# Supplier Deviation Disposition Request
# Engineering Disposition



PROJECT: River Protection Project Waste Treatment Plant JOB NO.: 24590 SDDR: 24590-WTP-SDDR-MS-11-00245 Rev. N/A

**Title of SDDR:** LAW Carbon Bed Adsorber Standards Latest Issue at Time of Award Deviation.

## Supplier Acknowledgement:

The Supplier accepts the RPP-WTP's disposition herein and agrees to implement the RPP-WTP's disposition accordingly. Return the signed SDDR to the RPP-WTP Project Document Control (PDC).

| 17. Supplier | Donald R. Weber, Proj Mgr | Donald R. Weber | 11/7/11 |
|---|---|---|---|
| | *Print/Type Supplier Representative Name and Position* | *Signature* | *Date* |

Please note that source, special nuclear, and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA) are regulated at the U. S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts that pursuant to AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

RPP-WTP
RECEIVED
NOV 08 2011
BY PDC

NOTES:
1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

ISSUED BY
RPP-WTP PDC

R11431697

☐ Yes ☒ No **THIS DOCUMENT CONTAINS EXPORT CONTROLLED INFORMATION, SEE BASE DOCUMENT FOR FULL LABEL AND RESTRICTIONS**

# Supplier Deviation Disposition Request



**PROJECT: River Protection Project Waste Treatment Plant** **JOB No.: 24590**

| FOR RPP-WTP USE | | |
|---|---|---|
| RPP-WTP SDDR No. | Rev. | DATE RECEIVED |
| 24590-WTP-SDDR-MS-11-00245 | N/A | 10/27/2011 |

| FOR SUPPLIER USE | |
|---|---|
| SUPPLIER SDDR No. | DATE SUBMITTED |
| 910040-IDR-045 | 10/26/2011 |

| 1. Supplier Name | Address | City & State | Zip |
|---|---|---|---|
| IONEX Research Corporation | PO Box 70 | Lafayette, CO | 80026 |

| 2. Supplier's Order No. | 3. RPP-WTP P.O. or SC | Rev |
|---|---|---|
| 910040 | 24590-QL-POA-MWK0-00001 | 24 |

**4. Deviation Description** (Attach extra sheets, photographs, sketches, etc. as necessary and identify quantity and serial numbers as applicable)

REFERENCE: Specification 24590-WTP-3PS-MWK0-T0001, Section 2.1.2 specifies that... "If a date or revision is not listed in section 2, the latest issue, including addenda, at the time of award shall apply.

DEVIATION DESCRIPTION: Materials that have been purchased and utilized have ASTM Standards with revision dates later than Sept 28, 2004 (award date). See two attached lists. Additionally, some received MTRs have ASTM standards that do not have revision dates shown. See attached documents.

**4a. Was an NCR issued?** ☒ No ☐ Yes Number:

**5. Supplier's Proposed Disposition:** ☒ Use As-Is ☐ Repair ☐ Modify RPP-WTP Requirement

**6. Supplier's Estimated Cost Impact:** N/A

**7. Supplier's Estimated Schedule Impact:** N/A

**8. Proposed Disposition and Technical Justification (plus Cost/Schedule if applicable):** (Attach extra sheets, sketches, etc., as necessary.)

PROPOSED DISPOSITION:

Accept the attached list of ASTM Standards and dates to apply for the Carbon Bed Adsorbers. Actual procured material standards, as reflected in current on-hand Material Test Reports, to be considered equivalent to the standards that apply at the time of contract award.

Accept test reports received that do not reflect revision dates.

JUSTIFICATION:

As presently interpreted, an SDDR must be written for any variation of ASTM dates other then the ASTM Standards that were in effect at the time of Contract Award (Sept 28, