Point, "I"- Inspection Point, "R"-Revision, "W"- Witness Point

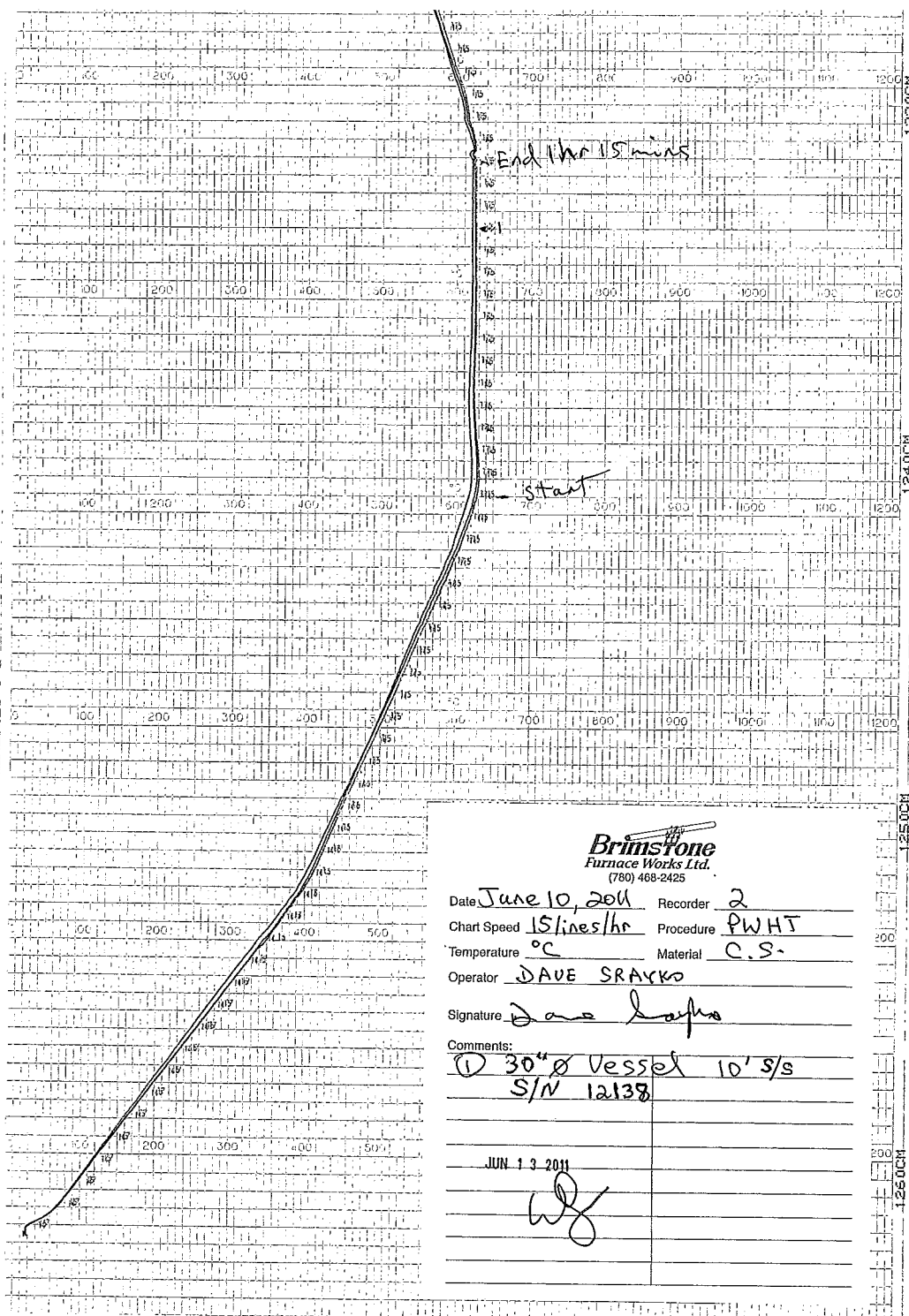
Hold Points established - Sign & Date

John May 26/11
(Authorized Inspector)

Vessel Serial #		12138	DWG #	V02-385	(A) #		607664
Vessel Title:		3 Phase vertical Separator		CRN #	P8736.231		
ITEM		COMMENTS	AUTH Insp., Hold Rev., Witness POINTS	DATE FUNCTION COMPLETE & INSPECTORS INITIALS			
				QC INSPECTOR		AUTHORIZED INSPECTOR	
APPROVED DRAWING			X	May 19,2011	D	JL June 16/11	
CALCULATIONS ON FILE			X	May 19,2011	D	JL June 16/11	
MATERIAL CHECKED AGAINST DRAWING, MATERIAL LIST				May 19,2011	D		
MTR'S CHECKED			X	May 19,2011	D	JL June 16/11	
VESSEL LAYOUT				May 20,2011	D		
NOZZLES	ORIENTATION			May 20,2011	D		
& FITTINGS	RATINGS		X	May 20,2011	D	JL June 16/11	
FIT	NOZZLES&FITTINGS			May 24,2011	D		
UP	SHELL & HEAD			MAY 27 2011	D		
INTERNALS (tray, baffles, etc)				May 25,2011	D		
INTERNAL INSPECTION			H	May 26,2011	D	JL May 26/11	
WELD SIZES			X	JUN 07 2011	D	JL June 16/11	
WELDERS I.D.				JUN 07 2011	D		
EXTERNAL AFTER COMPLETION OF ALL WELDING			X	JUN 07 2011	D	JL June 16/11	
RADIOGRAPHS			X	May 17,2011	D	JL June 16/11	
OTHER N.D.E.							
IMPACT TESTS							
POST WELD HEAT TREATMENT		YES: ☒ D NO: ☐					
EXTERNAL BEFORE PWHT			H	JUN 09 2011	D	JL June 9/11	
PWHT CHART CHECKED			X	JUN 13 2011	D	JL June 16/11	
NAMEPLATE			X	JUN 16 2011	D	JL June 16/11	
HYDROSTATIC TEST			H	JUN 10 2011	D	JL June 16/11	
DATA REPORT			X	JUN 16 2011	D	JL June 16/11	
NONCONFORMANCES							

		SPECIFICATIONS		HEAT NUMBER	VERIFIED THICKNESS
SHELL	C1	SA-516-70		29693	31.75mm
	C2				
HEADS	1	SA-516-70		29694	30.16mm
	2	SA-516-70		29694	30.16mm
	3				
REPADS	1	SA-516-70 Shell		6620N	12.7mm
	2				
	3				
	4	SA-516-70 Lift Lugs		79958	19.0mm
		SPECIFICATIONS	SIZE	SCHEDULE	
NOZZLES		SA-106-B	3", 2"	Sch XXH	
FITTINGS		SA-105	1/2", 3/4"	6000#	
TUBES					





Brimstone
Furnace Works Ltd.
(780) 468-2425

Date June 10, 2011 Recorder 2
Chart Speed 15 lines/hr Procedure PWHT
Temperature °C Material C.S.
Operator DAVE SRAKO

Signature Dave Sraiko

Comments:
① 30" Ø Vessel 10' S/S
S/N 12138

JUN 13 2011

WJ

WORK ORDER

FURNACE DIVISION

7216 - 52 Street, Edmonton, Alberta T6B 2G3

Telephone (780) 468-2425
Fax (780) 469-6809

DATE June 10 2011

CLIENT RTV Gasfield Services PHONE NO. 632-7774
ADDRESS 4901 Bruce Road DATE REQUIRED ASAP
Vegreville, AB. ATTENTION OF Wes
CLIENT REF. NO. _____ P.O. NO. 2733 Job No. _____

[illegible]

CUSTOMER SPECIFICATION

TOTAL

P-NO. _____ MATERIAL C.S.

TOTAL OVERTIME HOURS= _____ @ \$ _____/hr.

AMBIENT to 425 at M/R

425 to 621 at 178 per hour

SOAK at 621 ° ± 14 ° for 1 hours 15 mins.

COOL FROM 621 to 425 at 222 per hour

COOL FROM 425 to AMB at AC.

COOL FROM _____ to _____ at _____

Above temperatures in °C Written Record

11/2 2 1 10

Comments A/C Based on 1.0

OTHER CHARGES OR CONDITIONS: _____

<https://doi.org/10.1016/j.jmb.2019.05.005>

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17

W.I.

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0%

NOTE: Customers sending in work for heat treatment only:

(1) Will be charged an extra for any supports or blocking required.

(2) Will not hold Brimstone Furnace Works Ltd. responsible for any damage or distortion caused by Heat treatment process.

Thank you for your patronage

BRIMSTONE FURNACE WORKS LTD.

Don DeMarco



GAS FIELD SERVICES

4901 Bruce Road, Vegreville, Alberta

Phone: (780) 632-7774

HEAT TREATMENT INSTRUCTION FORM

CUSTOMER Brimestone Furnace P.O.# 2733 JOB#
Phone: 780-468-2425
Fax: 780-469-6809 JOB#

DESCRIPTION Stress relieve Vessel S/N 12138, 30"

VESSEL SERIAL # 12138 DIAMETER 30"

LENGTH 10'S/S WEIGHT

	Material	THICKNESS
SHELL	<u>SA-516-70</u>	<u>1.25"</u>
HEADS	<u>SA-516-70</u>	<u>1.25"</u>
MISC	<u> </u>	<u> </u>
	<u> </u>	<u> </u>

TYPE OF HEAT TREATMENT REQUIRED: **STRESS-RELIEVING**

INSTRUCTIONS:

ASME SECTION 8-DIV-1

P-NO 1 MATERIAL: **Carbon Steel**

AMBIENT TO 800°F at Moderate RATE

800°F to 1150° at 400°F hour

SOAK 75 Minutes at 1150°F

COOL 1150° to 800°F at 500° Hour

800°F to AMBIENT - AIR COOL

"As Per Material Thickness"


Signature



A DIVISION OF RUSSEL METALS INC.
UNE DIVISION DE METAUX RUSSEL INC.

RUSSEL METALS INC.

5730 - 72A AVENUE
EDMONTON, AB

COMBINATION SHORT FORM OF STRAIGHT BILL OF LADING - EXPRESS SHIPPING CO. INC.
SUBJECT TO ALL TERMS, CONDITIONS AND LIMITATIONS INCORPORATED BY REFERENCE AS SHOWN ON THE BACK OF THIS BILL.
FORMULAIRE COMBINÉ DE CONNAISSANCE DIRECT - ET DE CONTRAT D'EXPÉDITION PAR
MESSAGERIE ASSUJÉTI À TOUTES LES MODALITÉS, CONDITIONS ET LIMITATIONS QUI Y SONT INTÉGRÉES PAR RENVOI, AINSI
QU'IL EST INDICÉ AU VERSO DU PRÉSENT CONNAISSANCE. TEL: (780) 439-2051

Shipper's No./No. d'expéditeur

Carrier's No./No. Transporteur

62040227-32733

9:22:01

PROMISED: 03/11/11

CARRIER/TRANSPORTEUR

AVIA ROUTE 50 COMMON CARRIER From/De

COM CAR-SPECIFY

EDMONTON, AB 03/25/11 RUSSEL METALS INC.
SALESPERSON (REPRÉSENTANT DES VENTES): CRAIG MARSHALL
SHIPPED TO OO SOLD TO 6111357
R.J.V. GAS FIELD SERVICE LTD R.J.V. GAS FIELD SERVICE LTD
1901 - 47 STREET 1901 - 47 STREET
WEGREVILLE AB T9C 1C1 WEGREVILLE AB T9C 1C1

FREIGHT TERMS
MODALITÉS DE TRANSPORT

COLLECT
CARRIER
TRANSPORTEUR

VEHICLE IDENT
IDENTIFICATION DU VÉHICULE

CPC

NUMBER AND DESCRIPTION OF ARTICLES
NOMBRE & DESCRIPTION DES ARTICLES

WEIGHT
POIDS

8062040227CPO#: 2703 RELEASED NRS

CUSTOMER INSTRUCTIONS
SEND PRICED PACKING SLIPS

01 36089 HOT ROLL PLATE FVQ 96" 2 60"
500 (1/2) HR PLT A516 70 NORM
HEATH 6620N 1 EA 817 LB
COUNTRY/ORIGIN PRICE: 945.0000/EA
01 LINE COMMENTS BURN IPC-90"ID X 60" LONG CAR
ROLL & TACK TO PROFILE
MAKE HEATH ON EACH PIECE
MTR'S REQUIRED

1pc inside
by FC31

PAGE: 1
TOTAL SKIDS

WJ

THE LOAD MUST BE TARPED AND KEPT DRY / LA MARCHANDISE DOIT ÊTRE COUVERTE AVEC UNE TOILE IMPERMÉABLE

STEEL, STAINLESS STEEL, ALUMINIUM, BRASS,
COPPER, NICKEL AND SPECIALTY STEEL



ACIER, ACIER INOXYDABLE, ALUMINIUM, LAITON,
CUIVRE, NICKEL ET ACIER SPÉCIALISÉ

The above listed products, in a natural state, do not pose inhalation, ingestion or contact hazards.
Prolonged overexposure to dust or fumes during welding, burning, grinding or machining may result in respiratory irritation, skin irritation or disease. USE ADEQUATE VENTILATION AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.
For Brass and Copper Alloys, contact with acids may liberate flammable and explosive hydrogen gas. If heated, copper oxide, zinc oxide, nickel oxide, tin oxides, cadmium oxide and/or lead fumes may be evolved. Aluminum products may slip during handling or transportation.
ALL PRODUCTS MUST BE SECURED FOR HANDLING AND TRANSPORTATION.
Cutting steel containment strapping may result in the strapping rebounding and injuring those nearby. EXERCISE CAUTION.
For overexposure to metal fumes, remove to fresh air. For skin contact, wash thoroughly with soap and water. Obtain medical attention if symptoms persist.
SEE MATERIAL SAFETY DATA SHEETS FOR MORE DETAILED INFORMATION.

Les produits mentionnés ci-haut, à l'état brut, ne causent aucun danger en contact, en cas d'inhalation ou d'ingestion.
Une surexposition aux poussières ou aux émanations durant la soudure, la coupe au chalumeau, le meulage ou l'usinage peuvent résulter en une irritation des voies respiratoires ou de la peau ou autres maladies. UNE VENTILATION ADEQUATE EST DE MISE AINSI QU'UN EQUIPEMENT PROTECTEUR APPROPRIÉ.
Pour ce qui est des alliages de cuivre et de laiton, un contact avec certains acides peuvent dégager des gaz hydrogène explosifs et inflammables. Si chauffés, de l'oxyde de cuivre, de zinc, de nickel, d'étain, de cadmium et/ou des vapeurs de plomb pourraient s'échapper. Les produits d'aluminium peuvent glisser lors de leur manipulation ou transport.
TOUTS LES PRODUITS DOIVENT ÊTRE ATTACHÉS SOLUMENT LORS DU TRANSPORT ET DE LA MANIPULATION.
Lors de la coupe, les courroies d'acier peuvent rebondir et causer des blessures. MANIPULEZ AVEC PRECAUTION.
En cas d'une surexposition aux émanations, retirez-vous et respirez de l'air frais. Si y a contact avec la peau laver la région affectée avec du savon et de l'eau. Si les symptômes persistent consultez votre médecin.
POUR PLUS D'INFORMATION, CONSULTEZ LA FEUILLE DE DONNÉES DE SÉCURITÉ.

PURCHASER'S ORDER IS FILLED IN ACCORDANCE WITH THE ABOVE TERMS AND CONDITIONS AND THOSE ON THE REVERSE HEREOF, ALL OF WHICH TERMS AND CONDITIONS SUPERSEDE THE TERMS AND CONDITIONS (IF ANY) OF PURCHASER'S ORDER. BY ACCEPTING DELIVERY OF ALL OR PART OF THE ABOVE-DESCRIBED GOODS (HEREINAFTER CALLED THE 'GOODS') OR BY PAYING FOR SAME IN WHOLE OR IN PART PURCHASER AGREES TO ALL THE TERMS AND CONDITIONS SET FORTH ABOVE AND ON THE REVERSE HEREOF.

LA COMMANDE DE L'ACHETEUR EST EXÉCUTÉE EN CONFORMITÉ DES CONDITIONS STIPULÉES CI-DESSUS ET AU VERSO DES PRÉSENTES. TOUTES CES CONDITIONS REMPLAÇANT CELLES (LE CAS ÉCHÉANT) ÉNONCÉES AU BON DE COMMANDE DE L'ACHETEUR EN ACCEPTANT LA LIVRAISON DE TOUT OU PARTIE DES MARCHANDISES DÉCRITES CI-DESSUS (CI-APRÈS APPELÉES LES 'MARCHANDISES') OU EN LES PAYANT INTÉGRALEMENT OU PARTIELLEMENT, L'ACHETEUR ACCEPTE TOUTES LES CONDITIONS STIPULÉES CI-DESSUS ET AU VERSO DES PRÉSENTES.

ESSAR Steel Algoma Inc.

105 West Street, Sault Ste. Marie, Ontario Canada P6A 7B4

62A004490

CUSTOMER PURCHASE ORDER NUMBER	ENTRY DATE	SHIP DATE	TALLY NUMBER	SHIPMENT NO.	CARRIER
M62006006	2010/10/05	2010/10/29	200384	-	BCOL

CHARGE TO CUSTOMER NAME AND ADDRESS

SHIP TO CUSTOMER NAME AND ADDRESS

RUSSEL METALS INC.
PO BOX 4128
EDMONTON ALBERTA
T6E 4T2

RUSSEL METALS INC. DISTRIBUTION
C/O CN SCOTSFORD
4060 99TH STREET
SCOTSFORD, ALBERTA T6E 3N5

CUSTOMER SPECIFICATION
HR MULTIPLE CERTIFIED PLATE - CARBON - ASTM A516 GR 70/ASME SA516 GR 70 (06)
(09B) CVNL 20/13 FT LBS AT -50 F - FINE GRAIN - PVO - NORMALIZED - FLATNESS
1/2 A-20 - NORMALIZED FOR 17 MINUTES MIN. @ 1670 F

MILL TEST REPORTS

ESSAR STEEL, ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES.

M. MCLEAN

MANAGING METALLURGIST

THIS WILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL, ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705) 945-2624 COLLECT FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT.

SUPPLEMENTARY INSTRUCTIONS

TEST CERT 1: GBEYERS@RUSSELMETALS.COM TEST CERT 2: RWEISNER@RUS
SELMETALS.COM PLATE TEST COUPON:

TEST REPORTS REQUIRED

RESALE P/N 80680

2000164189 PF
2010/11/01 06:25

MEETS EN 10204 3.1
ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ESSARSTEELALGOMA.COM
ALL HEATS FULLY KILLED
HEATS INDICATED WITH (+) MADE IN CANADA WITH DOMESTIC AND NORTH AMERICAN MATERIALS

CUSTOMER ITEM 00002 OUR ITEM 002 DIMENSIONS .500 X 120 X 480 "

PLATE NUMBER	HEAT-MS	NO. PIECES	WEIGHT	PLATE NUMBER	HEAT-MS	NO. PIECES	WEIGHT
67439	6620N-06	2	16335	67443	6620N-55	2	16335

TENSILE TESTS: * SAMPLE * * * * * M E C H A N I C A L P R O P E R T I E S * * * * *

HEAT NUMBER	SRCE	GAUGE	COND	METH	DIR	YIELD	TENSILE	% ELONG
6620N 67439	166"	.5000	N	2	T	55.0	78.0	25(8")
6620N 67443	166"	.5000	N	2	T	55.0	78.0	25(8")

HEAT NUMBER	SRCE	GAUGE	COND	METH	DIR	YIELD	TENSILE	% ELONG
6620N 67439	166"	.5000	N	2	T	55.0	78.0	25(8")
6620N 67443	166"	.5000	N	2	T	55.0	78.0	25(8")

WARNING

THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE (INCLUDING DESIGN OR CALCULATIONS) AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.

105 West Street, Sault Ste. Marie, Ontario Canada P6A 7B4

MILL ORDER
68012

SHIP TO CUSTOMER NAME AND ADDRESS

RUSSEL METALS INC.
C/O CN SCOTSFORD DISTRIBUTION
4060 99TH STREET
SCOTSFORD, ALBERTA T6E 3N5

MILL TEST REPORTS

CUSTOMER SPECIFICATION
 HR MULTIPLE CERTIFIED PLATE - CARBON - ASTM A516 GR 70/ASME SA516 GR 70 (06)
 (09B) - CVNL 20/13 FT LBS AT -50 F- FINE GRAIN - PVQ - NORMALIZED - FLATNESS
 1/2 A-20 - NORMALIZED FOR 17 MINUTES MIN. @ 1670 F

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M. MCLEAN

MANAGING METALLURGIST

SUPPLEMENTARY INSTRUCTIONS

TEST CERT 1: GBEYERS@RUSSEIMETALS.COM TEST CERT 2: RWEISNER@RUSSEIMETALS.COM
 PLATE TEST COUPON:

INSPIRE TEST REPORTS REQUIRED

2000164189 PF

2010/11/01 06:25

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REPRODUCED EXCEPT IN FULL WITHOUT
WRITTEN APPROVAL OF ESSAR STEEL
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DOCUMENT AND ARE NOT THE INTENDED
RECEIVER, PLEASE CALL (705)945-2624
COLLECT FOR INSTRUCTIONS ON METHOD
OF DISPOSAL OF DOCUMENT.

CUST
USE
RESALE P/N 80680

2010/11/01 06:25

[illegible][illegible]

♦♦WARNING♦♦

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RUSSEL METALS INC.

5730 - 72A AVENUE
EDMONTON, ABA DIVISION OF RUSSEL METALS INC.
UNE DIVISION DE METAUX RUSSEL INC.COMBINATION SHORT FORM OF STRAIGHT BILL OF LADING - EXPRESS SHIPPING
SUBJECT TO ALL TERMS, CONDITIONS AND LIMITATIONS INCORPORATED BY REFERENCE AS SHOWN ON THE BACK OF THIS BILL.
FORMULAIRE COMBINÉ DE CONNAISSANCE DIRECT - ET DE CONTRAT D'EXPÉDITION PAR
MESSAGERIE ASSUJÉTI À TOUTES LES MODALITÉS, CONDITIONS ET LIMITATIONS QUI Y SONT INTÉGRÉES PAR RENVOI, AINSI
QU'IL EST INDICÉ AU VERSO DU PRÉSENT CONNAISSANCEShipper's No./No. d'expéditeur
Carrier's No./No. Transporteur

62040237-32733

CARRIER/TRANSPORTEUR

At/A

ROUTE 50 COMMON CARRIER

From/De

COM CAR-SPECIFY

PROMISED: 03/31/11

EDMONTON, AB 09/25/11 RUSSEL METALS INC.
SALESPERSON (REPRESENTANT DES VENTES): CRAIG MARSHALL
SHIPPED TO 00 SOLD TO 6111257
R.J.V. GAS FIELD SERVICE LTD R.J.V. GAS FIELD SERVICE LTD
1901 - 47 STREET 1901 - 47 STREET
VEGREVILLE AB T9C 1C3 VEGREVILLE AB T9C 1C3

FREIGHT TERMS
MODALITÉS DE TRANSPORTCOLLECT
CARRIER
TRANSPORTEURVEHICLE IDENT
IDENTIFICATION DU VEHICULE

CRU

NUMBER AND DESCRIPTION OF ARTICLES
NOMBRE & DESCRIPTION DES ARTICLESWEIGHT
POIDS

S062040237CPO# 2707 * RELEASE# WES

CUSTOMER INSTRUCTIONS
SEND PRICED PACKING SLIPSREC. PHONE NO.
NO. DE TÉLÉPHONE DU CONTACT

780-632-7774

RECEIVING HOURS & DAYS
HEURES ET JOURS DE RECEPTIONRECEIVING CONTACT
CONTACT À LA RECEPTION

01 36089 HOT ROLL PLATE PVO 96" X 60"
500 (1/2) HR PLT 3516 70 NORM
HEATR 6600N 1 EA 817 LB
COUNTRY/ORIGIN PRICE: 945.0600/EA
01 LINE COMMENTS BURN IPC-36"ID X 60" LONG CAR
ROLL & TACK TO PROFILE
HARD HEATR ON EACH PIECE
MTR'S REQUIRED

If charges are to be prepaid, write or
stamp here: "TO BE PREPAID."
Si les frais doivent être payés à
l'avance écrire ou estamper ici:
"À ÊTRE PAYÉ À L'AVANCE"

Received \$
Reçu \$

to apply in prepayment of the charges
on the property described hereon.
à appliquer comme paiement anticipé
des frais sur la marchandise décrite
aux présentes.

Per
Par
(Signature of Agent / Signature de l'Agent)

(The signature here acknowledges
only the amount prepaid)
(La signature ci-haut reconnaît
uniquement les montants payés à
l'avance.

DATE SHIPPED
DATE EXPÉDIÉERECEIVED
REÇU

Per
Par

Date

THE LOAD MUST BE TARPED AND KEPT DRY / LA MARCHANDISE DOIT ÊTRE COUVERTE AVEC UNE TOILE IMPERMÉABLE

STEEL, STAINLESS STEEL, ALUMINUM, BRASS,
COPPER, NICKEL AND SPECIALTY STEELACIER, ACIER INOXYDABLE, ALUMINIUM, LAITON,
CUIVRE, NICKEL ET ACIER SPÉCIALISÉ

The above listed products, in a natural state, do not pose irritation, ingestion or contact hazards.
Prolonged exposure to dust or fumes during welding, burning, grinding or machining may result in
respiratory irritation, skin irritation or disease. USE ADEQUATE VENTILATION AND APPROPRIATE PERSONAL
PROTECTIVE EQUIPMENT.

For Brass and Copper Alloys, contact with acids may liberate flammable and explosive hydrogen gas. If heated,
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products may slip during handling or transportation.

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Cutting steel containment strapping may result in the strapping rebounding and injuring those nearby. EXERCISE
CAUTION.

For overexposure to metal fumes, remove to fresh air. For skin contact, wash thoroughly with soap and water.
Obtain medical attention if symptoms persist.

SEE MATERIAL SAFETY DATA SHEETS FOR MORE DETAILED INFORMATION.

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l'usinage pourrait résulter en une irritation des voies respiratoires ou de la peau ou autres maladies. UNE
VENTILATION ADEQUATE EST DE MISE AINSI QU'UN EQUIPEMENT PROTECTEUR APPROPRIÉ.

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hydrogène explosifs et inflammables. Si chauffé, de l'oxyde de cuivre, de zinc, de nickel, d'étain, de cadmium
et/ou des vapeurs de plomb pourraient s'échapper. Les produits d'aluminium peuvent glisser lors de leur
manipulation ou transport.

TOUTS LES PRODUITS DOIVENT ÊTRE ATTACHÉS SOULEMENT LORS DU TRANSPORT ET DE LA
MANIPULATION.
Lors de la coupe, les courroies d'acier peuvent rebondir et causer des blessures. MANIPULEZ AVEC
PRÉCAUTION.

En cas d'une surexposition aux émanations, retirez-vous et respirez de l'air frais. Si y a contact avec la peau
lavez la région affectée avec de l'eau et du savon. Si les symptômes persistent consultez votre médecin.
POUR PLUS D'INFORMATION, CONSULTEZ LA FEUILLE DE DONNÉES DE SÉCURITÉ.

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THE TERMS AND CONDITIONS (IF ANY) OF PURCHASER'S ORDER. BY ACCEPTING DELIVERY OF ALL OR PART OF THE ABOVE-DESCRIBED GOODS (HEREINAFTER CALLED THE 'GOODS') OR BY
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(LE CAS ÉCHÉANT) ÉNONCÉES AU BON DE COMMANDE DE L'ACHETEUR EN ACCEPTANT LA LIVRAISON DE TOUT OU PARTIE DES MARCHANDISES DÉCRITES CI-DESSUS (CI-APRÈS APPELÉES
LES 'MARCHANDISES') OU EN LES PAYANT INTÉGRALEMENT OU PARTIELLEMENT. L'ACHETEUR ACCEPTE TOUTES LES CONDITIONS STIPULÉES CI-DESSUS ET AU VERSO DES PRÉSENTES.

ESSAR Steel Algoma Inc.

105 West Street, Sault Ste. Marie, Ontario Canada P6A 7B4

62A004490

CUSTOMER PURCHASE ORDER NUMBER	ENTRY DATE	SHIP DATE	TALLY NUMBER	SHIPPER'S NO.	CARRIER
M62006006	2010/10/05	2010/10/29	200384	-	BCOL

CHARGE TO CUSTOMER NAME AND ADDRESS

SHIP TO CUSTOMER NAME AND ADDRESS

RUSSEL METALS INC.
PO BOX 4128
EDMONTON ALBERTA
T6E 4T2

RUSSEL METALS INC.
C/O CN SCOTSFORD DISTRIBUTION
4060 99TH STREET
SCOTSFORD, ALBERTA T6E 3N5

CUSTOMER SPECIFICATION
HR MULTIPLE CERTIFIED PLATE - CARBON - ASTM A516 GR 70 / ASME SA516 GR 70 (06)
(09B) - CVNL 20/13 FT LBS AT -50 F - FINE GRAIN - PVO - NORMALIZED - FLATNESS
1/2 A-20 - NORMALIZED FOR 17 MINUTES MIN. @ 1670 F

MILL TEST REPORTS

ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES.

M. MCLEAN

MANAGING METALLURGIST

SUPPLEMENTARY INSTRUCTIONS

TEST CERT 1: GBEYERS@RUSSELMETALS.COM TEST CERT 2: RWELISNER@RUS
SELMETALS.COM PLATE TEST COUPON:

INSP T/R TEST REPORTS REQUIRED

CUST RESALE P/N 80680

2000164189 PF
2010/11/01 06:25

THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705) 945-2624 COLLECT FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT.

MEETS EN 10204 3.1
ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ESSARSTEELALGOMA.COM
ALL HEATS FULLY KILLED
HEATS INDICATED WITH (*) FINE GRAINED
HEATS INDICATED WITH (+) MADE IN CANADA WITH DOMESTIC AND NORTH AMERICAN MATERIALS

* * * * * P R O D U C T S H I P P E D * * * * *

CUSTOMER ITEM 00002 OUR ITEM 002 DIMENSIONS .500 X 120 X 480 "

PLATE NUMBER	HEAT-MS NO.	WEIGHT	PLATE NUMBER	HEAT-MS NO.	WEIGHT
67439	6620N-06	16335	67443	6620N-55	16335

* * * * * M E C H A N I C A L P R O P E R T I E S * * * * *

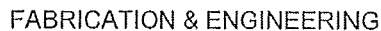
TENSILE TESTS:	* SAMPLE *	* TEST *	* YIELD TENSILE	* ELONG
HEAT NUMBER	SRCE	COND METH DIR	KSI	%
6620N 67439	166"	N	55.0	25(8")
6620N 67443	166"	N	78.0	25(8")

IMPACT TESTS:									
HEAT	PLATE	GUAGE	* COND	* METH	* TEST	* SIZE	* TEMP	FULLSIZE	ENERGY
6620N	67439	IN	N	CVN	1	FULL	-50F	FTLB	* AVG*
6620N	67443	.5000	N	CVN	1	FULL	-50F	87	76
		166"						80	76
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		166"							

THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE (INCLUDING DESIGN OR CALCULATIONS) AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.

[Signature]
APR 1 2011

SPEC LAB
ASTM ALG
ASTM ALG



AB

Date: March 21, 2011
These items shipped on our sales order:
S24823

Attention: Quality Control Manager

Subject: Customer P.O.: 2698

[illegible]

Linda Petek

Linda Pritchard
Q.C. Documentation

MAR 22 2009

Page 1

FABRICATION & ENGINEERING

SHIP TO

CUSTOMER P.O. NO.	2698
CESSCO W.O. NO.	S24823
DATE CERT. ORIGINATED	21-Mar-11

[illegible][illegible]

Linda Pritchard
QUALITY CONTROL

INSPECTION & TEST PLAN				
CUSTOMER: RJV Gasfield			JOB NO: S24823	
DESCRIPTION : SHELL			TAG NO: 0	
6 PCS 1 1/4" PL x 30" OD x 10'			P.O.NO: 2698	
			LOG NO: 29693 (5) 29692 (1)	
INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA	CESSCO		
		HOLD	SIGN	DATE
1	MATERIAL RECEIVED, INSPECTION COMPLETED		DM	3/14/11
2	MILL TEST REPORTS CHECKED AND TRACEABLE		DM	3/14/11
3	CUSTOMER REQUIREMENTS:			
	HIC: SELECT CHEM:			
	U.T. GRID: BHN: MISC:			
	B.H.N. TEST:			
	B.H.N. RESULTS:			
4	FIBRE ELONGATION: 4.35 %			
	HOT ROLL ☐ COLD ROLL ☒ C.R. & STRESS ☐			
5	CIRC SEAM PREP.: IN: ☐			
6	LONG SEAM PREP.: IN: ☐			
7	CIRC SEAM PREP.: OUT: ☒ 30° N.L.		SF	
8	LONG SEAM PREP.: OUT: ☒ 30° N.L. 5/32" GAP		SF	MAR 17/11
9	SQUARE CUT: CIRC SEAM ☐			
10	SQUARE CUT: LONG SEAM ☐			
11	LOG NUMBER STAMP ON OUTSIDE OF SHELL		SF	
12	VISUAL CHECK OF PLATE & BEVEL AFTER BURNING		SF	MAR 18/11
13	VISUAL AND DIAMETER CHECK AFTER ROLLING		DM	MAR 18/11
14	CLEAR TO SHIP		SF	MAR 18/11

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS: _____

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield	JOB NO: S24823
DESCRIPTION : HEADS	TAG NO: 0
12 PCS 30" OD x 1 1/4"nom 1.1875"min 2:1 S.E. 2" S.F.	P.O.NO: 2698
	PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA	CESSCO				
		B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED		Dv	3/4/11	29694	1.228
2	MILL TEST REPORTS CHECKED AND TRACEABLE		Dv	-	✓	1.227
3	CHECK HEAD FOR DEFECTS		Dv	✓	✓	1.222
4	VERIFY ALL STAMPING ON HEAD		Dv	✓	✓	1.224
5	CIRCLE STAMPING ON HEAD		Dv	✓	✓	1.226
6	BEVEL: IN: OUT: 30° N.L.			03/5/11	✓	1.223
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"			✓	✓	1.227
8	CUSTOMER REQUIREMENTS:				✓	1.222
	HIC: SELECT CHEM:				✓	1.228
	U.T. GRID: B.H.N. MISC:				✓	1.229
	TO MATCH: 1 1/4" shells SCH:			✓	✓	1.225
9	CHECK HEAD FOR DEFECTS AFTER MACHINING			✓	✓	1.220
10	CHECK FINISHED BEVEL			✓		
11	FINISHED DIAMETER CHECK			✓		
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT		
		+1/8"	+1/8"	+1"		
		-1/8"	-1/8"	-1/4"		
	CLEAR TO SHIP			03/12/11		

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.
REMARKS:



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B
DIN EN 10204
(A02)

No. (A03) 586433
Page 3/14
Date 18.03.2009

No. (A07) 605/6281
Purchaser Salzgitter Mannesmann
(A06) International GmbH
40409 Düsseldorf

26.01.2009

No. (A07) Cessco Steel
Customer NEW WESTMINSTER
(A06) KANADA

Product Heavy plate
(B01)

Works order No. 0000037106

(A08) WS
Inspection (A06)

Steel grade and terms of delivery SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV
(B02-B03) SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV
ASME sect. II part A ed. 2007, add.2008
ASME SA 20 (M), SA 516 (M)
Cessco StkChem1102R01 04/2007
ASTM A 20 (M)-06, A 516 (M)-06
VANCOUVER / NWBC; K-04204

Material data (B01-B09)

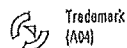
Item	Quantity (B08)	Product No. (B07)	Mat. No. (B07)	Cond. of delivery (B04)	Thickness x Width x Length (B09-B11)	in x in x in
11	1	706687 2	48264	N	1,000 x 96,000 x 384,000	-29670
11	1	706688 1	48264	N	1,000 x 96,000 x 384,000	-29672
11	1	706688 2	48264	N	1,000 x 96,000 x 384,000	-29672
13	1	709039 1	53282	N	1,125 x 120,000 x 480,000	-29685
13	1	709040 1	53282	N	1,125 x 120,000 x 480,000	-29685
13	1	709041 1	53282	N	1,125 x 120,000 x 480,000	-29681
13	1	709042 1	53282	N	1,125 x 120,000 x 480,000	-29681
13	1	709043 1	53282	N	1,125 x 120,000 x 480,000	-29683
13	1	709044 1	48264	N	1,125 x 120,000 x 480,000	-29683
14	1	710725 1	53283	N	1,250 x 96,000 x 384,000	-29688
14	1	710726 1	53283	N	1,250 x 96,000 x 384,000	-29688
14	1	710727 1	53283	N	1,250 x 96,000 x 384,000	-29688
15	1	708892 1	53283	N	1,250 x 120,000 x 480,000	-29692
15	1	708893 1	53283	N	1,250 x 120,000 x 480,000	-29692
15	1	708894 1	53283	N	1,250 x 120,000 x 480,000	-29690
15	1	708895 1	53283	N	1,250 x 120,000 x 480,000	-29690
15	1	708896 1	53283	N	1,250 x 120,000 x 480,000	-29694
15	1	708897 1	53283	N	1,250 x 120,000 x 480,000	-29694
15	1	708898 1	53283	N	1,250 x 120,000 x 480,000	-29697
15	1	710421 1	52908	N	1,250 x 120,000 x 480,000	-29691
15	1	710422 1	52908	N	1,250 x 120,000 x 480,000	-29691
15	1	710423 1	52908	N	1,250 x 120,000 x 480,000	-29691
16	1	707233 1	48266	N	1,500 x 120,000 x 480,000	-29702
16	1	707234 1	48266	N	1,500 x 120,000 x 480,000	-29702
16	1	707235 1	48266	N	1,500 x 120,000 x 480,000	-29370
16	1	707236 1	48266	N	1,500 x 120,000 x 480,000	-29370
17	1	707075 1	48266	N	2,000 x 96,000 x 384,000	-29702
17	1	707076 1	48266	N	2,000 x 96,000 x 384,000	-29702
17	1	707825 1	48266	N	2,000 x 96,000 x 384,000	-29702
17	1	707826 1	48266	N	2,000 x 96,000 x 384,000	-29702
18	1	709028 1	48266	N	2,000 x 120,000 x 480,000	-29708
18	1	709029 1	48266	N	2,000 x 120,000 x 480,000	-29708
18	1	709030 1	00777	N	2,000 x 120,000 x 480,000	-29707

N: normalized

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A04)

ILsenburger Grobblech GmbH
Vockenstedter Weg 10
D-38871 Ilseburg
(A01)

Inspection Stamp
(Z05)

Inspection Representative
(Z02)

Cyron



ILSEBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B
DIN EN 10204
(A01)

No. (A03) 586433
Page 4/14
Date 18.03.2009

No. (A07) 605/6281
Purchaser Salzgitter Mannesmann
(A06) International GmbH
40409 Düsseldorf

26.01.2009 No. (A07)

Customer Cessco Steel
(A06) NEW WESTMINSTER
KANADA

Product Heavy plate
(B01)

Works order No. 0000037106
(A08)

Inspection WS
(A05)

Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV
SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV
ASME sect. II part A ed. 2007, add.2008
ASME SA 20 (M), SA 516 (M)
Cessco StkChem1102R01 04/2007
ASTM A 20 (M)-06, A 516 (M)-06
VANCOUVER / NWBC; K-04204

Material data (B01-B09)

01	4	Weight	5.928	kg
02	6	(B12)	14.226	
03	10		36.978	
04	4		11.858	
05	5		11.120	
06	15		69.480	
07	10		35.566	
08	4		22.228	
09	6		24.900	
10	6		38.910	
11	7		33.194	
13	6		50.022	
14	3		17.781	
15	10		92.620	
16	4		44.456	
17	4		37.940	
18	3		44.457	
Σ	107		591.664	

Dimensional check and visual examination of the surface condition:
without objection

Ladle analysis (C70-C99)

Manufacturer standard

Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,20	0,16 - 0,46	0,80 - 1,20	≤ 0,010	≤ 0,003		≥ 0,020	≤ 0,30	≤ 0,20	≤ 0,30
00777	0,20 ✓	0,27 ✓	1,16 ✓	0,010 ✓	0,001 ✓	0,005	0,033	0,02 ✓	0,03 ✓	0,05 ✓
01142	0,17 ✓	0,35 ✓	1,15 ✓	0,010 ✓	0,001 ✓	0,004	0,050	0,01 ✓	0,04 ✓	0,19 ✓
48263	0,16 ✓	0,35 ✓	1,17 ✓	0,009 ✓	0,001 ✓	0,004	0,042	0,03 ✓	0,03 ✓	0,18 ✓
Heat No. (B07)	Mo %	V %	Ti %	Nb %	B %	Ca %	O ppm	Nb+V %	EV1 1) %	EV2 2) %
	≤ 0,13	≤ 0,015	≤ 0,01	≤ 0,02	≤ 0,0005	≤ 0,008	≤ 50	≤ 0,03	≤ 0,50	
00777	0,00 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0002	0,001	14	0,02	0,07	0,40
01142	0,00 ✓	0,002 ✓	0,00 ✓	0,02 ✓	0,0002	0,002	13	0,02	0,07	0,38
48263	0,01 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0002	0,002	13	0,02	0,09	0,38

1) EV1: Nb+V+Ti+Cu+Mo+Cr

2) EV2: CEV=C+Mn/6+Mo/5+Ni/16+Cr/5+V/3+Cu/16

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

Trademark
(A04)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-58871 Ilseburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 5/14 18.03.2009
No. (A07) Purchaser (A08)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A09) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Ladle analysis (C70-C08)
Manufacturer standard

Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤0,20	0,15-0,45	0,85-1,20	≤0,010	≤0,003		≥0,020	≤0,30	≤0,20	≤0,30
48264	0,16 ✓	0,35 ✓	1,18 ✓	0,010 ✓	0,001 ✓	0,003	0,050	0,02 ✓	0,05 ✓	0,20 ✓
48266	0,20 ✓	0,24 ✓	1,14 ✓	0,010 ✓	0,002 ✓	0,003	0,041	0,02 ✓	0,04 ✓	0,06 ✓
52908	0,18 ✓	0,35 ✓	1,14 ✓	0,007 ✓	0,0002 ✓	0,003	0,043	0,12 ✓	0,04 ✓	0,18 ✓
53282	0,16 ✓	0,33 ✓	1,10 ✓	0,010 ✓	0,001 ✓	0,004	0,049	0,02 ✓	0,03 ✓	0,17 ✓
53283	0,20 ✓	0,24 ✓	1,14 ✓	0,010 ✓	0,002 ✓	0,003	0,042	0,02 ✓	0,03 ✓	0,04 ✓
Heat No. (B07)	Mo %	V %	Ti %	Nb %	B %	Ca %	O ppm	Nb+V %	EV1 1) %	EV2 2) %
	≤0,13	≤0,016	≤0,01	≤0,02	≤0,0005	≤0,008	≤50	≤0,03	≤0,60	
48264	0,00 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0002	0,002	15	0,02	0,09	0,38
48266	0,00 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0001	0,001	14	0,02	0,08	0,40
52908	0,00 ✓	0,002 ✓	0,00 ✓	0,02 ✓	0,0001	0,001	7	0,02	0,18	0,40
53282	0,00 ✓	0,002 ✓	0,01 ✓	0,02 ✓	0,0002	0,001	12	0,02	0,08	0,36
53283	0,00 ✓	0,004 ✓	0,00 ✓	0,02 ✓	0,0001	0,001	14	0,02	0,07	0,40

1) EV1: Nb+V+Ti+Cu+Mo+Cr

2) EV2: CEV=C+Mn/6+Mo/8+Ni/16+Cr/5+V/6+Cu/15

Steelmaking process: Basic oxygen process
(C70)

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

DM-System: Certification as per ISO 9001 since 28 February 1990

 Trademark
(A04)

Ilseburger Grobblech GmbH
Vackanstädter Weg 10
D-36571 Ilseburg
(A01)

 Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 6/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204			

Check analysis (C70-C99)

Specimen No. (C00)	Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %
		≤0,20	0,13-0,45	0,75-1,30	≤0,020	≤0,005			≤0,50
693095 *)	00777	0,18	0,29	1,16	0,010	0,002	0,004	0,027	0,01
705462 *)	01142	0,17	0,32	1,16	0,015	0,001	0,003	0,054	0,01
706439	48263	0,17	0,34	1,14	0,006	0,002	0,005	0,039	0,03
706427	48264	0,16	0,32	1,15	0,008	0,000	0,002	0,043	0,01
707076	48266	0,19	0,24	1,17	0,013	0,003	0,003	0,037	0,03
710423	52908	0,20	0,33	1,14	0,007	0,000	0,004	0,045	0,11
708823	53282	0,14	0,35	1,11	0,008	0,001	0,002	0,058	0,02
708898	53283	0,18	0,22	1,11	0,010	0,001	0,003	0,045	0,02
Specimen No. (C00)	Heat No. (B07)	Cr %	Ni %	Mo %	V %	Ti %	Nb %	B %	Ca %
		≤0,20	≤0,30	≤0,13	≤0,015	≤0,010	≤0,02	≤0,005	≤0,005
693095 *)	00777	0,03	0,06	0,00	0,002	0,002	0,02	0,0002	0,001
705462 *)	01142	0,03	0,20	0,00	0,000	0,007	0,02	0,0003	0,002
706439	48263	0,04	0,18	0,00	0,003	0,003	0,02	0,0001	0,002
706427	48264	0,06	0,20	0,01	0,002	0,003	0,02	0,0001	0,003
707076	48266	0,05	0,06	0,01	0,004	0,005	0,02	0,0002	0,002
710423	52908	0,03	0,19	0,01	0,002	0,005	0,02	0,0000	0,002
708823	53282	0,03	0,17	0,00	0,002	0,003	0,02	0,0001	0,003
708898	53283	0,03	0,03	0,00	0,005	0,003	0,02	0,0000	0,002
Specimen No. (C00)	Heat No. (B07)	Nb+V %	EV1 1) %	EV2 2) %					
			≤0,50						
693095 *)	00777	0,022	0,06	0,38					
705462 *)	01142	0,020	0,07	0,38					
706439	48263	0,023	0,10	0,38					
706427	48264	0,022	0,11	0,38					
707076	48266	0,024	0,12	0,40					
710423	52908	0,022	0,18	0,42					
708823	53282	0,022	0,08	0,34					
708898	53283	0,025	0,08	0,38					

1) EV1: Nb+V+Ti+Cu+Mo+Cr
2) EV2: C+Mn+Si+Mo+Ni+V+Cr+P+Cu+Al

3) The sample product is not part of the delivery

Grain size according to ASTM E112: 7 and finer

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QMS-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A04)

Ilsenburger Grobblech GmbH
Vockenstedter Weg 10
D-38671 Ilsenburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 7/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

"Produced with sulfid shape control."

Material is vacuum degassed

Fully killed

Tensile test (C10-C19)									
Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type (C10)	Yield strength (C11) Rp0,2 N/mm2 ≥ 200	Tensile strength (C12) Rm N/mm2 485 - 520	Elongation (C13) 8 in %	
706424	48264	K6G	Q	N	P	355	514	26	
706425	48264	K6G	Q	N	P	355	512	27	
706426	48264	K6G	Q	N	P	356	513	25	
706427	48264	K6G	Q	N	P	360	511	29	
706437	48264	K6G	Q	N	P	368	515	28	
706438	48264	K6G	Q	N	P	365	516	25	
706439	48263	K6G	Q	N	P	372	516	24	
706440	48264	K6G	Q	N	P	361	514	23	
706685	48264	K6G	Q	N	P	366	512	27	
706686	48263	K6G	Q	N	P	367	513	26	
706687	48264	K6G	Q	N	P	370	512	26	
706688	48264	K6G	Q	N	P	364	513	26	
706876	48263	K6G	Q	N	P	389	537	25	
706877	48263	K6G	Q	N	P	363	507	26	
707075	48266	K6G	Q	N	P	326	501	31	
707076	48266	K6G	Q	N	P	324	503	32	
707214	48263	K6G	Q	N	P	364	511	25	
707215	48263	K6G	Q	N	P	358	510	25	
707233	48266	K6G	Q	N	P	351	516	26	
707234	48266	K6G	Q	N	P	350	520	28	
707235	48266	K6G	Q	N	P	351	520	28	
707236	48266	K6G	Q	N	P	339	516	25	
707815	01142	K6G	Q	N	P	370	529	28	
707816	01142	K6G	Q	N	P	365	525	26	
707817	01142	K6G	Q	N	P	385	533	25	
707820	48263	K6G	Q	N	P	366	516	24	
707821	48263	K6G	Q	N	P	362	511	23	

1) K: Top
2) s: 1/8 Width
3) 0: Thickness of product

4) Q: transversal
5) N: normalized
6) P: prismatic

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

 Trademark
(A04)

Ilsenburger Grobblech GmbH
Vöckenstadter Weg 10
D-38071 Ilsenburg
(A01)

 Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B
DIN EN 10204
(A02)

No. (A03) 586433
Page 8/14
Date 18.03.2009

No. (A07) 605/6281
Purchaser Salzgitter Mannesmann
(A08) International GmbH
40409 Düsseldorf

26.01.2009

No. (A07)
Customer Cessco Steel
(A08) NEW WESTMINSTER
KANADA

Product Heavy plate
(B01)

Works order No. 0000037106
(A06)

Inspection WS
(A06)

Steel grade and terms of delivery (B02-B03)
SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV
SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV
ASME sect. II part A ed. 2007, add.2008
ASME SA 20 (M), SA 516 (M)
Cessco StkChem1102R01 04/2007
ASTM A 20 (M)-06, A 516 (M)-06
VANCOUVER / NWBC; K-04204

Tensile test (C10-C28)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type (C10)	Yield strength (C11) Rp0,2 N/mm2 ≥ 280	Tensile strength (C12) Rm N/mm2 485 - 620	Elongation (C13) 8 in % ≥ 17		
		1) 2) 3)	4)	5)	6)					
707825	48266	K6G	Q	N	P	336	508	28		
707826	48266	K6G	Q	N	P	327	503	26		
708823	53282	K6G	Q	N	P	388	520	20		
708824	53282	K6G	Q	N	P	397	522	22		
708856	53282	K6G	Q	N	P	371	508	27		
708857	53282	K6G	Q	N	P	368	508	25		
708858	53282	K6G	Q	N	P	372	512	24		
708859	53282	K6G	Q	N	P	370	508	26		
708860	53282	K6G	Q	N	P	363	502	24		
708873	48264	K6G	Q	N	P	349	508	24		
708874	48264	K6G	Q	N	P	354	511	25		
708883	48263	K6G	Q	N	P	368	515	24		
708884	48263	K6G	Q	N	P	381	519	25		
708885	48263	K6G	Q	N	P	376	518	24		
708886	48263	K6G	Q	N	P	372	517	24		
708892	53283	K6G	Q	N	P	368	530	24		
708893	53283	K6G	Q	N	P	373	531	27		
708894	53283	K6G	Q	N	P	360	531	26		
708895	53283	K6G	Q	N	P	373	533	27		
708896	53283	K6G	Q	N	P	367	532	30		
708897	53283	K6G	Q	N	P	359	527	24		
708898	53283	K6G	Q	N	P	366	528	29		
709028	48266	K6G	Q	N	P	322	504	27		
709029	48266	K6G	Q	N	P	323	503	29		
709030	00777	K6G	Q	N	P	333	513	29		
709039	53282	K6G	Q	N	P	339	494	31		
709040	53282	K6G	Q	N	P	342	492	30		
709041	53282	K6G	Q	N	P	343	495	30		
709042	53282	K6G	Q	N	P	339	492	29		
709043	53282	K6G	Q	N	P	339	491	26		
709044	48264	K6G	Q	N	P	354	510	29		
709898	53282	K6G	Q	N	P	360	500	22		
709899	53282	K6G	Q	N	P	362	500	23		
710134	53282	K6G	Q	N	P	353	500	28		

- 1) X: Top
2) S: 1/8 Width
3) S: Thickness of product

- 4) Q: transversal
5) N: normalized
6) P: pickled

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A04)

Ilseburger Grobblech GmbH
Vackenstedter Weg 10
D-39871 Ilseburg
(A01)



Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 9/14 18.03.2009
No. (A07) Purchaser (A08)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (D01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Tensile test (C10-C29)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B08)	Type (C10)	Yield strength (C11) Rp0,2 N/mm2 ≥ 280	Tensile strength (C12) Rm N/mm2 485 - 820	Elongation (C13) 8 in % ≥ 17		
		1) 2) 3)	4)	5)	6)					
710135	53282	K6G	Q	N	P	363	502	27		
710421	52908	K6G	Q	N	P	359	517	30		
710422	52908	K6G	Q	N	P	364	523	30		
710423	52908	K6G	Q	N	P	357	516	27		
710721	53282	K6G	Q	N	P	363	519	24		
710722	53282	K6G	Q	N	P	356	508	26		
710725	53283	K6G	Q	N	P	362	528	25		
710726	53283	K6G	Q	N	P	357	523	27		
710727	53283	K6G	Q	N	P	356	525	25		

- 1) K: Top
2) S: 1/8 Width
3) Q: Thickness of product

- 4) Q: transversal
5) N: normalized
6) P: prismatic

Impact test (C40-C49)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B08)	Type of specimen (C40-C41)	Temperature (C03) °F	Impact energy (C42-C43) 1 2 3 MW 6) ftlbft ftlbft ftlbft ≥ 15 ≥ 20			
		1) 2) 3)	4)	5)						
706424	48264	K6O	L	N	Charpy V-notch	-051	212	125	223	187
706425	48264	K6O	L	N	Charpy V-notch	-051	131	128	113	124
706426	48264	K6O	L	N	Charpy V-notch	-051	172	123	119	138
706427	48264	K6O	L	N	Charpy V-notch	-051	161	221	201	194
706437	48264	K6O	L	N	Charpy V-notch	-051	128	135	149	137
706438	48264	K6O	L	N	Charpy V-notch	-051	114	162	103	126
706439	48263	K6O	L	N	Charpy V-notch	-051	134	124	155	138
706440	48264	K6O	L	N	Charpy V-notch	-051	108	133	173	138
706685	48264	K6V	L	N	Charpy V-notch	-051	101	207	101	136

- 1) X: Top
2) S: 1/8 Width
3) O: near surface
V: 1/4 Thickness

- 4) L: longitudinal
5) N: normalized
6) MW: Average

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

Trademark
(A04)

Ilseburger Grobblech GmbH
Vockensieder Weg 10
D-38871 Ilseburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) 586433 Page 10/14 Date 18.03.2009
No. (A07) 605/6281 Purchaser Salzgitter Mannesmann (A08) International GmbH 40409 Düsseldorf	26.01.2009 Customer Cessco Steel (A09) NEW WESTMINSTER KANADA	
Product Heavy plate (B01)		Works order No. 0000037106 (A08) Inspection WS (A05)
Steel grade and terms of delivery SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV (B02-B03) SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Impact test (C40-C49)										
Specimen No. (C01)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type of specimen (C40-C41)	Temperature (C03)	Impact energy (C42-C43)			
							1 ft.lbf ≥ 15	2	3	MW 6) ft.lbf ≥ 20
706686	48263	K6V	L	N	Charpy V-notch	-051	107	114	196	139
706687	48264	K6V	L	N	Charpy V-notch	-051	223	148	215	195
706688	48264	K6V	L	N	Charpy V-notch	-051	97	168	209	158
706876	48263	K60	L	N	Charpy V-notch	-051	131	79	156	122
706877	48263	K60	L	N	Charpy V-notch	-051	137	107	202	149
707075	48266	K6V	L	N	Charpy V-notch	-051	26	73	64	55
707076	48266	K6V	L	N	Charpy V-notch	-051	55	29	44	43
707214	48263	K60	L	N	Charpy V-notch	-051	142	141	103	128
707215	48263	K60	L	N	Charpy V-notch	-051	198	190	194	194
707233	48266	K6V	L	N	Charpy V-notch	-051	62	44	66	58
707234	48266	K6V	L	N	Charpy V-notch	-051	74	41	42	52
707235	48266	K6V	L	N	Charpy V-notch	-051	28	60	33	41
707236	48266	K6V	L	N	Charpy V-notch	-051	62	55	17	44
707815	01142	K60	L	N	Charpy V-notch	-051	113	93	117	108
707816	01142	K60	L	N	Charpy V-notch	-051	108	131	126	122
707817	01142	K60	L	N	Charpy V-notch	-051	65	117	111	97
707820	48263	K60	L	N	Charpy V-notch	-051	201	117	202	173
707821	48263	K60	L	N	Charpy V-notch	-051	181	151	174	169
707825	48266	K6V	L	N	Charpy V-notch	-051	65	22	63	50
707826	48266	K6V	L	N	Charpy V-notch	-051	63	66	52	60
708823	53282	K60	L	N	Charpy V-notch	-051	38	41	72	51
708824	53282	K60	L	N	Charpy V-notch	-051	47	63	59	56
708856	53282	K60	L	N	Charpy V-notch	-051	176	209	184	190
708857	53282	K60	L	N	Charpy V-notch	-051	102	187	112	133
708858	53282	K60	L	N	Charpy V-notch	-051	95	88	88	90
708859	53282	K60	L	N	Charpy V-notch	-051	190	127	197	171
708860	53282	K60	L	N	Charpy V-notch	-051	201	112	121	145
708873	48264	K60	L	N	Charpy V-notch	-051	52	20	77	49
708874	48264	K60	L	N	Charpy V-notch	-051	111	59	105	92
708883	48263	K60	L	N	Charpy V-notch	-051	108	108	79	98
708884	48263	K60	L	N	Charpy V-notch	-051	143	132	148	141
708885	48263	K60	L	N	Charpy V-notch	-051	195	126	139	153
708886	48263	K60	L	N	Charpy V-notch	-051	117	119	128	122

1) K: Top
2) S: 1/8 Width
3) O: near surface
V: 1/4 Thickness

4) L: longitudinal
5) N: normalized
6) MW: Average

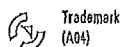
1) K: Top
2) 8: 1/8 Width
3) 0: near surface
V: 1/4 Thickness

4) L: longitudinal
5) N: normalized
6) MW: Average

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QIM-System: Certification as per ISO 9001 since 28 February 1990


Trademark
(A04)

Ilsenburg Grobblech GmbH
Vackendter Weg 10
D-38671 Ilsenburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 11/14 18.03.2009
No. (A07) Purchaser (A08)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08)	0000037106
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		
		Inspection (A05)	WS

Impact test (C40-C40)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type of specimen (C40-C41)	Temperature (C03)	Impact energy (C42-C43)			
							1	2	3	MW 6)
		1) 2) 3)	4)	5)		°F	ftlbf ≥ 15			ftlbf ≥ 20
708892	53283	K6V	L	N	Charpy V-notch	-051	86	16	87	63
708893	53283	K6V	L	N	Charpy V-notch	-051	61	57	55	58
708894	53283	K6V	L	N	Charpy V-notch	-051	69	64	73	69
708895	53283	K6V	L	N	Charpy V-notch	-051	57	19	55	44
708896	53283	K6V	L	N	Charpy V-notch	-051	25	77	84	62
708897	53283	K6V	L	N	Charpy V-notch	-051	15	55	52	41
708898	53283	K6V	L	N	Charpy V-notch	-051	72	84	61	72
709028	48266	K6V	L	N	Charpy V-notch	-051	49	57	21	42
709029	48266	K6V	L	N	Charpy V-notch	-051	50	29	44	41
709030	00777	K6V	L	N	Charpy V-notch	-051	64	29	68	54
709039	53282	K6V	L	N	Charpy V-notch	-051	105	209	102	139
709040	53282	K6V	L	N	Charpy V-notch	-051	89	146	145	126
709041	53282	K6V	L	N	Charpy V-notch	-051	131	122	119	124
709042	53282	K6V	L	N	Charpy V-notch	-051	217	127	215	187
709043	53282	K6V	L	N	Charpy V-notch	-051	88	191	142	140
709044	48264	K6V	L	N	Charpy V-notch	-051	238	128	153	173
709898	53282	K60	L	N	Charpy V-notch	-051	218	153	232	201
709899	53282	K60	L	N	Charpy V-notch	-051	190	183	114	162
710134	53282	K60	L	N	Charpy V-notch	-051	205	197	150	184
710135	53282	K60	L	N	Charpy V-notch	-051	91	102	86	93
710421	52908	K6V	L	N	Charpy V-notch	-051	76	60	82	73
710422	52908	K6V	L	N	Charpy V-notch	-051	86	108	99	97
710423	52908	K6V	L	N	Charpy V-notch	-051	100	114	103	105
710721	53282	K60	L	N	Charpy V-notch	-051	65	74	92	77
710722	53282	K60	L	N	Charpy V-notch	-051	103	127	147	125
710725	53283	K6V	L	N	Charpy V-notch	-051	80	19	47	49
710726	53283	K6V	L	N	Charpy V-notch	-051	53	77	65	65
710727	53283	K6V	L	N	Charpy V-notch	-051	63	58	27	49

- 1) K: Top
2) 6: 1/6 Width
3) 0: near surface
V: 1/4 Thickness

- 4) L: longitudinal
5) N: normalized
6) MW: Average

Specimen size:
5,0 x 10 x 55 mm (from 5,00 mm up to 8,99 mm plate thickness)
7,5 x 10 x 55 mm (from 9,00 mm to 11,99 mm plate thickness)
10 x 10 x 55 mm (from 12,00 mm plate thickness)

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1993

Trademark
(A04)

Ilsenburger Grobblech GmbH
Vockenstopfer Weg 10
D-38071 Ilsenburg
(A01)

Inspection
(Z03)

Inspection Representative
(Z02)

Cyron

Inspection certificate 3.1/3.1.B
DIN EN 10204
(A02)

No. (A03) 586433
Page 12/14
Date 18.03.2009

No. (A07) 605/6281
Purchaser Salzgitter Mannesmann
(A08) International GmbH
40409 Düsseldorf

26.01.2009 No. (A07)

Customer Cessco Steel
(A05) NEW WESTMINSTER
KANADA

Product Heavy plate
(B01)

Works order No. 0000037106

(A06)
Inspection WS
(A05)

Steel grade and terms of delivery (B02-B03)
SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV
SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV
ASME sect. II part A ed. 2007, add.2008
ASME SA 20 (M), SA 516 (M)
Cessco StkChem1102R01.04/2007
ASTM A 20 (M)-06, A 516 (M)-06
VANCOUVER / NWBC; K-04204

Hardness test (C30-C39)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Cond. (B05)	Type of specimen (C30)	Hardness (C31-C32)				
					1	2	3	MW 4)	
693095 *)	00777	K6	N	HV10	162	168	164	165	
706424	48264	K6	N	HB30	155	154	155	155	
706425	48264	K6	N	HB30	149	152	151	151	
706426	48264	K6	N	HB30	152	150	153	152	
706427	48264	K6	N	HV10	156	157	160	158	
706427	48264	K6	N	HB30	151	154	150	152	
706437	48264	K6	N	HB30	150	153	151	151	
706438	48264	K6	N	HB30	151	156	155	154	
706439	48263	K6	N	HV10	162	161	164	162	
706439	48263	K6	N	HB30	151	150	153	151	
706440	48264	K6	N	HB30	154	154	153	154	
706685	48264	K6	N	HB30	150	152	149	150	
706686	48263	K6	N	HB30	153	154	154	154	
706687	48264	K6	N	HB30	153	155	150	153	
706688	48264	K6	N	HB30	154	154	155	154	
706688	48264	K6	N	HB30	161	162	162	162	
706876	48263	K6	N	HB30	151	152	151	151	
706877	48263	K6	N	HB30	151	151	150	151	
707075	48266	K6	N	HV10	160	160	154	158	
707076	48266	K6	N	HB30	151	149	147	149	
707076	48266	K6	N	HB30	154	153	151	153	
707214	48263	K6	N	HB30	149	152	149	150	
707215	48263	K6	N	HB30	153	155	151	153	
707233	48266	K6	N	HB30	157	155	154	155	
707234	48266	K6	N	HB30	157	151	156	155	
707235	48266	K6	N	HB30	155	155	152	154	
707236	48266	K6	N	HB30	154	158	156	156	
707815	01142	K6	N	HB30	154	155	159	156	
707816	01142	K6	N	HV10	170	165	165	167	
707817	01142	K6	N	HB30	155	157	160	157	
707817	01142	K6	N	HB30	151	152	156	153	
707820	48263	K6	N	HB30	150	154	149	151	
707821	48263	K6	N	HB30	152	152	153	152	
707825	48266	K6	N	HB30	147	152	148	149	
707826	48266	K6	N	HB30	163	163	164	163	
708823	53282	K6	N	HV10	155	154	154	154	
708823	53282	K6	N	HB30					

- 1) K: Top
2) b: 1/8 Width
*) The sample product is not part of the delivery

- 3) N: normalized
4) MW: Average

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1999

 Trademark
(A04)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilseburg
(A01)

 Inspection Representative
(Z03)

Inspection Representative
(Z02)

Cyron

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 13/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Hardness test (C30-C39)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Cond. (B05)	Type of specimen (C30)	Hardness (C31-C32)				
					1	2	3	MW 4)	
708824	53282	K6	N	HB30	155	158	155	156	
708856	53282	K6	N	HB30	149	153	153	152	
708857	53282	K6	N	HB30	148	154	153	152	
708858	53282	K6	N	HB30	151	152	153	152	
708859	53282	K6	N	HB30	153	153	151	152	
708860	53282	K6	N	HB30	148	148	146	147	
708873	48264	K6	N	HB30	148	151	152	150	
708874	48264	K6	N	HB30	150	149	149	149	
708883	48263	K6	N	HB30	152	153	152	152	
708884	48263	K6	N	HB30	155	153	153	154	
708885	48263	K6	N	HB30	153	156	156	155	
708886	48263	K6	N	HB30	151	153	152	152	
708892	53283	K6	N	HB30	158	159	156	158	
708893	53283	K6	N	HB30	155	160	159	158	
708894	53283	K6	N	HB30	158	155	157	157	
708895	53283	K6	N	HB30	158	158	161	159	
708896	53283	K6	N	HB30	159	159	156	158	
708897	53283	K6	N	HB30	157	156	156	156	
708898	53283	K6	N	HV10	164	166	164	165	
708898	53283	K6	N	HB30	156	157	158	157	
709028	48266	K6	N	HB30	148	150	149	149	
709029	48266	K6	N	HB30	152	150	149	150	
709030	00777	K6	N	HB30	152	150	155	152	
709039	53282	K6	N	HB30	145	147	147	146	
709040	53282	K6	N	HB30	146	147	147	147	
709041	53282	K6	N	HB30	147	147	149	148	
709042	53282	K6	N	HB30	147	147	144	146	
709043	53282	K6	N	HB30	148	148	147	148	
709044	48264	K6	N	HB30	150	148	152	150	
709898	53282	K6	N	HB30	147	149	150	149	
709899	53282	K6	N	HB30	146	151	149	149	
710134	53282	K6	N	HB30	151	150	147	149	
710135	53282	K6	N	HB30	149	148	148	148	
710421	52908	K6	N	HB30	152	152	153	152	
710422	52908	K6	N	HB30	156	158	155	156	
710423	52908	K6	N	HV10	161	161	160	161	

1) K: Top
2) E: 1/8 Width
*) The sample product is not part of the delivery

3) N: normalized
4) MW: Average

We hereby certify that the delivered material complies with the terms of the order.

(201)

QM-System: Certification as per ISO 9001 since 28 February 1990


Trademark
(A04)

ILsenburger Grobblech GmbH
Vackunstedter Weg 10
D-38871 Ilsenburg
(A01)


Inspection Stamp
(203)

Inspection Representative
(202)

Cyrion



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 14/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A06)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Hardness test (C30-C39)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Cond. (B05)	Type of specimen (C30)	Hardness (C31-C32)				
					1	2	3	MW 4)	
710423	52908	K6	N	HB30	152	152	153	152	
710721	53282	K6	N	HB30	152	155	154	154	
710722	53282	K6	N	HB30	151	149	152	151	
710725	53283	K6	N	HB30	158	160	158	159	
710726	53283	K6	N	HB30	153	158	156	156	
710727	53283	K6	N	HB30	154	156	156	155	

1) K: Top
2) B: 1/8 W/idth
*) The sample product is not part of the delivery

3) N: normalized
4) MW: Average

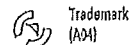
For results of microanalysis see appendix to this certificate.

Heat treatment: Temperature : 910 +/-10°C
Soaking time: 30 min/inch
Cooling in still air

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1998



Trademark
(A04)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-33871 Ilseburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron

FABRICATION & ENGINEERING

SHIP TO

TAG:

[illegible]

CUSTOMER P.O. NO.	2698
CESSCO W.O. NO.	S24823
DATE CERT. ORIGINATED	21-Mar-11

[illegible]

The chemical and physical properties as indicated on the attached report are the results of the Mill Tests of the raw material used in the manufacture of these products and are certified to meet only the minimum requirements of the ASME and ASTM specifications for this material

- | | | | |
|-------------------------------------|--|-------------------------------------|---|
| ☒ | The items listed above were formed in strict accordance with all applicable requirements of the ASME Boiler and Pressure Vessel Code Section VIII, Div 1. | ☐ | We hereby certify that these heads were heated to 1950°F and water quenched in strict accordance with all applicable specifications |
| ☒ | We hereby certify that these heads were hot formed at the required normalizing temperature and air cooled, in accordance with all applicable specifications. | ☐ | We hereby certify that these heads were heated to 1950°F and rapid air cooled in strict accordance with all applicable specifications |
| ☐ | We hereby certify that these heads were cold formed in compliance with ASME Boiler and Pressure Vessel Code, Section VIII, Div. 1 paragraph UCS - 79 (d). | ☒ | We hereby certify that these heads comply with tolerances of UG - 81 of ASME Section VIII, Div. 1. |

WE HEREBY CERTIFY THAT THIS REPORT COVERING THE ABOVE AND ATTACHED INFORMATION IS TRUE AND CORRECT AS SHOWN AND CONTAINED IN OUR RECORDS.

Linda Pritchard

Linda Pritchard
QUALITY CONTROL

INSPECTION & TEST PLAN				
CUSTOMER: RJV Gasfield		JOB NO: S24823		
DESCRIPTION : SHELL		TAG NO: 0		
6 PCS 1 1/4" PL x 30" OD x 10'		P.O.NO: 2698		
		LOG NO: 29693 (5) 29692 (1)		
INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA	CESSCO		
		HOLD	SIGN	DATE
1	MATERIAL RECEIVED, INSPECTION COMPLETED		DM	3/14/11
2	MILL TEST REPORTS CHECKED AND TRACEABLE		DM	3/14/11
3	CUSTOMER REQUIREMENTS:			
	HIC: SELECT CHEM:			
	U.T. GRID: BHN: MISC:			
	B.H.N. TEST:			
	B.H.N. RESULTS:			
4	FIBRE ELONGATION: 4.35 %			
	HOT ROLL ☐ COLD ROLL ☒ C.R. & STRESS ☐			
5	CIRC SEAM PREP.: IN: ☐			
6	LONG SEAM PREP.: IN: ☐			
7	CIRC SEAM PREP.: OUT: ☒ 30° N.L.		SF	
8	LONG SEAM PREP.: OUT: ☒ 30° N.L. 5/32" GAP		SF	MAR 18/11
9	SQUARE CUT: CIRC SEAM ☐			
10	SQUARE CUT: LONG SEAM ☐			
11	LOG NUMBER STAMP ON OUTSIDE OF SHELL		SF	
12	VISUAL CHECK OF PLATE & BEVEL AFTER BURNING		SF	MAR 18/11
13	VISUAL AND DIAMETER CHECK AFTER ROLLING		DM	MAR 18/11
14	CLEAR TO SHIP		SF	MAR 18/11

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS: _____

INSPECTION & TEST PLAN

CUSTOMER:	RJV Gasfield	JOB NO:	524823
DESCRIPTION :	HEADS	TAG NO:	0
	12 PCS 30" OD x 1 1/4"nom 1.1875"min 2:1 S.E. 2" S.F.	P.O.NO:	2698
		PAGE NO:	

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA				CESSCO				
					B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED					D✓	3/14/11	29694	1.228
2	MILL TEST REPORTS CHECKED AND TRACEABLE					D✓	✓	✓	1.227
3	CHECK HEAD FOR DEFECTS					D✓	✓	✓	1.222
4	VERIFY ALL STAMPING ON HEAD					D✓	✓	✓	1.224
5	CIRCLE STAMPING ON HEAD					D✓	✓	✓	1.226
6	BEVEL: IN: OUT: 30° N.L.					✓	03/15/11	✓	1.223
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"					✓	✓	✓	1.227
8	CUSTOMER REQUIREMENTS:							✓	1.222
	HIC: SELECT CHEM:							✓	1.228
	U.T. GRID: B.H.N. MISC:							✓	1.229
	TO MATCH: 1 1/4" shells SCH:					✓	✓	✓	1.225
9	CHECK HEAD FOR DEFECTS AFTER MACHINING					✓	✓	✓	1.220
10	CHECK FINISHED BEVEL					✓	✓		
11	FINISHED DIAMETER CHECK					✓	✓		
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT		✓	✓		
		+1/8"	+1/8"	+1"					
		-1/8"	-1/8"	-1/4"					
	CLEAR TO SHIP					✓	03/16/11		

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS: _____

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 3/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 Customer (A05)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204			

Material data (B01-B09)						in x in x in		
Item	Quantity (B08)	Product No. (B07)	Heat No. (B07)	Cond. of delivery (B04)	Thickness x Width x Length (B03-B11)			
1.1	1	706687 2	48264	N	1,000 x 96,000 x 384,000	- 2 9 6 7 0		
1.1	1	706688 1	48264	N	1,000 x 96,000 x 384,000	- 2 9 6 7 2		2 9 6 7 3
1.1	1	706688 2	48264	N	1,000 x 96,000 x 384,000	- 2 9 6 7 2		2 9 6 8 4
1.3	1	709039 1	53282	N	1,125 x 120,000 x 480,000	- 2 9 6 8 5		2 9 6 8 2
1.3	1	709040 1	53282	N	1,125 x 120,000 x 480,000	- 2 9 6 8 1		2 9 6 8 0
1.3	1	709041 1	53282	N	1,125 x 120,000 x 480,000	- 2 9 6 8 3		2 9 6 8 6
1.3	1	709042 1	53282	N	1,125 x 120,000 x 480,000	- 2 9 6 8 8		2 9 6 8 7
1.3	1	709043 1	53282	N	1,125 x 120,000 x 480,000	- 2 9 6 9 2		2 9 6 8 9
1.3	1	709044 1	48264	N	1,125 x 120,000 x 480,000	- 2 9 6 9 0		2 9 6 9 3
1.4	1	710725 1	53283	N	1,250 x 96,000 x 384,000	- 2 9 6 9 4		2 9 6 9 5
1.4	1	710726 1	53283	N	1,250 x 96,000 x 384,000	- 2 9 6 9 7		2 9 6 9 8
1.4	1	710727 1	53283	N	1,250 x 96,000 x 384,000	- 2 9 6 9 1		2 9 6 9 6
1.5	1	708892 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	708893 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	708894 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	708895 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	708896 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	708897 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	708898 1	53283	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	710421 1	52908	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	710422 1	52908	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.5	1	710423 1	52908	N	1,250 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.6	1	707233 1	48266	N	1,500 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.6	1	707234 1	48266	N	1,500 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.6	1	707235 1	48266	N	1,500 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.6	1	707236 1	48266	N	1,500 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.7	1	707075 1	48266	N	2,000 x 96,000 x 384,000	- 2 9 7 0 2		2 9 6 9 8
1.7	1	707076 1	48266	N	2,000 x 96,000 x 384,000	- 2 9 7 0 2		2 9 6 9 8
1.7	1	707825 1	48266	N	2,000 x 96,000 x 384,000	- 2 9 7 0 2		2 9 6 9 8
1.7	1	707826 1	48266	N	2,000 x 96,000 x 384,000	- 2 9 7 0 2		2 9 6 9 8
1.8	1	709028 1	48266	N	2,000 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.8	1	709029 1	48266	N	2,000 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
1.8	1	709030 1	00777	N	2,000 x 120,000 x 480,000	- 2 9 7 0 2		2 9 6 9 8
				N: normalized				

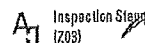
We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

 Trademark
(A01)

Ilseburger Grobblech GmbH
Voekenstadter Weg 10
D-38871 Ilseburg
(A01)

 Inspection Stamp
(Z05)

Inspection Representative
(Z02)

Cyron

SCANNED

K-04204


**ILSENBURGER
GROBBLECH**

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 1/14 18.03.2009
No. (A07) Purchaser (A05)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08)	0000037106
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01.04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204	Inspection CHEMICAL & PHYSICALS CHECKED AS.M.E. Ed. 2.1 add. 08 @Cessco By: JLC APR 15 2009	
Marking of the product (B06) Trademark/Steelgrade/Heat-No/Product-No/ inspector's stamp		CESSCO PLATE LOG NO:	

Material data (B01-B09)

Item	Quantity (B08)	Product No. (B07)	Heat No. (B07)	Cond. of delivery (B04)	Thickness x Width x Length (B09-B11)	in x in x in
01	1	708823 1	53282	N	0,250 x 120,000 x 384,000	-29600
01	1	708823 2	53282	N	0,250 x 120,000 x 384,000	-29600
01	1	708824 1	53282	N	0,250 x 120,000 x 384,000	-29600
01	1	708824 2	53282	N	0,250 x 120,000 x 384,000	-29600
02	1	709898 1	53282	N	0,500 x 96,000 x 384,000	-29608
02	1	709898 2	53282	N	0,500 x 96,000 x 384,000	-29605
02	1	709898 3	53282	N	0,500 x 96,000 x 384,000	-29605
02	1	709899 1	53282	N	0,500 x 96,000 x 384,000	-29606
02	1	709899 2	53282	N	0,500 x 96,000 x 384,000	-29606
02	1	709899 3	53282	N	0,500 x 96,000 x 384,000	-29606
03	1	708856 1	53282	N	0,500 x 120,000 x 480,000	-29613
03	1	708856 2	53282	N	0,500 x 120,000 x 480,000	-29615
03	1	708857 1	53282	N	0,500 x 120,000 x 480,000	-29611
03	1	708857 2	53282	N	0,500 x 120,000 x 480,000	-29611
03	1	708858 1	53282	N	0,500 x 120,000 x 480,000	-29610
03	1	708858 2	53282	N	0,500 x 120,000 x 480,000	-29610
03	1	708859 1	53282	N	0,500 x 120,000 x 480,000	-29618
03	1	708859 2	53282	N	0,500 x 120,000 x 480,000	-29618
03	1	708860 1	53282	N	0,500 x 120,000 x 480,000	-29618
03	1	708860 2	53282	N	0,500 x 120,000 x 480,000	-29618
04	1	710721 1	53282	N	0,625 x 96,000 x 384,000	-29623
04	1	710721 2	53282	N	0,625 x 96,000 x 384,000	-29622
04	1	710722 1	53282	N	0,625 x 96,000 x 384,000	-29622
04	1	710722 2	53282	N	0,625 x 96,000 x 384,000	-29622
05	1	710134 1	53282	N	0,625 x 72,000 x 384,000	-29625
05	1	710134 2	53282	N	0,625 x 72,000 x 384,000	-29624
05	1	710134 3	53282	N	0,625 x 72,000 x 384,000	-29624
05	1	710135 1	53282	N	0,625 x 72,000 x 384,000	-29627
05	1	710135 2	53282	N	0,625 x 72,000 x 384,000	-29627
06	1	706437 1	48264	N	0,625 x 120,000 x 480,000	-29629
06	1	706437 2	48264	N	0,625 x 120,000 x 480,000	-29629
06	1	706438 1	48264	N	0,625 x 120,000 x 480,000	-29631
06	1	706438 2	48264	N	0,625 x 120,000 x 480,000	-29631
06	1	706439 1	48263	N	0,625 x 120,000 x 480,000	-29640
06	1	706440 1	48264	N	0,625 x 120,000 x 480,000	-29640

N: normalized

 We hereby certify that the delivered material complies with the terms of the order.
(Z01)

DM-System: Certification as per ISO 9001 since 28 February 1990

 Trademark
(A04)

 Ilseburger Grobblech GmbH
 Voerkonster Weg 10
 D-38871 Ilseburg
 (A01)

 Inspection Stamp
(Z03)

 AS.M.E. Ed. 2.1 add. 08
 @Cessco By: JLC

 JAN 20 2011
 Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B
DIN EN 10204
(A02)

No. (A03) 586433
Page 2/14
Date 18.03.2009

No. (A07) 605/6281
Purchaser Salzgitter Mannesmann
(A06) International GmbH
40409 Düsseldorf

26.01.2009

No. (A07) Cessco Steel
Customer NEW WESTMINSTER
(A06) KANADA

Product Heavy plate
(B01)

Works order No. 0000037106
(A08)
Inspection WS
(A08)

Steel grade and terms of delivery (B02-B03)
SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV
SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV
ASME sect. II part A ed. 2007, add.2008
ASME SA 20 (M), SA 516 (M)
Cessco StkChem1102R01 04/2007
ASTM A 20 (M)-06, A 516 (M)-06
VANCOUVER / NWBC; K-04204

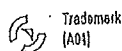
Material data (B01-B03)

Item	Quantity (B08)	Product No. (B07)	Heat No. (B07)	Cond. of delivery (B04)	Thickness x Width x Length (B09-B11)	in x in x in
06	1	706440 2	48264	N	0,625 x 120,000 x 480,000	2 9 6 3 4
06	1	708883 1	48263	N	0,625 x 120,000 x 480,000	2 9 6 3 4
06	1	708883 2	48263	N	0,625 x 120,000 x 480,000	2 9 6 3 9
06	1	708884 1	48263	N	0,625 x 120,000 x 480,000	2 9 6 4 2
06	1	708884 2	48263	N	0,625 x 120,000 x 480,000	2 9 6 3 8
06	1	708885 1	48263	N	0,625 x 120,000 x 480,000	2 9 6 3 3
06	1	708885 2	48263	N	0,625 x 120,000 x 480,000	2 9 6 4 1
06	1	708886 1	48263	N	0,625 x 120,000 x 480,000	2 9 6 4 3
06	1	708886 2	48263	N	0,625 x 120,000 x 480,000	2 9 6 4 5
07	1	706876 1	48263	N	0,750 x 96,000 x 384,000	2 9 6 4 9
07	1	706876 2	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 0
07	1	706876 3	48263	N	0,750 x 96,000 x 384,000	2 9 6 4 7
07	1	706877 1	48263	N	0,750 x 96,000 x 384,000	2 9 6 4 8
07	1	706877 2	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 2
07	1	706877 3	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 1
07	1	707820 1	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 4
07	1	707820 2	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 4
07	1	707821 1	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 4
07	1	707821 2	48263	N	0,750 x 96,000 x 384,000	2 9 6 5 4
08	1	708873 1	48264	N	0,750 x 120,000 x 480,000	2 9 6 5 5
08	1	708873 2	48264	N	0,750 x 120,000 x 480,000	2 9 6 5 7
08	1	708874 1	48264	N	0,750 x 120,000 x 480,000	2 9 6 5 6
08	1	708874 2	48264	N	0,750 x 120,000 x 480,000	2 9 3 5 7
09	1	707815 1	01142	N	0,875 x 96,000 x 384,000	2 9 3 5 6
09	1	707815 2	01142	N	0,875 x 96,000 x 384,000	2 9 6 6 2
09	1	707816 1	01142	N	0,875 x 96,000 x 384,000	2 9 3 5 5
09	1	707816 2	01142	N	0,875 x 96,000 x 384,000	2 9 6 6 3
09	1	707817 1	01142	N	0,875 x 96,000 x 384,000	2 9 6 6 1
09	1	707817 2	01142	N	0,875 x 96,000 x 384,000	2 9 6 6 5
10	1	706424 1	48264	N	0,875 x 120,000 x 480,000	2 9 6 6 9
10	1	706425 1	48264	N	0,875 x 120,000 x 480,000	2 9 6 6 7
10	1	706426 1	48264	N	0,875 x 120,000 x 480,000	2 9 6 6 7
10	1	706427 1	48264	N	0,875 x 120,000 x 480,000	2 9 6 6 6
10	1	707214 1	48263	N	0,875 x 120,000 x 480,000	2 9 6 6 4
10	1	707215 1	48263	N	0,875 x 120,000 x 480,000	2 9 6 6 4
11	1	706685 1	48264	N	1,000 x 96,000 x 384,000	2 9 6 7 1
11	1	706685 2	48264	N	1,000 x 96,000 x 384,000	2 9 6 7 1
11	1	706686 1	48263	N	1,000 x 96,000 x 384,000	2 9 6 7 5
11	1	706687 1	48264	N	1,000 x 96,000 x 384,000	2 9 6 7 7

N: normalized

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QMS-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A01)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilseburg
(A01)

Inspection
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 4/14 18.03.2009
No. (A07) Purchaser (A08)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204			

Material data (B01-B03)			
01	4	Weight	5.928 kgs
02	6	(B12)	14.226
03	10		36.978
04	4		11.858
05	5		11.120
06	15		69.480
07	10		35.566
08	4		22.228
09	6		24.900
10	6		38.910
11	7		33.194
13	6		50.022
14	3		17.781
15	10		92.620
16	4		44.456
17	4		37.940
18	3		44.457
Σ	107		591.664
Dimensional check and visual examination of the surface condition: without objection			

Ladle analysis (C70-C93)										
Manufacturer standard										
Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤0,20	0,16-0,40	0,85-1,20	≤0,010	≤0,003		≥0,020	≤0,30	≤0,20	≤0,30
00777	0,20 ✓	0,27 ✓	1,16 ✓	0,010 ✓	0,001 ✓	0,005	0,033	0,02 ✓	0,03 ✓	0,05 ✓
01142	0,17 ✓	0,35 ✓	1,15 ✓	0,010 ✓	0,001 ✓	0,004	0,050	0,01 ✓	0,04 ✓	0,19 ✓
48263	0,16 ✓	0,35 ✓	1,17 ✓	0,009 ✓	0,001 ✓	0,004	0,042	0,03 ✓	0,03 ✓	0,18 ✓
Heat No. (B07)	Mo %	V %	Ti %	Nb %	B %	Ca %	O ppm	Nb+V %	EV1 1) %	EV2 2) %
	≤0,13	≤0,015	≤0,01	≤0,02	≤0,0005	≤0,008	≤80	≤0,03	≤0,50	
00777	0,00 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0002	0,001	14	0,02	0,07	0,40
01142	0,00 ✓	0,002 ✓	0,00 ✓	0,02 ✓	0,0002	0,002	13	0,02	0,07	0,38
48263	0,01 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0002	0,002	13	0,02	0,09	0,38
1) EV1: Nb+V+Ti+Cu+Mo+Cr 2) EV2: CEV=C+Mn/6+Mo/5+Ni/16+Cr/5+V/5+Cu/15										

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

Trademark
(A04)

Ilseburger Grobblech GmbH
Vockensdorf Weg 10
D-38071 Ilseburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

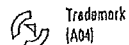
Cyron

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) 586433 Page 5/14 Date 18.03.2009
No. (A07) 605/6281 Purchaser (A08) Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 Customer (A06) Cessco Steel NEW WESTMINSTER KANADA	
Product (B01) Heavy plate	Works order No. (A08) 0000037106 Inspection (A05) WS	
Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Ladle analysis (C73-C08) Manufacturer standard										
Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤0,20	0,15-0,45	0,85-1,20	≤0,010	≤0,003		≥0,020	≤0,30	≤0,20	≤0,30
48264	0,16 ✓	0,35 ✓	1,18 ✓	0,010 ✓	0,001 ✓	0,003	0,050	0,02 ✓	0,05 ✓	0,20 ✓
48266	0,20 ✓	0,24 ✓	1,14 ✓	0,010 ✓	0,002 ✓	0,003	0,041	0,02 ✓	0,04 ✓	0,06 ✓
52908	0,18 ✓	0,35 ✓	1,14 ✓	0,007 ✓	0,0002 ✓	0,003	0,043	0,12 ✓	0,04 ✓	0,18 ✓
53282	0,16 ✓	0,33 ✓	1,10 ✓	0,010 ✓	0,001 ✓	0,004	0,049	0,02 ✓	0,03 ✓	0,17 ✓
53283	0,20 ✓	0,24 ✓	1,14 ✓	0,010 ✓	0,002 ✓	0,003	0,042	0,02 ✓	0,03 ✓	0,04 ✓
Heat No. (B07)	Mo %	V %	Ti %	Nb %	B %	Ca %	O ppm	Nb+V %	EV1 1) %	EV2 2) %
	≤0,13	≤0,015	≤0,01	≤0,02	≤0,0005	≤0,006	≤50	≤0,03	≤0,50	
48264	0,00 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0002	0,002	15	0,02	0,09	0,38
48266	0,00 ✓	0,003 ✓	0,00 ✓	0,02 ✓	0,0001	0,001	14	0,02	0,08	0,40
52908	0,00 ✓	0,002 ✓	0,00 ✓	0,02 ✓	0,0001	0,001	7	0,02	0,18	0,40
53282	0,00 ✓	0,002 ✓	0,01 ✓	0,02 ✓	0,0002	0,001	12	0,02	0,08	0,36
53283	0,00 ✓	0,004 ✓	0,00 ✓	0,02 ✓	0,0001	0,001	14	0,02	0,07	0,40
1) EV1: Nb+V+Ti+Cu+Mo+Cr 2) EV2: C+Mn+Si+Mo+Ni+V+Cr+P+V+Cu+Ni										
Steelmaking process: Basic oxygen process (C70)										

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1999



Ilseburger Grobblech GmbH
Vackensiedler Weg 10
D-38671 Ilseburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyxon



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 6/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Check analysis (C70-C89)

Specimen No. (C03)	Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %
		≤0,20	0,13-0,45	0,78-1,30	≤0,020	≤0,005			≤0,30
693095 *)	00777	0,18	0,29	1,16	0,010	0,002	0,004	0,027	0,01
705462 *)	01142	0,17	0,32	1,16	0,015	0,001	0,003	0,054	0,01
706439	48263	0,17	0,34	1,14	0,006	0,002	0,005	0,039	0,03
706427	48264	0,16	0,32	1,15	0,008	0,000	0,002	0,043	0,01
707076	48266	0,19	0,24	1,17	0,013	0,003	0,003	0,037	0,03
710423	52908	0,20	0,33	1,14	0,007	0,000	0,004	0,045	0,11
708823	53282	0,14	0,35	1,11	0,008	0,001	0,002	0,058	0,02
708898	53283	0,18	0,22	1,11	0,010	0,001	0,003	0,045	0,02
Specimen No. (C00)	Heat No. (B07)	Cr %	Ni %	Mo %	V %	Ti %	Nb %	B %	Ca %
		≤0,20	≤0,30	≤0,13	≤0,015	≤0,010	≤0,02	≤0,0005	≤0,008
693095 *)	00777	0,03	0,06	0,00	0,002	0,002	0,02	0,0002	0,001
705462 *)	01142	0,03	0,20	0,00	0,000	0,007	0,02	0,0003	0,002
706439	48263	0,04	0,18	0,00	0,003	0,003	0,02	0,0001	0,002
706427	48264	0,06	0,20	0,01	0,002	0,003	0,02	0,0001	0,003
707076	48266	0,05	0,06	0,01	0,004	0,005	0,02	0,0002	0,002
710423	52908	0,03	0,19	0,01	0,002	0,005	0,02	0,0000	0,002
708823	53282	0,03	0,17	0,00	0,002	0,003	0,02	0,0001	0,003
708898	53283	0,03	0,03	0,00	0,005	0,003	0,02	0,0000	0,002
Specimen No. (C00)	Heat No. (B07)	Nb+V %	EV1 1) %	EV2 2) %					
			≤0,50						
693095 *)	00777	0,022	0,06	0,38					
705462 *)	01142	0,020	0,07	0,38					
706439	48263	0,023	0,10	0,38					
706427	48264	0,022	0,11	0,38					
707076	48266	0,024	0,12	0,40					
710423	52908	0,022	0,18	0,42					
708823	53282	0,022	0,08	0,34					
708898	53283	0,025	0,08	0,38					

1) EV1: Nb+V+Ti+Cu+Mo+Cr

2) The sample product is not part of the delivery

2) EV2: CEV=C+Mn/6+Mo/6+Ni/16+Cu/5+V/5+Co/15

Grain size according to ASTM E112: 7 and finer

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1999



Trademark
(A01)

Ilsenburger Grobblech GmbH
Vockenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) 586433 Page 7/14 Date 18.03.2009
No. (A07) 605/6281 Purchaser (A06) Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A05) Cessco Steel NEW WESTMINSTER KANADA	Works order No. 0000037106 (A09) Inspection (A06) WS
Product (B01) Heavy plate		
Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

"Produced with sulfid shape control."

Material is vacuum degassed

Fully killed

Tensile test (C10-C25)

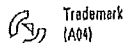
Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B06)	Type (C10)	Yield strength (C11) Rp0,2 N/mm2 ≥280	Tensile strength (C12) Rm N/mm2 485-820	Elongation (C13) 8in % ≥17		
		1) 2) 3)	4)	5)	6)					
706424	48264	K6G	Q	N	P	355	514	26		
706425	48264	K6G	Q	N	P	355	512	27		
706426	48264	K6G	Q	N	P	356	513	25		
706427	48264	K6G	Q	N	P	360	511	29		
706437	48264	K6G	Q	N	P	368	515	28		
706438	48264	K6G	Q	N	P	365	516	25		
706439	48263	K6G	Q	N	P	372	516	24		
706440	48264	K6G	Q	N	P	361	514	23		
706685	48264	K6G	Q	N	P	366	512	27		
706686	48263	K6G	Q	N	P	367	513	26		
706687	48264	K6G	Q	N	P	370	512	26		
706688	48264	K6G	Q	N	P	364	513	26		
706876	48263	K6G	Q	N	P	389	537	25		
706877	48263	K6G	Q	N	P	363	507	26		
707075	48266	K6G	Q	N	P	326	501	31		
707076	48266	K6G	Q	N	P	324	503	32		
707214	48263	K6G	Q	N	P	364	511	25		
707215	48263	K6G	Q	N	P	358	510	25		
707233	48266	K6G	Q	N	P	351	516	26		
707234	48266	K6G	Q	N	P	350	520	28		
707235	48266	K6G	Q	N	P	351	520	28		
707236	48266	K6G	Q	N	P	339	516	25		
707815	01142	K6G	Q	N	P	370	529	28		
707816	01142	K6G	Q	N	P	365	525	26		
707817	01142	K6G	Q	N	P	385	533	25		
707820	48263	K6G	Q	N	P	366	516	24		
707821	48263	K6G	Q	N	P	362	511	23		

- 1) K: Top
2) 8: 1/8 Width
3) 0: Thickness of product

- 4) Q: transversal
5) N: normalized
6) P: prismatic

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A04)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilseburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 8/14 18.03.2009
No. (A01) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Tensile test (C10-C28)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type (C10)	Yield strength (C11) Rp0,2 N/mm2 ≥ 280	Tensile strength (C12) Rm N/mm2 485 - 620	Elongation (C13) δ in % ≥ 17		
		1) 2) 3)	4)	5)	6)					
707825	48266	K6G	Q	N	P	336	508	28		
707826	48266	K6G	Q	N	P	327	503	26		
708823	53282	K6G	Q	N	P	388	520	20		
708824	53282	K6G	Q	N	P	397	522	22		
708856	53282	K6G	Q	N	P	371	508	27		
708857	53282	K6G	Q	N	P	368	508	25		
708858	53282	K6G	Q	N	P	372	512	24		
708859	53282	K6G	Q	N	P	370	508	26		
708860	53282	K6G	Q	N	P	363	502	24		
708873	48264	K6G	Q	N	P	349	508	24		
708874	48264	K6G	Q	N	P	354	511	25		
708883	48263	K6G	Q	N	P	368	515	24		
708884	48263	K6G	Q	N	P	381	519	25		
708885	48263	K6G	Q	N	P	376	518	24		
708886	48263	K6G	Q	N	P	372	517	24		
708892	53283	K6G	Q	N	P	368	530	24		
708893	53283	K6G	Q	N	P	373	531	27		
708894	53283	K6G	Q	N	P	360	531	26		
708895	53283	K6G	Q	N	P	373	533	27		
708896	53283	K6G	Q	N	P	367	532	30		
708897	53283	K6G	Q	N	P	359	527	24		
708898	53283	K6G	Q	N	P	366	528	29		
709028	48266	K6G	Q	N	P	322	504	27		
709029	48266	K6G	Q	N	P	323	503	29		
709030	00777	K6G	Q	N	P	333	513	29		
709039	53282	K6G	Q	N	P	339	494	31		
709040	53282	K6G	Q	N	P	342	492	30		
709041	53282	K6G	Q	N	P	343	495	30		
709042	53282	K6G	Q	N	P	339	492	29		
709043	53282	K6G	Q	N	P	339	491	26		
709044	48264	K6G	Q	N	P	354	510	29		
709898	53282	K6G	Q	N	P	360	500	22		
709899	53282	K6G	Q	N	P	362	500	23		
710134	53282	K6G	Q	N	P	353	500	28		

1) K: Top
2) B: 1/8 Width
3) G: Thickness of product
4) Q: transversal
5) N: normalized
6) P: prismatic

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QMS-System: Certification as per ISO 9001 since 28 February 1990

Trademark
(A01)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 9/14 18.03.2009
No. (A07) Purchaser (A08)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Tensile test (C10-C23)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type (C10)	Yield strength (C11) Rp0.2 N/mm2 ≥ 200	Tensile strength (C12) Rm N/mm2 485 - 820	Elongation (C13) 8 in % ≥ 17		
710135	53282	K6G	Q	N	P	363	502	27		
710421	52908	K6G	Q	N	P	359	517	30		
710422	52908	K6G	Q	N	P	364	523	26		
710423	52908	K6G	Q	N	P	357	516	27		
710721	53282	K6G	Q	N	P	363	519	24		
710722	53282	K6G	Q	N	P	356	508	26		
710725	53283	K6G	Q	N	P	362	528	25		
710726	53283	K6G	Q	N	P	357	523	27		
710727	53283	K6G	Q	N	P	356	525	25		

- 1) K: Top
2) S: 1/8 Width
3) G: Thickness of product

- 4) Q: Transversal
5) N: normalized
6) P: prismatic

Impact test (C40-C48)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type of specimen (C40-C41)	Temperature (C03) °F	Impact energy (C42-C43) 1 2 3 MW 6) ftlbf ftlbf ftlbf ftlbf ≥ 15 ≥ 20			
706424	48264	K6O	L	N	Charpy V-notch	-051	212	125	223	187
706425	48264	K6O	L	N	Charpy V-notch	-051	131	128	113	124
706426	48264	K6O	L	N	Charpy V-notch	-051	172	123	119	138
706427	48264	K6O	L	N	Charpy V-notch	-051	161	221	201	194
706437	48264	K6O	L	N	Charpy V-notch	-051	128	135	149	137
706438	48264	K6O	L	N	Charpy V-notch	-051	114	162	103	126
706439	48263	K6O	L	N	Charpy V-notch	-051	134	124	155	138
706440	48264	K6O	L	N	Charpy V-notch	-051	108	133	173	138
706685	48264	K6V	L	N	Charpy V-notch	-051	101	207	101	136

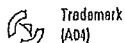
- 1) K: Top
2) S: 1/8 Width
3) O: near surface
V: 1/4 Thickness

- 4) L: longitudinal
5) N: normalized
6) MW: Average

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A04)

Ilsenburger Grobblech GmbH
Vockenstedter Weg 10
D-35871 Ilsenburg
(A01)



Inspection stamp
(Z03)

Inspection Representative
(Z02)

Cyron

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 10/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 Customer (A08)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08)	0000037106
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		
		Inspection (A05)	WS

Impact test (C40-C43)										
Specimen No. (B00)	Heat No. (B07)	Location (C01)	Dirct. (C02)	Cond. (B05)	Type of specimen (C40-C41)	Temperature (C03) ° F	Impact energy (C42-C43)			
							1	2	3	MW 6)
							ft.lbf ≥ 15			ft.lbf ≥ 20
706686	48263	K6V	L	N	Charpy V-notch	-051	107	114	196	139
706687	48264	K6V	L	N	Charpy V-notch	-051	223	148	215	195
706688	48264	K6V	L	N	Charpy V-notch	-051	97	168	209	158
706876	48263	K60	L	N	Charpy V-notch	-051	131	79	156	122
706877	48263	K60	L	N	Charpy V-notch	-051	137	107	202	149
707075	48266	K6V	L	N	Charpy V-notch	-051	26	73	64	55
707076	48266	K6V	L	N	Charpy V-notch	-051	55	29	44	43
707214	48263	K60	L	N	Charpy V-notch	-051	142	141	103	128
707215	48263	K60	L	N	Charpy V-notch	-051	198	190	194	194
707233	48266	K6V	L	N	Charpy V-notch	-051	62	44	66	58
707234	48266	K6V	L	N	Charpy V-notch	-051	74	41	42	52
707235	48266	K6V	L	N	Charpy V-notch	-051	28	60	33	41
707236	48266	K6V	L	N	Charpy V-notch	-051	62	55	17	44
707815	01142	K60	L	N	Charpy V-notch	-051	113	93	117	108
707816	01142	K60	L	N	Charpy V-notch	-051	108	131	126	122
707817	01142	K60	L	N	Charpy V-notch	-051	65	117	111	97
707820	48263	K60	L	N	Charpy V-notch	-051	201	117	202	173
707821	48263	K60	L	N	Charpy V-notch	-051	181	151	174	169
707825	48266	K6V	L	N	Charpy V-notch	-051	65	22	63	50
707826	48266	K6V	L	N	Charpy V-notch	-051	63	66	52	60
708823	53282	K60	L	N	Charpy V-notch	-051	38	41	72	51
708824	53282	K60	L	N	Charpy V-notch	-051	47	63	59	56
708856	53282	K60	L	N	Charpy V-notch	-051	176	209	184	190
708857	53282	K60	L	N	Charpy V-notch	-051	102	187	112	133
708858	53282	K60	L	N	Charpy V-notch	-051	95	88	88	90
708859	53282	K60	L	N	Charpy V-notch	-051	190	127	197	171
708860	53282	K60	L	N	Charpy V-notch	-051	201	112	121	145
708873	48264	K60	L	N	Charpy V-notch	-051	52	20	77	49
708874	48264	K60	L	N	Charpy V-notch	-051	111	59	105	92
708883	48263	K60	L	N	Charpy V-notch	-051	108	108	79	98
708884	48263	K60	L	N	Charpy V-notch	-051	143	132	148	141
708885	48263	K60	L	N	Charpy V-notch	-051	195	126	139	153
708886	48263	K60	L	N	Charpy V-notch	-051	117	119	128	122

1) K: Top
2) S: 1/6 Width
3) O: non surface
V: 1/4 Thickness

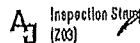
4) L: longitudinal
5) N: normalized
6) MW: Average

We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1999

 Trademark
(A01)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilseburg
(A01)

 Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 11/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A09) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Impact test (C40-C49)										
Specimen No. (C00)	Heat No. (B07)	Location (C01)	Direct. (C02)	Cond. (B05)	Type of specimen (C40-C41)	Temperature (C03) °F	Impact energy (C42-C43)			
							1 ft.lbf ≥ 15	2	3	MW 6) ft.lbf ≥ 20
708892	53283	K6V	L	N	Charpy V-notch	-051	86	16	87	63
708893	53283	K6V	L	N	Charpy V-notch	-051	61	57	55	58
708894	53283	K6V	L	N	Charpy V-notch	-051	69	64	73	69
708895	53283	K6V	L	N	Charpy V-notch	-051	57	19	55	44
708896	53283	K6V	L	N	Charpy V-notch	-051	25	77	84	62
708897	53283	K6V	L	N	Charpy V-notch	-051	15	55	52	41
708898	53283	K6V	L	N	Charpy V-notch	-051	72	84	61	72
709028	48266	K6V	L	N	Charpy V-notch	-051	49	57	21	42
709029	48266	K6V	L	N	Charpy V-notch	-051	50	29	44	41
709030	00777	K6V	L	N	Charpy V-notch	-051	64	29	68	54
709039	53282	K6V	L	N	Charpy V-notch	-051	105	209	102	139
709040	53282	K6V	L	N	Charpy V-notch	-051	89	146	145	126
709041	53282	K6V	L	N	Charpy V-notch	-051	131	122	119	124
709042	53282	K6V	L	N	Charpy V-notch	-051	217	127	215	187
709043	53282	K6V	L	N	Charpy V-notch	-051	88	191	142	140
709044	48264	K6V	L	N	Charpy V-notch	-051	238	128	153	173
709898	53282	K6O	L	N	Charpy V-notch	-051	218	153	232	201
709899	53282	K6O	L	N	Charpy V-notch	-051	190	183	114	162
710134	53282	K6O	L	N	Charpy V-notch	-051	205	197	150	184
710135	53282	K6O	L	N	Charpy V-notch	-051	91	102	86	93
710421	52908	K6V	L	N	Charpy V-notch	-051	76	60	82	73
710422	52908	K6V	L	N	Charpy V-notch	-051	86	108	99	97
710423	52908	K6V	L	N	Charpy V-notch	-051	100	114	103	105
710721	53282	K6O	L	N	Charpy V-notch	-051	65	74	92	77
710722	53282	K6O	L	N	Charpy V-notch	-051	103	127	147	125
710725	53283	K6V	L	N	Charpy V-notch	-051	80	19	47	49
710726	53283	K6V	L	N	Charpy V-notch	-051	53	77	65	65
710727	53283	K6V	L	N	Charpy V-notch	-051	63	58	27	49

1) K: Top
2) 6: 1/6 Width
3) 0: near surface
V: 1/4 Thickness

4) L: longitudinal
5) N: normalized
6) MW: Average

Specimen size:
5,0 x 10 x 55 mm (from 5,00 mm up to 8,99 mm plate thickness)
7,5 x 10 x 55 mm (from 9,00 mm to 11,99 mm plate thickness)
10 x 10 x 55 mm (from 12,00 mm plate thickness)

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

DM-System: Certification as per ISO 9001 since 28 February 1990

Trademark
(A04)

Ilsenburger Grobblech GmbH
Vockenstedter Weg 10
D-38071 Ilsenburg
(A01)

Inspection Representative
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) 586433 Page 12/14 Date 18.03.2009
No. (A07) 605/6281 Purchaser (A08) Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A08) Cessco Steel NEW WESTMINSTER KANADA	Works order No. (A09) 0000037106 Inspection (A05) WS
Product (B01) Heavy plate		
Steel grade and terms of delivery (B02-B03) SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Hardness test (C30-C39)

Specimen No. (C00)	Heat No. (B07)	Location (C01)	Cond. (B06)	Type of specimen (C30)	Hardness (C31-C32)			
					1	2	3	MW 4)
693095 *)	00777	K6	N	HV10	162	168	164	165
706424	48264	K6	N	HB30	155	154	155	155
706425	48264	K6	N	HB30	149	152	151	151
706426	48264	K6	N	HB30	152	150	153	152
706427	48264	K6	N	HV10	156	157	160	158
706427	48264	K6	N	HB30	151	154	150	152
706437	48264	K6	N	HB30	150	153	151	151
706438	48264	K6	N	HB30	151	156	155	154
706439	48263	K6	N	HV10	162	161	164	162
706439	48263	K6	N	HB30	151	150	153	151
706440	48264	K6	N	HB30	154	154	153	154
706685	48264	K6	N	HB30	150	152	149	150
706686	48263	K6	N	HB30	153	154	154	154
706687	48264	K6	N	HB30	153	155	150	153
706688	48264	K6	N	HB30	154	154	155	154
706876	48263	K6	N	HB30	161	162	162	162
706877	48263	K6	N	HB30	151	152	151	151
707075	48266	K6	N	HB30	151	151	150	151
707076	48266	K6	N	HV10	160	160	154	158
707076	48266	K6	N	HB30	151	149	147	149
707214	48263	K6	N	HB30	154	153	151	153
707215	48263	K6	N	HB30	149	152	149	150
707233	48266	K6	N	HB30	153	155	151	153
707234	48266	K6	N	HB30	157	155	154	155
707235	48266	K6	N	HB30	157	151	156	155
707236	48266	K6	N	HB30	155	155	152	154
707815	01142	K6	N	HB30	154	158	156	156
707816	01142	K6	N	HB30	154	155	159	156
707817	01142	K6	N	HV10	170	165	165	167
707817	01142	K6	N	HB30	155	157	160	157
707820	48263	K6	N	HB30	151	152	156	153
707821	48263	K6	N	HB30	150	154	149	151
707825	48266	K6	N	HB30	152	152	153	152
707826	48266	K6	N	HB30	147	152	148	149
708823	53282	K6	N	HV10	163	163	164	163
708823	53282	K6	N	HB30	155	154	154	154

1) K: Top
2) S: 1/8 Width
*) The sample product is not part of the delivery

3) N: normalized
4) MW: Average

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

Trademark
(A04)

Ilseburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilseburg
(A01)

Inspection Representative
(Z02)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 13/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 Customer (A08)	No. (A07) Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC; K-04204		

Hardness test (C30-C39)

Specimen No. (C00)	Heat No. (D07)	Location (C01)	Cond. (B05)	Type of specimen (C30)	Hardness (C31-C32)				
					1	2	3	MW 4)	
708824	53282	K6	N	HB30	155	158	155	156	
708856	53282	K6	N	HB30	149	153	153	152	
708857	53282	K6	N	HB30	148	154	153	152	
708858	53282	K6	N	HB30	151	152	153	152	
708859	53282	K6	N	HB30	153	153	151	152	
708860	53282	K6	N	HB30	148	148	146	147	
708873	48264	K6	N	HB30	148	151	152	150	
708874	48264	K6	N	HB30	150	149	149	149	
708883	48263	K6	N	HB30	152	153	152	152	
708884	48263	K6	N	HB30	155	153	153	154	
708885	48263	K6	N	HB30	153	156	156	155	
708886	48263	K6	N	HB30	151	153	152	152	
708892	53283	K6	N	HB30	158	159	156	158	
708893	53283	K6	N	HB30	155	160	159	158	
708894	53283	K6	N	HB30	158	155	157	157	
708895	53283	K6	N	HB30	158	158	161	159	
708896	53283	K6	N	HB30	159	159	156	158	
708897	53283	K6	N	HB30	157	156	156	156	
708898	53283	K6	N	HV10	164	166	164	165	
708898	53283	K6	N	HB30	156	157	158	157	
709028	48266	K6	N	HB30	148	150	149	149	
709029	48266	K6	N	HB30	152	150	149	150	
709030	00777	K6	N	HB30	152	150	155	152	
709039	53282	K6	N	HB30	145	147	147	146	
709040	53282	K6	N	HB30	146	147	147	147	
709041	53282	K6	N	HB30	147	147	149	148	
709042	53282	K6	N	HB30	147	147	144	146	
709043	53282	K6	N	HB30	148	148	147	148	
709044	48264	K6	N	HB30	150	148	152	150	
709898	53282	K6	N	HB30	147	149	150	149	
709899	53282	K6	N	HB30	146	151	149	149	
710134	53282	K6	N	HB30	151	150	147	149	
710135	53282	K6	N	HB30	149	148	148	148	
710421	52908	K6	N	HB30	152	152	153	152	
710422	52908	K6	N	HB30	156	158	155	156	
710423	52908	K6	N	HV10	161	161	160	161	

1) K: Top
2) S: 1/6 Width
*) The sample product is not part of the delivery

3) N: normalized
4) MW: Average

We hereby certify that the delivered material complies with the terms of the order.

(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990



Trademark
(A04)

Ilseburger Grobblech GmbH
Vockstedter Weg 10
D-38871 Ilseburg
(A01)



Inspection Stamp
(Z03)

Inspection Representative
(Z02)

Cyron



ILSENBURGER
GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Inspection certificate 3.1/3.1.B DIN EN 10204 (A02)		No. (A03) Page Date	586433 14/14 18.03.2009
No. (A07) Purchaser (A06)	605/6281 Salzgitter Mannesmann International GmbH 40409 Düsseldorf	26.01.2009 No. (A07) Customer (A06)	Cessco Steel NEW WESTMINSTER KANADA
Product (B01)	Heavy plate	Works order No. (A08) Inspection (A05)	0000037106 WS
Steel grade and terms of delivery (B02-B03)	SA 516 Gr.70 MTLTV / A 516 Gr.70 MTLTV SA 516M Gr.485 MTLTV / A 516M Gr.485 MTLTV ASME sect. II part A ed. 2007, add.2008 ASME SA 20 (M), SA 516 (M) Cessco StkChem1102R01 04/2007 ASTM A 20 (M)-06, A 516 (M)-06 VANCOUVER / NWBC, K-04204		

Hardness test (C30-C39)									
Specimen No. (C00)	Heat No. (B07)	Location (C01)	Cond. (B05)	Type of specimen (C30)	Hardness (C31-C32)				
					1	2	3	MW 4)	
710423	52908	K6	N	HB30	152	152	153	152	
710721	53282	K6	N	HB30	152	155	154	154	
710722	53282	K6	N	HB30	151	149	152	151	
710725	53283	K6	N	HB30	158	160	158	159	
710726	53283	K6	N	HB30	153	158	156	156	
710727	53283	K6	N	HB30	154	156	156	155	
1) K: Top					3) N: normalized				
2) S: 1/8 Width					4) MW: Average				
*) The sample product is not part of the delivery									

For results of microanalysis see appendix to this certificate.

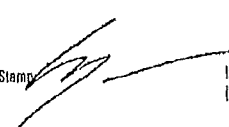
Heat treatment: Temperature : 910 +/-10°C
Soaking time: 30 min/inch
Cooling in still air

We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

 Trademark
(A04)

Ilseburger Grobblech GmbH
Vackenstedter Weg 10
D-38871 Ilseburg
(A01)

 Inspection Stamp
(Z03)


Inspection Representative
(Z02)
Cyron

** Lift lug*

RUKKI

VASTAANOTTOTODISTUS INSPECTION CERTIFICATE

EN 10 204-3.1 (2004)

A 251
24

Ostaja / Purchaser OLBERT METAL SALES LIMITED ONTARIO L5T 2J8 CANADA Tilaus nro / Order No. 1574		Vastaanottaja / Consignee OLBERT METAL SALES LIMITED ONTARIO L5T 2J8 CANADA Asiakkaan merkki / Shipping mark 25098		Päivämäärä / Date 26.10.2009 Valmistajan merkki / Mark of the Manufacturer	
Tilauksen vahvistus / Order Confirmation 25098		Laivaus / Shipping DONGEBORG		Tarkastajan leima / Stamp of work's Inspector MAK	
Todistuksen / Certificate 31		Laivauksen / Quality Stamping SA516GR70MTLTV		Vastanottajan leima / Stamp of Surveyor Muut leimaukset / Other Stamps	
Tuotteen / Product HEAVY PLATES GR 70 ASME SA516-07/ASTM A516-06 Laatuvaatimukset / Quality Specifications PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/AOD-08A SA20		Sulatus nro / levy nro / Cast No. / Plate No. XXXXX XXX XXX		Tekniset vaatimukset / Technical terms of Delivery and/or Official Reg. ASME SA-20 ED. 2008A	
Positiiv. / Millim. / Dimensions mm Item / Dimensions mm / Markki / Markki		Kpl / Pcs		Paino kg / Weight kg	
CHARTER-V IMPACT TEST PER SA20/TABLE A2.1.5 NORMALIZED STEEL PLATES		Sulatus nro / levy nro / Cast plate No. HT# P/1#		SP nro / SP No. SP nro / SP No.	
003	9.53 X 3048 X 12192	2	5560	79958	051 051
004	12.70 X 3048 X 12192	2	7410	79956	011 011
004	12.70 X 3048 X 12192	2	7410	79956	013 013
004	12.70 X 3048 X 12192	2	7410	79956	021 021
004	12.70 X 3048 X 12192	2	7410	79956	024 024
004	12.70 X 3048 X 12192	2	7410	79956	031 031
004	12.70 X 3048 X 12192	2	7410	79956	032 032
004	12.70 X 3048 X 12192	2	7410	79956	033 033
004	12.70 X 3048 X 12192	2	7410	79956	051 051
004	12.70 X 3048 X 12192	2	7410	79956	052 052
004	12.70 X 3048 X 12192	2	7410	79956	053 053
005	15.88 X 3048 X 12192	1	4632	79969	011 011
005	15.88 X 3048 X 12192	1	4632	79969	013 013
005	15.88 X 3048 X 12192	1	4632	79969	021 021
005	15.88 X 3048 X 12192	1	4632	79969	022 022
005	15.88 X 3048 X 12192	1	4632	79969	024 024
006	19.05 X 3048 X 12192	1	5557	79956	041 041
006	19.05 X 3048 X 12192	1	5557	79956	042 042
006	19.05 X 3048 X 12192	1	5557	79956	043 043
006	19.05 X 3048 X 12192	1	5557	79956	044 044
006	19.05 X 3048 X 12192	1	5557	79958	011 011
006	19.05 X 3048 X 12192	1	5557	79958	012 012
006	19.05 X 3048 X 12192	1	5557	79958	013 013
006	19.05 X 3048 X 12192	1	5557	79958	014 014
006	19.05 X 3048 X 12192	1	5557	79958	031 031
006	19.05 X 3048 X 12192	1	5557	79958	036 036
007	22.23 X 2438 X 12192	1	5188	77671	041 041

Täten todistamme, että toimitus on tilausvahvistuksen mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Raabe Steel Works

Testaus ja tarkastus / Testing and Inspection

adg
 APR 12 2011

MINNA VALKAMA
 Valtuutettu tarkastaja / Authorized Inspector
 Yhtiön nimi / Company Name: RAUTARUUKKI OYJ
 Käsittely- ja varustelu / Treatment and equipment

Osoite / Address: PL 93, P.O. Box 63

Päätös / Decision: OK 2011

Tilaaaja Purchaser: OLBERT METAL SALES LIMITED
 Tilauksen nro Order No.: 1574
 Tilauksen vahvistus Order Confirmation: 25098
 Toimitusvakuutus Delivery type: TOTAL DELIVERY
 Toimitus Certificate: 31

Vastaanottaja Consignee: OLBERT METAL SALES LIMITED
 Osoite Address: P.O. Box 93, FIN-82101 RAAHE, FINLAND
 Puhelin Telephone: 020 5911, +358 20 5911
 Faksi Fax: 020 592 2736, +358 20 592 2736
 Y-tunnus Business ID: 0113276-9

Tuote Product: HEAVY PLATES
 GR 70 ASME SA516-07/ASTM A516-06
 Laatuvaatimukset Quality Specifications: PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

Asiakkaan merkki Shipping mark: 25098
 Lausumaus Quality Stamping: SA516GR70MTLTV
 Sulatus no./lely nro Cast No./Plate No.: XXXX XXXX XX XXX
 Toleranssit Tolerances: ASME SA-20 ED. 2008A

Tarkastajan leima Stamp of work's Inspector: *Mxx*
 Vastanottajan leima Stamp of Surveyor
 Muut leimaukset Other Stamps

Tekniset vaatimukset/Technical terms of Delivery and/or Official Regi

Positiio Item: 31

Normaalitiedot Dimensions mm: 12192

CHARY-V IMPACT TEST PER SA20/TABLE A2.15

NORMALIZED STEEL PLATES

Positiio Item	Normaalitiedot Dimensions mm	Merkit Mark	Kpl Pcs	Paino kg Weight kg	Sulatus lely nro Cast plate No	SP nro Sp No	UT MT	UT MT
001	6.35 X 2438 X	12192	1/4X96X480	2964	79961	031	031	
001	6.35 X 2438 X	12192		2964	79961	032	032	
001	6.35 X 2438 X	12192		2964	79961	033	033	
001	6.35 X 2438 X	12192		2964	79961	034	034	
001	6.35 X 2438 X	12192		1482	79961	035	035	
001	6.35 X 2438 X	12192		2964	79961	036	036	
001	6.35 X 2438 X	12192		2964	79961	037	037	
001	6.35 X 2438 X	12192		2964	79961	038	038	
002	6.35 X 3048 X	12192	1/4X120X480	1852	79072	012	012	
002	6.35 X 3048 X	12192		1852	79072	013	013	
002	6.35 X 3048 X	12192		1852	79072	014	014	
002	6.35 X 3048 X	12192		1852	79072	015	015	
002	6.35 X 3048 X	12192		1852	79072	016	016	
002	6.35 X 3048 X	12192		1852	79072	017	017	
002	6.35 X 3048 X	12192		1852	79072	018	018	
002	6.35 X 3048 X	12192		1852	79072	019	019	
002	6.35 X 3048 X	12192		1852	79699	023	023	
002	6.35 X 3048 X	12192		1852	79699	024	024	
002	6.35 X 3048 X	12192		1852	79699	025	025	
002	6.35 X 3048 X	12192		1852	79699	033	033	
002	6.35 X 3048 X	12192		1852	79699	052	052	
002	6.35 X 3048 X	12192		1852	79699	053	053	
003	9.53 X 3048 X	12192	3/8X120X480	1852	79699	062	062	
003	9.53 X 3048 X	12192		5560	79956	051	051	
003	9.53 X 3048 X	12192		5560	79956	052	052	
003	9.53 X 3048 X	12192		5560	79956	053	053	
003	9.53 X 3048 X	12192		5560	79956	054	054	

Täien todistamme, että toimitus on tilausvahvistuksen mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Testaus ja tarkastus Testing and Inspection

M. Cantu

MINNA VALKAMA
 Vastuullu tarkastaja Authorized Inspector
 Yhtiön nimi Company Name: RAUTARUUKKI OYJ
 Katoaika Registered Office: HELSINKI

Osoite Address: P.O. Box 93, FIN-82101 RAAHE, FINLAND
 Puhelin Telephone: 020 5911, +358 20 5911
 Faksi Fax: 020 592 2736, +358 20 592 2736
 Y-tunnus Business ID: 0113276-9

RAUTAKI

Tiaja Purchaser

OLBERT METAL SALES LIMITED
ONTARIO L5T 2J8 CANADA

Tilaus nro Order No

Tilausvahvistus Order Confirmation
25098

Podistus Certificate
31
Laivaus Shipping
DONGERORG

Laetitia/maus Quality Stamping
SAE16CD70MTI TV

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OLBERT METAL SALES LIMITED
ONTARIO L5T 2J8 CANADA
Asiölkään merkki Shipping mark

Päivämäärä	Date
226.10.2009	
Valmistajan merkki	Mark of the Manufacturer

31 Folmitus;yppl Delivery type
TOTAL DELIVERY

HEAVY PLATES

SA516-06
Grade 70
ASTM A516-07

Quality Specifications

PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

Posilio Item	Mitat mm Dimensions mm	Markki Mark	Kpl Pcs	Painokp Weight kg	Sutatus leev nro Cart Date No	SP nro SP No	UT UT	MT MT
CHARPY-V IMPACT TEST PER SA20/TABLE A2.15								
NORMALIZED STEEL PLATES								
007	22.23 X 2438	X	12192	7/8X96X480	5188 77871 043	043		
007	22.23 X 2438	X	12192		5188 77871 044	044		
007	22.23 X 2438	X	12192		5188 78525 332	332		
007	22.23 X 2438	X	12192		5188 79068 111	111		
007	22.23 X 2438	X	12192		5188 79115 021	021		
007	22.23 X 2438	X	12192		5188 79115 022	022		
007	22.23 X 2438	X	12192		5188 79115 023	023		
007	22.23 X 2438	X	12192		5188 79115 024	024		
008	22.23 X 3048	X	12192	7/8x120X480	5188 79115 044	044		
008	22.23 X 3048	X	12192		6485 79968 011	011		
008	22.23 X 3048	X	12192		6485 79968 012	012		
008	22.23 X 3048	X	12192		6485 79968 013	013		
009	38.10 X 2438	X	9754	11/2X96X384	6485 80518 043	043		
009	38.10 X 2438	X	9754		7113 78759 014	014		
009	38.10 X 2438	X	9754		7113 78787 041	041		
009	38.10 X 2438	X	9754		7113 79824 021	021		
009	38.10 X 2438	X	9754		7113 79824 022	022		
010	38.10 X 3048	X	9754	11/2X120X384	7113 79824 023	023		
010	38.10 X 3048	X	9754		8892 79114 012	012		
010	38.10 X 3048	X	9754		8892 79824 031	031		
010	38.10 X 3048	X	9754		8892 79824 033	033		
011	63.50 X 2438	X	9754	21/2X96X384	8892 80111 041	041		
011	63.50 X 2438	X	9754		11856 79793 021	021		
011	63.50 X 2438	X	9754		11856 79793 022	022		
011	63.50 X 2438	X	9754		11856 79797 033	033		
011	63.50 X 2438	X	9754		11856 79798 011	011		

Tälän lodistamme, että toimulus on lülausvahvistuksen mukainen.

we hereby certify that the material described above has been tested and complies with the terms of the order contract.

Testaus ja tarkastus
Testing and Inspection

MINNA VALKAMÄ

Valtuutettu tarkastaja / Authorized Inspector

Shilön nimi Company Name:

Kolipsaik2 Registered Office:

On the other hand, the

PL 93, P.O. Box 93
FIN-92101 RAUHE
EINI AND

Publicin Telephone: 020 5911

Telekopio Telefaks: 020 592 2736

Vollständige Beschreibung:

Täällä todistamme, että laumius on tilausvahvistuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Y-113276-9

Tilaaja / Purchaser
OLBERT METAL SALES LIMITED
SUITE 305
Tilaus nro / Order No.
1574

Vastaanottaja / Consignee
OLBERT METAL SALES LIMITED
SUITE 305
Asiakkaan merkki / Shipping mark

Päivämäärä / Date
26.10.2009
Valmistajan merkki / Mark of the Manufacturer

Lehti / Grade
GR 70

Laatuvaatimukset / Quality Specifications

PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

Lisävaatimukset / Additional requirements

Jalkuravalellus happipäästä
Oxygen steel, continuous casting

N 920C, T=1.1(MIN)XTH(CKN)(MM)																			
Pos Item	Sulatus, K: erä nro Cast test No	T-tila Cond	Velokoe / Tensile test										Taivutuskoee Bend test		Huom No				
			K2	F	RP02 KSI	RT05 KSI	REL KSI	REH KSI	1	RM, KSI 2	3	A % 50 80 200	REH /RM	RM * A5		1	RAZ % 2 3	Keskiläro Average	
001	79961	031	N	F1	54							77							25
001	79961	032	N	F1	54							78							26
001	79961	033	N	F1	55							79							26
001	79961	034	N	F1	54							76							26
001	79961	035	N	F1	54							77							25
001	79961	036	N	F1	54							76							26
001	79961	037	N	F1	55							77							26
001	79961	038	N	F1	55							77							27
002	79072	012	N	F1	55							77							26
002	79072	013	N	F1	54							78							24
002	79072	014	N	F1	55							78							26
002	79072	015	N	F1	55							77							26
002	79072	016	N	F1	54							77							25
002	79072	017	N	F1	55							78							29
K2, F1=TOP TS&NSV																			

K2 F1=TOP,TRANSV.

N=NORMALIZED

Pos. Item	Sulatus. Cast test No	Tila Cond	Sitäsmurto / Ductile fracture										Huom. Nb
			K3	F	1	2	3	Keskiläro Average	1	2	3	Keskiläro Average	
001	79961	031	117	-051	61	74	65	66					
001	79961	032	117	-051	64	55	72	64					
001	79961	033	117	-051	95	68	62	75					
001	79961	034	117	-051	89	78	100	89					
001	79961	035	117	-051	75	65	66	69					
001	79961	036	117	-051	80	69	77	75					
001	79961	037	117	-051	76	55	69	66					
001	79961	038	117	-051	81	103	74	86					
002	79072	012	117	-051	77	71	71	73					
002	79072	013	117	-051	76	84	80	80					
002	79072	014	117	-051	82	68	103	84					
002	79072	015	117	-051	65	77	72	72					
002	79072	016	117	-051	75	69	72	72					
002	79072	017	117	-051	89	73	69	77					

K3: 117=OH-VIIISO-VIIITX10.TOP, LONGIT, KV600

Raate Steel Works

Testaus ja tarkastus / Testing and inspection

Minna Valkama
Valtuutettu tarkastaja / Authorized inspector

Yhtiön nimi / Company Name: RAUTARUUKKI OYJ
Kotipaikka / Registered Office: HELSINKI

Osoite / Address: PL 93, P.O. Box 93
FIN-02101 RAUHE, FINLAND

Puhelin / Telephone: 020 5811
+358 20 5911

Telekopio / Telefax: 020 592 2735
+358 20 592 2735

Y-luottamus Business ID: 0113276-9

Tämän todistuksen, että toimitus on tilausvahvistuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Tilaja Purchaser
OLBERT METAL SALES LIMITED
SUITE 305
Tilauksen nro Order No.
1574

Vastaanottaja Consignee
OLBERT METAL SALES LIMITED
SUITE 305
Asiakkaan merkki Shipping mark

Päivämäärä Date
26.10.2009
Valmistajan merkki
Mark of the Manufacturer

Laji Grade
GR 70

Liävaatimukset Additional requirements

Jalkuvavaleitus napierästä
Oxygen steel continuous casting

Laatuselitys Quality Specifications

PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

N 820C,T=1.1(MIN)XTHICKN(MM)

N 8200, 15-1, 1 (MIN) X 1 HICKIN (MM)																							
Pos. Item	Suatus. Cast. test No	T-tilla Cond	Veikoo Tensile test					Taivutuskoe Bend test					Huom Nb										
			K2	F	RP02 KSI	RT05 KSI	REL KSI	REH KSI	1	RM KSI	2	3		A %	200	REH / RM	RM * A5	1	2	3	Average	K5	D * X 1
002	79072	018	N	F1	54								77										25
002	79072	019	N	F1	54								77										26
002	79699	023	N	F1	53								76										24
002	79699	024	N	F1	54								78										25
002	79699	025	N	F1	53								77										25
002	79699	033	N	F1	54								77										27
002	79699	052	N	F1	54								77										25
002	79699	053	N	F1	53								76										28
002	79699	062	N	F1	54								77										24
003	79956	051	N	F1	53								77										28
003	79956	052	N	F1	52								76										28
003	79956	053	N	F1	52								77										26
003	79956	054	N	F1	53								77										26
003	79958	051	N	F1	53								76										25

K2: F1=TOP, TRANSV.

N-NORMALIZED

Pos Item	Suatus k:ä r:ä no Cast. test No	Istukoe Impact test		Silekämurtuma Ductile fracture			Erikokokeet Special tests					Huom No	Päästö Tempering F	
		K3	F	1	2	3	Keskianvo Average	K4	F	1	2			Keskianvo Average
002	79072	018	117	-051	92	76	82	63						
002	79072	019	117	-051	71	80	83	78						
002	79699	023	117	-051	74	79	79	77						
002	79699	024	117	-051	69	66	67	67						
002	79699	025	117	-051	71	69	84	74						
002	79699	033	117	-051	77	76	77	77						
002	79699	052	117	-051	74	66	76	72						
002	79699	053	117	-051	76	92	73	80						
002	79699	062	117	-051	84	99	90	91						
003	79956	051	115	-051	74	101	97	91						
003	79956	052	115	-051	92	80	86	86						
003	79956	053	115	-051	81	86	89	86						
003	79956	054	115	-051	78	115	84	92						
003	79958	051	115	-051	82	89	86	86						

3.117=CH-VISO-VUJ1X10.TOP LONGIT.KV800 115=CH-VISO-VUJ17.SX10.TOP LONGIT.KV800

K3, 117=CH-VISO-V(L),TX10,TOP, LONGIT,KV600 115=CH-VISO-V(L),7.5X10,TOP, LONGIT,KV600

Raaha Steel Works

Testaus ja la-kastus Testing and Inspection

Täten todistamme, että toimitus on iläusvahvituksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector

Yrityksen nimi Company Name: RAUTARUUKKI OYJ
Kilpailukka Registered Office: HELSINKI

Osoite Address: PL 83, P.O.Box 83
FIN-02101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5911

Telekopio Telefax: 020 592 2736
+358 20 592 2736

Y-tunnus Business ID: 0113276-9

ANALYYSITODISTUS ANALYSIS CERTIFICATE
ANALYSEBESCHNEIDUNG COMPOSITIO CHIMIQUE CERTIFICAT
СЕРТИФИКАТ АНАЛИЗА

A 251
24

Päivämäärä Date Datum Date Day
26.10.2009

Analysi % Chemical composition % Zusammensetzung % Composition Chimique % Анализ пробы % (*-ppm)

Swedish pro Cast No Smitzen Nr No de couler № Плавки	Test No Prüf Nr Essai No № Проб	Posi Pos Poste Поз.	Cek Ceq Cag Cekv
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79793 016 .42 .212 .38 1.15 .014 .001 .044 .016 .014 .004 .021 0.05 0.05 .004

CEQ=C+MN/5+(CR+MO+V)/5+(NI+CU)/15

Raah Steel Works

Testaus ja tarkastus
Prüfung und Kontrolle
Essai et Contrôle
Испытание и контроль качества

MINNA VALKAMA

Valuettu tarkastaja
Versuchsverständiger
Authorized Inspector
Inspector autorisé

Yhtiön nimi Company Name: RAUTARUUKKI OYJ
Kotipaikka Registered Office: HELSINKI

Osasto Address: PL 93, P.O Box 93
FIN-92101 RAAHE, FINLAND

Telefon Telephone: 020 5911
+358 20 5911

Telekopio Tefax: 020 592 2736
+358 20 592 2736

Steel manufactured and supplied by Rautaruukki is free from radiation.
Продукция не металлургическом комбинате «Рантауруукки» и поставленная
заказчику сталь не излучает радиацию.

Fileaja Purchaser
OLBERT METAL SALES LIMITED
SUITE 305
Tilaus nro Order No.
1574

Vastaanottaja Consignee
OLBERT METAL SALES LIMITED
SUITE 305
Asiakkaan merkki Shipping mark

Päivämäärä Date
26.10.2009
Valmistajan merkki
Mark of the Manufacturer

Laji Grade
GR 70

Lisävaatimukset Additional requirements

Jalkuväälätys happipäästä
Oxygen steel, continuous casting

Laatuselitys Quality Specifications

PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

N 820C, T=1.1(MIN)XTHICKN(MM)

Pos Item	Sulatus kera nro Cast test No	Tulika Contd	Velokoe Tensile test		REH KSI	REL KSI	RT05 KSI	RP02 KSI	RM KSI	REH /RM	RM-A5	RAZ %			Keskiarvo Average	Talvutuskoe Bend test	Huom Nb
			K2	F					1			1	2	3			
004	79956	011	N F1					53	76								26
004	79956	013	N F1					53	76								27
004	79956	021	N F1					53	76								26
004	79956	024	N F1					53	76								27
004	79956	031	N F1					51	76								25
004	79956	032	N F1					53	76								28
004	79956	033	N F1					51	75								25
004	79968	051	N F1					53	76								25
004	79968	052	N F1					53	75								27
004	79968	053	N F1					52	76								27
005	79969	011	N F1					52	75								27
005	79969	013	N F1					49	76								27
005	79969	021	N F1					50	75								27
005	79969	022	N F1					52	75								27

K2: F1=TOP, TRANSV.

N=NORMALIZED

Pos Item	Sulatus kera nro Cast test No	Isukoe Impact test		K3	F	1	2	3	Keskiarvo Average	Sileämurtuma Ductile fracture			Erikokeet Special tests			Huom Nb
		K3	F							1	2	3	K4	F	1	
004	79956	011	111	-051	91	104	60	85								
004	79956	013	111	-051	102	103	111	105								
004	79956	021	111	-051	87	106	100	98								
004	79956	024	111	-051	100	98	89	96								
004	79956	031	111	-051	77	122	122	107								
004	79956	032	111	-051	108	86	124	106								
004	79956	033	111	-051	94	96	112	100								
004	79968	051	111	-051	95	100	88	94								
004	79968	052	111	-051	98	115	105	106								
004	79968	053	111	-051	85	97	95	92								
005	79969	011	111	-051	118	92	100	103								
005	79969	013	111	-051	111	107	111	110								
005	79969	021	111	-051	119	105	113	113								
005	79969	022	111	-051	106	108	98	104								

K3 111=CH-VI(SO-VU),10X10, TOP, LONGIT, KV500

Raah Steel Works

Testaus ja tarkastus Testing and Inspection

Minna Valkama
MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector

Yhtiön nimi Company Name: RAUTARUUKKI OYJ
Kohdikkaa Registered Office: HELSINKI

Osoite Address:

PL 93, P.O Box 93
FIN-02101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5811

Telekopio Telefax: 020 592 2736
+358 20 592 2736

Y-luottamus Business ID: 0113276-6

Täten todistamme, että toimitus on tilausvahvistuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Tilastaja Purchaser
OLBERT METAL SALES LIMITED
SUITE 305
Tilaus nro Order No.
1574
Laji Grade
GR 70

Vastaanottaja Consignee
OLBERT METAL SALES LIMITED
SUITE 305
Asiakkaan merkki Shipping mark

Päivämäärä Date
26.10.2009
Valmistajan merkki
Mark of the Manufacturer

Laatuselitys Quality Specifications
PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/IADD-08A SA20

Lisävaatimukset Additional requirements

Jalkuvavaleltaa happipierästä
Oxygen steel, continuous casting

N 920C, T=1.1(MIN)XTHICKN(MM)

Pos. Item	Sulatus, k. era nro Cast. test No	Tila Cond	Velkoo Tensile test				REH KSI	REL KSI	RT05 KSI	RM KSI	A %	RAZ %			Keskiarvo Average	Taivutuskoe Bend test	Huom Nb
			K2	F	RP02 KSI	F				1	2	3	1	2	3		
005	79969	024	N	F1	51					75							
006	79956	041	N	F1	50					75							
006	79956	042	N	F1	48					75							
006	79956	043	N	F1	51					75							
006	79956	044	N	F1	50					75							
006	79958	011	N	F1	50					75							
006	79958	012	N	F1	49					76							
006	79958	013	N	F1	48					76							
006	79958	014	N	F1	47					75							
006	79958	031	N	F1	50					75							
006	79958	036	N	F1	49					75							
007	77871	041	N	J1	51					80							
007	77871	043	N	J1	53					81							
007	77871	044	N	J1	52					80							

K2, F1=TOP, TRANSV. J1=BOTTOM, TRANSV.

N-NORMALIZED

Pos. Item	Sulatus, k. era nro Cast. test No	Sukko Impact test			Sukko Impact test			Sukko Impact test			Sukko Impact test			Sukko Impact test			Huom Nb
		K3	F	1	2	3	Keskiarvo Average	1	2	3	Keskiarvo Average	1	2	3	Keskiarvo Average	1	
005	79969	024	111	-051	113	94	100				103						
006	79956	041	111	-051	125	90	104				106						
006	79956	042	111	-051	105	118	112				111						
006	79956	043	111	-051	109	91	87				96						
006	79956	044	111	-051	103	84	64				83						
006	79958	011	111	-051	111	100	76				95						
006	79958	012	111	-051	89	94	102				95						
006	79958	013	111	-051	100	99	103				101						
006	79958	014	111	-051	117	109	98				108						
006	79958	031	111	-051	109	57	97				88						
006	79958	036	111	-051	88	89	66				80						
007	77871	041	151	-051	55	89	79				74						
007	77871	043	151	-051	55	76	93				72						
007	77871	044	151	-051	52	78	83				71						

K3 111=CH+V/ISO-V(J), 10X10; TOP, LONGIT, KV600 151=CH+V/ISO-V(J), 10X10; BOTTOM, LONGIT, KV600

Rahe Steel Works

Testaus ja tarkastus Testing and inspection

Minna Valkama
MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector

Yhtiön nimi, Company Name: RAUTARUUKKI OYJ
Kotipaikka Registered Office: HELSINKI

Osoite Address: P.I. 93, P.O. Box 93
FIN-02101 RAHAHE, FINLAND

Puhelin Telephone: 020 5611
+358 20 5911

Telekopio Telefax: 020 562 2736
+358 20 592 2736

Y-tunnus Business ID: 0113276-9

Täten todistamme, että toimittu on tilausvahvistukseen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Tilaaja Purchaser: OLBERT METAL SALES LIMITED
 Suite 305
 Tilaus nro Order No: 1574
 Vastaanottaja Consignee: OLBERT METAL SALES LIMITED
 Suite 305
 Asiakkaan merkki Shipping mark: Mark of the Manufacturer
 Päivämäärä Date: 26.10.2009
 Valmistajan merkki Mark of the Manufacturer

Lehti Grade: GR 70
 Lisävaatimukset Additional requirements: Jatkuvetoisuus happipitoisuus Oxygen steel, continuous casting

Laatuvaatimukset Quality Specifications: PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

Pos. Item	Sualaus Cast. test No	Tulja Cond	Velokoe Tensile test				REH KSI	RM KSI	A %	REH /RM	RM * AS	RAZ %			Keskiarvo Average	Tarkastuskoee Bend test	Huom No
			K2	F	RP02 KSI	RP05 KSI						1	2	3			
007	78525	332	N J1		50				80								25
007	79068	111	N J1		52				78								28
007	79115	021	N J1		50				79								26
007	79115	022	N J1		51				79								29
007	79115	023	N J1		51				80								27
007	79115	024	N J1		51				79								25
007	79115	044	N J1		48				77								26
008	79968	011	N J1		51				77								31
008	79968	012	N J1		52				78								27
008	80518	013	N J1		51				77								28
008	80518	043	N J1		52				78								24
009	78759	014	N J1		46				75								28
009	78787	041	N J1		47				76								28
009	79824	021	N J1		49				79								26

N=NORMALIZED

Pos. Item	Sualaus Cast. test No	Iakukoe Impact test				Silkeasuuruma Ductile fracture			Erikasuuruma Special tests			Huom No
		K3	F	1	2	3	Keskiarvo Average	K4	F	1	2	
007	78525	332	151	-051	60	56	58					
007	79068	111	151	-051	79	92	102					
007	79115	021	151	-051	91	77	99					
007	79115	022	151	-051	78	73	80					
007	79115	023	151	-051	92	69	94					
007	79115	024	151	-051	82	73	69					
007	79115	044	151	-051	33	58	52					
008	79968	011	151	-051	66	91	67					
008	79968	012	151	-051	80	80	60					
008	79968	013	151	-051	75	79	65					
008	80518	043	151	-051	74	52	91					
009	78759	014	151	-040	91	89	45					
009	78787	041	151	-040	60	70	55					
009	79824	021	151	-040	58	75	81					

K3: 151=CH-V/ISO-V(J), 10X10, BOTTOM, LONGIT, KV600

Raabe Steel Works

Testaus ja tarkastus Testing and inspection

MINNA VALKAMA
 Valtuutettu tarkastaja Authorized Inspector
 Yhtiön nimi Company Name: RAUTARUUKKI OYJ
 Kolpaikka Registered Office: HELSINKI

Täten todistamme, että toimilue on iliauvahastuksen mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Tilaja Purchaser
OLBERT METAL SALES LIMITED
SUITE 305
Tilaus nro Order No
1574

Vaastanottaja Consignee
OLBERT METAL SALES LIMITED
SUITE 305
Asiakkaan merkki Shipping mark

Päivämäärä Date
26.10.2009
Valmistajan merkki
Mark of the Manufacturer

Leiri Grade
GR 70

Lisävaatimukset Additional requirements

Jalkuvavaietus heppierästä
Oxygen steel, continuous casting

Laatuvaatimukset Quality Specifications

PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

N 920C, T=1.1(MIN)XTHICK(NN)																							
Pos. Item	Status, Cast. list No	T-tila Cond	Valokoe Tensile test				Tavuluskoe Bend test										Hجوم Nb						
			K2	F	RP02 KSI	RT05 KSI	REL KSI	REL KSI	RM KSI	1	2	3	A %	200	REH /RM	RM * A5		1	2	3	Average	K5	D = X1
009	79824	022	N	J1	49																		27
009	79824	023	N	J1	50																		27
010	79114	012	N	J1	49																		28
010	79824	031	N	J1	52																		29
010	79824	033	N	J1	53																		26
010	79824	059	N	J1	53																		26
010	80111	041	N	J1	53																		27
011	79793	021	N	J1	42																		26
011	79793	022	N	J1	45																		26
011	79797	033	N	J1	45																		28
011	79798	011	N	J1	44																		27
012	80064	011	N	J1	43																		28
012	80064	012	N	J1	43																		26
012	80064	013	N	J1	43																		27
012	80064	013	N	J1	43																		28

K2 J1=BOTTOM,TRANSV

N=NORMALIZED

Pos. Item	Sulatus. Cast. last No	Isukoe Impact test	Sikeamutune Oucile fracture			Eirikolstokeet Special tests			Huom Nb
			K3	F	1	2	3	Keskiaivo Average	
009	79824	022	151	-040	82	63	58	68	
009	79824	023	151	-040	53	59	51	55	
010	79114	012	151	-040	57	96	80	77	
010	79824	031	151	-040	59	91	77	75	
010	79824	033	151	-040	52	88	57	66	
010	79824	059	151	-040	66	97	83	82	
010	80111	041	151	-040	52	72	74	66	
011	79793	021	131	-031	85	58	58	66	
011	79797	033	131	-031	49	60	52	54	
011	79797	033	131	-031	47	53	49	49	
011	79798	011	131	-031	60	55	49	55	
012	80064	011	131	-031	41	80	65	62	
012	80064	012	131	-031	80	60	75	72	
012	80064	013	131	-031	60	69	63	64	

K3 151=CH-VISO-V(J), 10X10,BOTTOM, LONGIT, KY600 131=CH-VISO-V(J), 10X10,BOTTOM T14, LONGIT.

Raake Steel Works

Testaus ja tarkastus Testing and inspection

Tämän todistuksen, että toimittaja on tässä vahvistuksen mukainen.

We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Minna Valkama
MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector
Yhtiön nimi Company Name: RAUTARUUKKI OYJ
Kotipaikka Registered Office: HELSINKI

Osoite Address: PL 83, P.O.Box 83
FIN-02101 RAAKE, FINLAND
Puhelin Telephone: 020 5911
+358 20 5911
Telekopio Telefax: 020 592 2736
+358 20 592 2736
Y-luonnus Business ID: 0113276-9

Tilaaja Purchaser: OLBERT METAL SALES LIMITED
 Suite 305
 Tilaus no Order No: 1574
 Vastaanottaja Consignee: OLBERT METAL SALES LIMITED
 Suite 305
 Asiakkaan merkki Shipping mark: Mark of the Manufacturer

Laji Grade: GR 70
 Laatuselitys Quality Specifications: PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20
 Lisävaatimukset Additional requirements: Jalkuvaajallus happipörsäsi Oxygen blast, continuous casing

N 920C, T=1.1(MIN)XTHICKN(MM)

Pos. Item	Sulatus Cast. test No	Tilja Cond	Vetokoe Tensile test				REH KSI	RM KSI	A %	RAZ %			Keskilavo Average	Tähdustio Bend test	Huom No
			K2	F	RP02 KSI	RT05 KSI				1	2	3			
012	80064	041	N	J1	44			73	26						
012	80064	049	N	J1	45			74	25						
013	80062	011	N	J1	44			73	27						
013	80062	012	N	J1	43			73	27						
013	80062	021	N	J1	44			73	26						
013	80062	022	N	J1	43			73	27						
013	80111	031	N	J1	45			75	26						
014	80060	011	N	J1	43			73	28						
014	80060	013	N	J1	43			74	29						
014	80060	021	N	J1	42			72	27						
014	80060	022	N	J1	44			74	28						
014	80060	031	N	J1	45			75	28						
015	79793	041	N	J1	45			75	26						
015	79793	043	N	J1	44			74	27						

N=NORMALIZED

Pos. Item	Sulatus Cast. test No	Isukoke Impact test	Sitkeämurtuma Ductile fracture			Enkoakokeel Special test			Huom No
			K3	F	Average	K4	F	Average	
012	90064	041	1B1	-031	59	58	67	61	
012	80064	049	1B1	-031	59	53	52	55	
013	80062	011	1B1	-020	73	47	63	61	
013	80062	012	1B1	-020	77	79	77	78	
013	80062	021	1B1	-020	63	74	83	73	
013	80062	022	1B1	-020	80	79	58	72	
013	80111	031	1B1	-020	60	51	60	57	
014	80060	011	1B1	-020	25	92	67	61	
014	80060	013	1B1	-020	64	69	81	72	
014	80060	021	1B1	-020	52	49	65	55	
014	80060	022	1B1	-020	54	53	53	53	
014	80060	031	1B1	-020	66	59	21	49	
015	79793	041	1B1	-020	72	73	75	74	
015	79793	043	1B1	-020	63	77	72	71	

K3, 1B1=CH-VIISO-VUJ, 10X10, BOTTOM T/4, LONGIT.

Täten todistamme, että toimittu on tilaustavhystuksen mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Rahe Steel Works
 Testaus ja tarkastus Testing and inspection
 Minna Valkama
 Valtuutettu tarkastaja Authorized Inspector
 Yrityksen nimi Company Name: RAUTARUKKI OYJ
 Kolipaikka Registered Office: HELSINKI
 Osoite Address: PL 93, P.O. Box 93
 FIN-02101 RAAHE, FINLAND
 Puhelin Telephone: 020 5911
 +356 20 5911
 Telekopio Telefax: 020 592 2736
 +356 20 592 2736
 Y-tunnus Business ID: 0113276-9

Tilaja Purchaser
OLBERT METAL SALES LIMITED
SUITE 305
Tilaus nro Order No
1574

Vastaanottaja Consignee
OLBERT METAL SALES LIMITED
SUITE 305
Asiakkaan merkki Shipping mark

Päivämäärä Date
26.10.2009
Valmistajan merkki
Mark of the Manufacturer

GR 70

Lisävaatimukset Additional requirements

Jalkuvaaleluna happipitoisuus
Oxygen steel, continuous casting

Laatuohjelma Quality Specifications
PRESS.VESSEL STEEL ASME CODE SEC II ED 2007/ADD-08A SA20

Pos. Item	Sulatus Cast test No	Tila Cond	Velokoe Tensile test	REH KSI	REL KSI	RT05 KSI	RM KSI	A %	RAZ %	Keskiarvo Average	Huom No
016	79793 031	N J1	44	74	74	200	1	50	1	2	3
016	79793 033	N J1	45	75	75	200	1	50	1	2	3

N=NORMALIZED

Pos. Item	Sulatus Cast test No	Iskukoe Impact test	Silkeämurtuma Ductile fracture	Erikoiskoe Special tests	Huom No
016	79793 031	1B1 -020 74 61	1 2 3 Keskiarvo Average	K4 F 1 2 Keskiarvo Average	
016	79793 033	1B1 -020 58 61	1 2 3 Keskiarvo Average	K4 F 1 2 Keskiarvo Average	

K3 1B1=CH-VISO-V(J).10X10.BOTTOM T4.LONGIT.

Raah Steel Works

Testaus ja tarkastus Tasting and Inspection

MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector
Yrityksen nimi Company Name: RAUTARUUKKI OYJ
Käsitteilyä harjoittava Registered Office: HELSINKI

Täällä todistamme, että toimitus on tilausvahvistuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Osio Address: PL 93, P.O Box 93
FIN-02101 RAAHE, FINLAND
Puhelin Telephone: 020 5811
+358 20 5911
Telekopio Telefax: 020 582 2736
+358 20 582 2736
Y-tunnus Business ID: 0113276-9

ANALYYSITODISTUS ANALYSIS CERTIFICATE
ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT
СЕРТИФИКАТ АНАЛИЗАA 250
24.Päivämäärä Date Datum Date
26.10.2009

24

Päivämäärä Date Datum Date Jahr
26.10.2009

CELESTIAL ANALYSA

Analysi % Chemical composition % Chemisch Zusammensetzung % Composition Chimique % Анализа пробы % (ppm)

Solutio nro Case No Schmelzen Nr No de coulen № Плавки	Koe nro Test No Prüf Nr Essai No № Пробки	Positiio Item Pos. Posie №	Cekiv Ceq Ceq Ceq Ceq	C	SI	MN	P	S	AL	NE	V	TI	CU	CR	NI	MO	
79961	001	40	.199	.32	1.09	.010	.003	.032	.001	.013	.003	.025	0.04	0.05	.005		
79072	002	40	.193	.32	1.14	.008	.002	.032	.005	.010	.004	.034	0.04	0.05	.008		
79699	002	39	.192	.32	1.10	.009	.002	.031	.001	.009	.003	.028	0.04	0.05	.004		
79956	003	39	.189	.32	1.09	.010	.002	.031	.001	.011	.005	.027	0.04	0.05	.005		
79958	003	39	.189	.31	1.11	.010	.004	.039	.001	.012	.004	.028	0.04	0.05	.005		
79956	004	39	.189	.32	1.09	.010	.002	.031	.001	.011	.005	.027	0.04	0.05	.005		
79968	004	40	.196	.36	1.12	.012	.002	.041	.015	.016	.005	.028	0.04	0.05	.004		
79969	005	39	.186	.33	1.10	.011	.002	.037	.006	.011	.004	.028	0.05	0.05	.004		
79956	006	39	.189	.32	1.09	.010	.002	.031	.001	.011	.005	.027	0.04	0.05	.005		
79958	006	39	.189	.31	1.11	.010	.004	.039	.001	.012	.004	.028	0.04	0.05	.005		
77871	007	42	.203	.38	1.17	.010	.003	.043	.015	.009	.003	.029	0.07	0.06	.006		
78525	007	43	.221	.36	1.13	.010	.003	.057	.015	.006	.003	.013	0.06	0.04	.009		
79068	007	41	.204	.37	1.15	.009	.002	.047	.016	.011	.005	.033	0.04	0.05	.006		
79115	007	42	.209	.37	1.15	.009	.001	.044	.016	.009	.004	.034	0.05	0.05	.005		
79968	008	40	.196	.36	1.12	.012	.002	.041	.015	.016	.005	.028	0.04	0.05	.004		
90518	008	42	.211	.38	1.16	.016	.002	.046	.017	.013	.005	.018	0.05	0.04	.003		
78759	009	40	.200	.39	1.10	.009	.002	.040	.014	.008	.004	.034	0.04	0.05	.005		
78787	009	41	.203	.36	1.10	.009	.003	.047	.017	.007	.004	.037	0.06	0.05	.002		
79824	009	41	.207	.36	1.14	.011	.002	.036	.016	.011	.003	.030	0.04	0.05	.003		
79114	010	42	.215	.37	1.14	.009	.002	.037	.018	.009	.003	.036	0.05	0.06	.003		
79824	010	41	.207	.36	1.14	.011	.002	.036	.016	.011	.003	.030	0.04	0.05	.003		
90111	010	43	.229	.37	1.15	.013	.001	.036	.017	.010	.004	.015	0.04	0.05	.003		
79793	011	42	.212	.38	1.15	.014	.001	.044	.016	.014	.004	.021	0.05	0.05	.004		
79797	011	41	.207	.38	1.14	.016	.001	.053	.016	.012	.004	.018	0.05	0.05	.003		
79796	011	41	.204	.38	1.12	.011	.001	.046	.015	.010	.004	.016	0.05	0.05	.003		
80064	012	41	.201	.37	1.14	.013	.003	.046	.015	.011	.004	.015	0.04	0.04	.003		
80062	013	41	.201	.38	1.15	.012	.003	.041	.016	.013	.004	.018	0.04	0.04	.003		
80111	013	43	.229	.37	1.15	.013	.001	.036	.017	.010	.004	.015	0.04	0.05	.003		
80060	014	42	.211	.38	1.15	.012	.001	.039	.015	.012	.004	.020	0.04	0.05	.003		
79793	015	42	.212	.38	1.15	.014	.001	.044	.016	.014	.004	.021	0.05	0.05	.004		

CEQ=C+MN/6+(CR+VO+V)/5+(NI+CU)/15

Raah Steel Works

Testaus ja tarkastus
Prüfung und Kontrolle
Testing and inspection
Essais et Contrôle
Испытание и контроль качества

MINNA VALKAMA

Valtuutettu tarkastaja
Vorsichtsprüfer
Authorized Inspector
Inspector autorisé
Уполномоченный инспектор

Yhtiön nimi Company Name: RAUTARUUKKI OYJ

Kotipaikka Registered Office: HELSINKI

Osalle Address: PL 93, P.O Box 93
FIN-02101 RAAHE, FINLANDPuhelin Telephone: 020 5911
+358 20 5911Telekopio Tefax: 020 592 2735
+358 20 592 2735

Y-tunnus Business ID: 0113276-9

Steel manufactured and supplied by Raaheräukki is free from radiation.
Произведенная на металлургическом комбинате «Раухерäukki» и поставленная заказчику сталь не излучает радиацию.



PURCHASE ORDER #

2698

DATE	March 9, 2011
------	---------------

<u>VENDOR</u>	Cessco
---------------	--------

CONTACT Louisa

DATE REQUIRED	30" 3 Phase Separators
---------------	------------------------

JOB NUMBERS

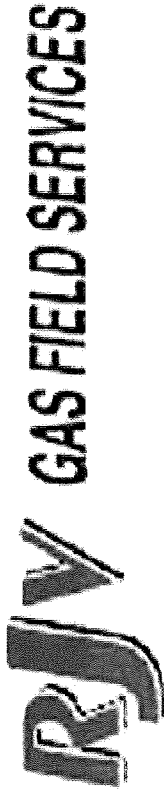
4901 Bruce Road Vegreville, Alberta T9C 1C3

Phone: (780) 632-7774

[illegible]

1. The above items are to be formed to meet the requirements of ASME Section VII, Div. 1 USC 79(d).
2. Tack welds that are welded must use procedures and welders qualified to ASME Section IX
3. On all code required material, Markings must be accurately transferred to formed material or cut pieces.

Authorized
Signature



PURCHASE ORDER #

2701

DATE March 15, 2011

VENDOR V.E.G. Oilfield Supply

CONTACT ALL

DATE REQUIRED 30" Vessel

JOB NUMBERS 12075 to 12078

4901 Bruce Road Vegreville, Alberta T9C 1C3

Phone: (780) 632-7774

Item	Quantity	Material Spec.	Description	Nom. Thickness	Min. Head	Mill Test	Q.C. Check	Price
1	4	SA-105	4" #600 ANSI RFWN	XXH	-	-		
1	8	SA-105	3" #600 ANSI RFWN	XXH	-	-		
1	10	SA-105	2" #600 ANSI RFWN	XXH	-	-		
2	10	SA-105	3/4" N.P.T. Full Cplg.	#6000	-	-		
3	2	SA-105	1/2" N.P.T. Full Cplg.	#6000	-	-		
4	2	SA-234-WPB	2" 90° elbow	XXH	-	-		
5	2'	SA-106-B	4" SMLS Pipe	XXH	-	Yes		
6	6'	SA-106-B	3" SMLS Pipe	XXH	-	Yes		
5	8'	SA-106-B	2" SMLS Pipe	XXH	-	Yes		

1. The above items are to be formed to meet the requirements of ASME Section VII, Div. 1 USC 79(d).
2. Tack welds that are welded must use procedures and welders qualified to ASME Section IX
3. On all code required material, Markings must be accurately transferred to formed material or cut pieces.

Authorized
Signature

HT
W
RT-1

Certified By

RJV

*GAS FIELD
SERVICES*

Vegreville, Alberta
Phone (780)632-7774

A#607664

UNIT NAME

Vert. 3 Phase Separator

M.A.W.P. Internal

1440 p.s.i.
9928 Kpa.

HYDRO TEST

2160 p.s.i.
14,892 Kpa.

DESIGN TEMP.

100 °F
38 °C

C.R. NUMBER

P8736.231

SERIAL NO.

12138

CORR. ALLOW.

3.17 mm

SHELL MAT'L

SA-516-70-N

SHELL THICK.

31.75 mm

HEAD THICK.

Top - 30.16 mm

Bottom - 30.16 mm

HEAT TREATMENT

Yes

HEAD MAT'L

Top- SA-516-70-N

Bottom- SA-516-70-N

SIZE

762 X 3048 mm

WEIGHT

2689 Kg.

MIN. DESIGN METAL TEMPERATURE

TEMPERATURE

-20 °F

-29 °C

DATE MFG.

@

@

@

PRESSURE

1440 p.s.i.

9928 Kpa.

June 2011

Add To #A



ISO 9001:2000

RADIOGRAPHIC TESTING REPORT

R-206271

CLIENT
ATTENTION
ADDRESS
PROJECT
WORK LOCATION

RJV

DATE
ACUREN JOB #
POWO #
PROCEDURE #
ACCEPTANCE
STANDARD

May 17/00

331-56647-84
Serial # 18138
RT-0016
ASME SEC VIII
DIV I CLASS 2010

PAGE 1 OF 1
MATERIAL TYPE
FILM BRAND
RADIATION SOURCE
FOCAL SPOT

P1
Agfa

☒ IR 192 ☐ Co 60 ☐ X-RAY
55 (Ci) MM/IN
0.14

Legend: 1. Accept 2. Moderate 3. Reject *Welder Symbol

IDENTIFICATION	PIPE DIA.	PIPE SCH	FILM TYPE	REIN.	TECH #	SOD (D)	OFD (I)	# OF EXP	C K	L F	I P	S U	C R	E P	* DEFECT LOCATION & REMARKS	ACC	REJ
1	LS1 0-15	30"	1 1/4"	DS	1 1/8"	20"	1 1/4"	8							mk		
2	15-30																
3	30-45																
4	45-60																
5	60-75														water mark 61"		
6	75-90																
7	90-105																
8	105-End														film marks 105"		
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	

SIGNATURES

CLIENT REPRESENTATIVE

TECHNICIAN (SIGN)

PRINT NAME:

*Please note: Film that is not accepted by the client when the report is issued will be disposed of by Acuren unless otherwise notified and acknowledged in writing.

PRINT

PRINT

1st TECHNICIAN
2nd TECHNICIAN/ASSISTANT

SIGNATURE

SIGNATURE

SIGNATURE

FILM USED

FILM SIZE

DTR #

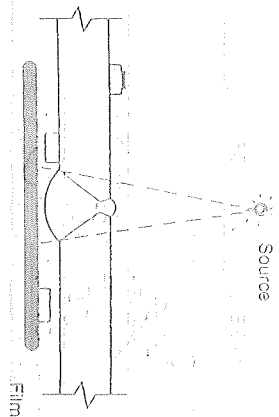
REFER TO OPPOSITE SIDE FOR SCOPE OF SERVICES AND STANDARD OF CARE

White - Client Copy

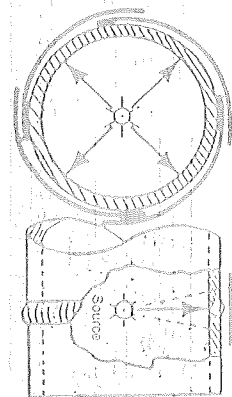
Canary - Office Copy

Pink - Technician Copy

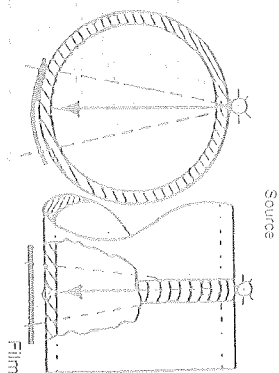
Golden Rod - Office Copy



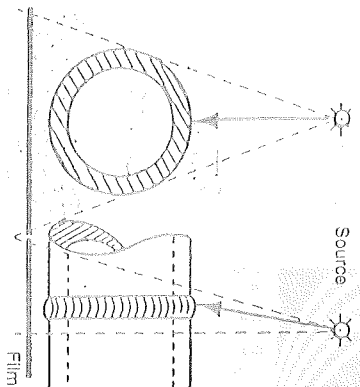
Technique "1"
SWE-SWV



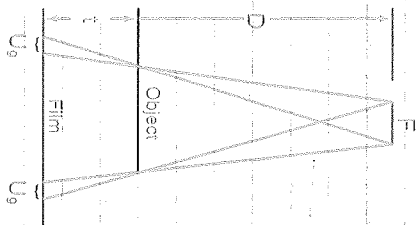
Technique "2"
SWE-SWV



Technique "3"
DWE-SWV



Technique "4"
DWE-DWV



Technique "5"
DWE-DWV

- U_g = Geometric Unsharpness
- D = source to object distance
- t = object to film distance
- F = Focal Spot Size

$$U_g = \frac{Ft}{D}$$

Note: If it is omitted from this report, the Pipe Schedule shall apply as it.

DISCLAIMERS

SCOPE OF SERVICE

The agreement of Acuren to perform the Services extends only to those Services provided for in writing. Under no circumstances shall such Services extend beyond the performance of the requested Services during the performance of the Services or within one (1) year thereafter. Purchaser discovers that the Services do not conform to the warranty. Acuren shall, upon receipt of written notice from Purchaser, promptly provide technicians/engineers to reperform the Services to the extent necessary to conform to the warranty and Acuren shall have no other liability whatsoever. No other warranty, expressed or implied, is made or intended by Acuren.

STANDARD OF CARE

In performing the Services provided, Acuren uses the degree of care and skill ordinarily exercised under similar circumstances by others performing such Services in the same or similar locality. If at any time during the performance of the Services or within one (1) year thereafter, Purchaser discovers that the Services do not conform to the warranty, Acuren shall, upon receipt of written notice from Purchaser, promptly provide technicians/engineers to reperform the Services to the extent necessary to conform to the warranty and Acuren shall have no other liability whatsoever. No other warranty, expressed or implied, is made or intended by Acuren.

LIMITATIONS OF LIABILITY

Nothing in this Agreement shall be construed to mean that Acuren assumes any liability on account of injury to persons or property, including death, except those directly caused by negligent acts of Acuren or its employees and that Purchaser's own responsibility for injury to persons or properties while on or about, Purchaser's property or equipment is in no way affected by this Agreement. Acuren shall not be held responsible or liable for any loss, damage, detention or delay caused by accidents, strikes, labour shortages, lock-outs, fire, flood, severe weather conditions, acts of civil or military authorities, or by insurance or not, or by any other cause that is unavoidable or beyond Acuren's control or in any event for consequential damages including, without limitation, downtime, loss of use or loss of profits.


ACUREN

CLIENT

ATTENTION

ADDRESS

PROJECT

WORK LOCATION

RJV

Dave

Vessel-Circs
Vegreville

RADIOGRAPHIC TESTING REPORT

R-218084

PAGE

1

OF

DATE

June 3/11

ACUREN JOB #

231-5647-84

POWO #

Serial# 12138

PROCEDURE #

RT-0016

ACCEPTANCE

ASME SEC VIII

STANDARD

DIVI WWSI 2010

MATERIAL TYPE

P1

FILM BRAND

Agfa

RADIATION SOURCE

IR 192 Co 60 X-RAY

KV

0.14" MM(N)

Legend 1. Accept 2. Moderate 3. Reject *Welder Symbol

	IDENTIFICATION	PIPE DIA.	PIPE SCH	FILM TYPE	REIN.	TECH #	SOD (D)	OFD (I)	# OF EXP	C R K	L F P	I P S	U C R P	*	DEFECT LOCATION & REMARKS	ACC	REJ
1	C1 0-15	30"	1 1/4"	DS	1/8"	2	15"	1 1/4"	1						mk	✓	
2	15-30															✓	
3	30-45															✓	
4	45-60															✓	
5	60-75															✓	
6	75-90															✓	
7	90-0	✓	✓	✓	✓	✓	✓	✓						✓		✓	
8																	
9																	
10	C2 0-15	30"	1 1/4"	DS	1/8"	2	15"	1 1/4"	1						mk	✓	
11	15-30															✓	
12	30-45															✓	
13	45-60															✓	
14	60-75															✓	
15	75-90															✓	
16	90-0	✓	✓	✓	✓	✓	✓	✓						✓		✓	
17																	
18																	
19																	
20																	

SIGNATURES

CLIENT REPRESENTATIVE

PRINT

TECHNICIAN (SIGN)

PRINT NAME:

1st TECHNICIAN2nd TECHNICIAN/ASSISTANT

*Please note: Film that is not accepted by the client when the report is issued will be disposed of by Acuren unless otherwise notified and acknowledged in writing.

CGSB LEVEL

II

SNT LEVEL

II

CGSB REGISTRATION #

3161

CGSB LEVEL

SNT LEVEL

CGSB REGISTRATION #

3161

FILM USED

14

FILM SIZE

4 1/2 x 17

PCS

PCS

PCS

PCS

PCS

PCS

DTR #

A354313

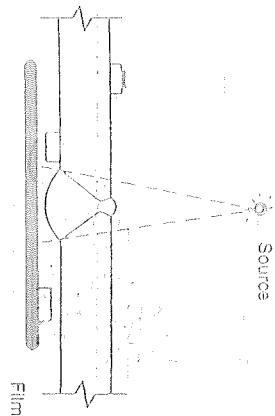
REFER TO OPPOSITE SIDE FOR SCOPE OF SERVICES AND STANDARD OF CARE

White - Client Copy

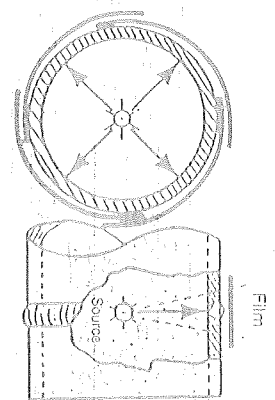
Canary - Office Copy

Pink - Technician Copy

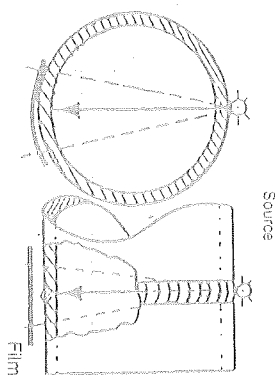
Golden Rod - Office Copy



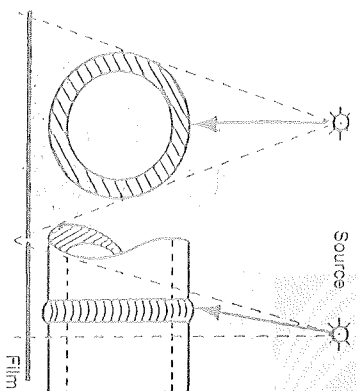
Technique "1"
SWE-SWV



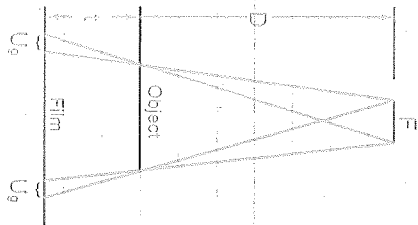
Technique "2"
SWE-SWV



Technique "3"
DWE-SWV



Technique "4"
DWE-DWV



Technique "5"
DWE-DWV

DEFECT LEGEND		OTHER LEGENDS	
CRK	Crack	SWE	Single Wall Exposure
LF	Lack of Fusion	DWE	Double Wall Exposure
IP	Incomplete Penetration	SWV	Single Wall Viewing
P	Porosity	DWV	Double Wall Viewing
S	Slag	EXP	Exposures
UC	Undercut	REIN	Reinforcement
CR	Concave Root	DIA	Diameter
EP	Excessive Penetration	SOD	Source Object Distance
BT	Burn Through	OFD	Object to Film Distance
HB	Hollow Bead		
PH	Pinhole		

U_g = Geometric Unsharpness

D = source to object distance

t = object to film distance

F = Focal Spot Size

$$U_g = \frac{Ft}{D}$$

Note: If t is omitted from this report, the Pipe Schedule shall apply as t.

DISCLAIMERS

SCOPE OF SERVICE

The agreement of Acuren to perform the Services extends only to those Services provided for in writing. Under no circumstances shall such Services extend beyond the performance of the requested Services provided for in writing and the preparation of reports or similar documents reflecting the data obtained or the opinion formulated on the basis of such Services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinion or observations of the examiner/engineer and are not intended, nor can they be construed, as representations or warranties as to the actual circumstances. Acuren does not assume any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, repair and use decisions as a result of the data or other information provided by Acuren. In no event shall Acuren's liability in respect of the Services referred to herein exceed the amount paid for such Services.

STANDARD OF CARE

In performing the Services provided, Acuren uses the degree of care and skill ordinarily exercised under similar circumstances by others performing such Services in the same or similar locality. If at any time during the performance of the Services or within one (1) year thereafter, Purchaser discovers that the Services do not conform to the warranty, Acuren shall, upon receipt of written notice from Purchaser, promptly provide technicians/engineers to reperform the Services to the extent necessary to conform to the warranty and Acuren shall have no other liability whatsoever. No other warranty, expressed or implied, is made or intended by Acuren.

LIMITATIONS OF LIABILITY

Nothing in this Agreement shall be construed to mean that Acuren assumes any liability on account of injury to persons or property, including death, except those directly caused by negligent acts of Acuren or its employees and that Purchaser's own responsibility for injury to persons or properties while on or about Purchaser's property or equipment is in no way affected by this Agreement. Acuren shall not be held responsible or liable for any loss, damage, detention or delay caused by accidents, strikes, labour shortages, lock-outs, fire, flood, severe weather conditions, acts of civil or military authorities, or by insurrection or riot, or by any other cause that is unavoidable or beyond Acuren's control or in any event for consequential damages including, without limitation, downtime, loss of use or loss of profits.

ALBERTA MUNICIPAL AFFAIRS

ABSA, the pressure equipment safety authority

9410 – 20th Avenue

Edmonton, AB T6N 0A4

Partial/ Partiel ☐

MANUFACTURER'S DATA REPORT

FOR PRESSURE VESSEL

DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR

D'APPAREILS SOUS PRESSION

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by <i>Construit par</i>	Name and address of Manufacturer/ <i>Nom et adresse du constructeur</i> RJV Gasfield Services 4901 Bruce Road, Vegreville, Alberta T9C 1C3
Manufactured for <i>Construit pour</i>	Name and address of Purchaser or Consignee/ <i>Nom et adresse du client ou de son représentant</i> RJV Gasfield Services 4901 Bruce Road, Vegreville, Alberta T9C 1C3
Ultimate owner <i>Utilisateur</i>	Name and address/ <i>Nom et adresse</i> Stock
Location of installation <i>Lieu d'installation</i>	Address/ <i>Adresse</i> Stock

Pressure vessel/ Appareil

Type/ <i>Genre</i> Vertical 3 Phase Separator	Overall Length/ <i>Longueur totale</i> 3048 mm sm/sm	Serial No./ <i>N° de série</i> 12138	Year built/ <i>Année de fabrication</i> 2011
Provincial Registration No. – C.R.N./ <i>N° d'enregistrement provincial - N.E.C.</i> P8736.231		National Board No./ <i>N° National Board</i> N/A	Drawing No./ <i>N° de dessin</i> V02-385

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.

Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51. <i>La conception, la construction et la façon sont conformes à ACNOR B51.</i>	ASME Section VIII 2007 Edition	Division 1	Addenda/ <i>Supplément</i> 2009b	Code case No. <i>N° de cas</i> N/A
Manufacturer's partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report: <i>Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:</i>				
Names of parts/ <i>Nom de la composante</i>	Item No./ <i>N° d'item</i>	Manufacturer's Name/ <i>Nom du constructeur</i>	Identifying Stamp/ <i>Estampe d'identification</i>	

Shell/ Virole

Description	Material <i>Matériau</i>	Thickness <i>Épaisseur</i>	Corr. Allow. <i>Surépais. de corr.</i>	Diameter <i>Diamètre</i>	Longitudinal Joints <i>Joints longitudinaux</i>			P.W.H.T. <i>Traitement therm</i>		Girth Joints <i>Joints de circonférence</i>		Number of courses <i>Nombre de sections</i>
					Type	R.T. <i>Radlog.</i>	Efficiency <i>Efficacité</i>	Temp.	Time <i>Durée</i>	Type	R.T. <i>Radlog.</i>	
Shell	SA-516-70N	31.75m m	3.17mm	762mm	1	Full	100%	621°C	75 min.	1	100%	1

Heads/ Têtes

Description	Material <i>Matériau</i>	Min. Thickn. <i>Épals minim.</i>	Corr. Allow <i>Surép. Corr.</i>	Crown. Radius <i>Rayon couron.</i>	Knuckle Radius <i>Petit rayon</i>	Ellipse Ratio <i>Rapp. ellipse</i>	Conical Apex Angle <i>Angle conique</i>	Hemisph. Radius <i>Ray. Hémisph</i>	Flat Diameter <i>Diam.plat</i>	Side to pressure <i>Côte sous pression</i>
Top	SA-516-70N	30.16mm	3.17 mm	-----	-----	2.1	-----	-----	-----	Concave
Bottom	SA-516-70N	30.16mm	3.17 mm	-----	-----	2.1	-----	-----	-----	Concave
Removable bolts used (describe other fastenings) <i>Boulons amovible utilisés (décrire tout autre attache)</i>					Mat'l Spec./ <i>Spéc. du mat.</i>			Grade		Size/ <i>Dimension</i>

Pressure - Temperature/ Pression - température

Pressure Vessel Part <i>Partie de l'appareil</i>	Constructed for max. allowable working pressure <i>Construit pour une pression maximale de marche permise</i>	At max. temp. <i>A une temp. max.</i>	Min. Temp. (when less than -29°C) <i>Temp. min. (inférieure à -29°C)</i>	Test pressure (hydro-pneumatic or combination) <i>Pression d'épreuve (hydro-pneumatique ou combinaison)</i>
Vessel	9928 Kpa	38°C	-29°C	14,892 Kpa

Tube Section/ Faisceau tubulaire

Tube sheet/ Plaque tubulaire	Material/ Matériau	Diameter/ Diamètre	Nominal Thickness Épaisseur nominale	Corr. Allow. Surépais. corrosion	Attachment Mode d'attachement
Tube material/ Matériau des tubes	Diameter/ Diamètre	Nominal Thickness (gauge) Épaisseur nominale (calibre)	Number/ Nbre	Type (Straight or U) Type (Droit ou U)	Heating Surface Surface de chauffe

Jacket/ Chemise

Type of jacket/ Genre de chemise	Jacket closure Fermeture de chemise	Proof Test Pression d'épreuve	Heating Surface Surface de chauffe	Sketch/ Schéma
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Safety Valve Outlets/ Soupapes de sûreté

Number/ Nombre 1	Dimension 60.3mm	Location/ Endroit Shell
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Nozzles and Openings/ Tubulures et ouvertures

Purpose/ But	Number Nombre	Dimension	Type	Material Matériau	Nominal Thickness Épaisseur nominale	Reinforcement material Matériau de renfort	How attached Genre d'attaches	Location/ Endroit
Outlet/Inlet	2	88.9mm	CL600	SA-105/SA-106-B	15.24mm	SA-516-70	UW16.1{c}	Shell
L.L.G.	4	26.7mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell
Temperature Indicator	1	26.7mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell
Pressure Indicator	1	21.3mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell
HLSD/LLSD/LLC	4	88.9mm	CL600	SA-105/SA-106-B	15.24mm	SA-516-70	UW16.1{c}	Shell
PSV/LLD	3	60.3mm	CL 600	SA-105/SA-106-B	11.07mm	N/A	UW16.1{c}	Shell
Drain	1	60.3mm	CL600	SA-105/SA-234- WPB/SA-106-B	11.07mm	N/A	UW16.1{c}	Bottom Head
Vent	1	26.7mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Top Head

Supports/ Supports

Skirt/ Jupe Yes/ Oui No/ Non ☒ ☐	Lugs/ Oreilles No./ Nbre Yes	Legs/ Pieds No./ Nbre No	Other/ Autres (Description) N/A	Attached/ Attaches (Where and How/ Méthode et endroit) Welded to bottom head and Shell
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Remarks/ Observations (Cubical capacity/ Volume)

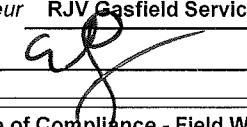
Volume-(1.35 cubic meters) Except from impact test requirements as per UG 20(f) 1 to 5 Hydrostatically tested in the Vertical Position Nozzle to shell weld is full penetration
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Certificate of Compliance/ Certificat de conformité

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51.

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51.

Provincial Registered Design
Enregistrement provincial **P8736.231**

Manufacturer
Constructeur **RJV Gasfield Services**
Signature  Date **JUN 16 2011**

Certificate of Compliance - Field Work/ Certificat de conformité - Installation au chantier

We certify that the field installation of all parts of the vessel conforms with the requirements of Provincial Regulations.

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux.

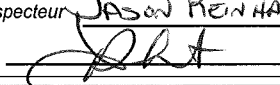
Installer's Name
Nom de l'installateur _____
Signature _____
Date _____

Certificate of Shop Inspection/ Certificat d'inspection en usine

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by **ABSA**

of/ de **Alberta**
have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN **P8736.231** and the requirements of standard CSA B51.

ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC et les exigences de la norme ACNOR B51.

Inspector's Name
Nom de l'inspecteur **JASON REINHART AB 248 NB 12899 A**
Signature  Date **JUNE 16/11**

Certificate of Field Inspection/ Certificat d'inspection - Installation au chantier

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by _____

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations.

ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et, autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux.

Inspector's Name
Nom de l'inspecteur _____
Signature _____ Date _____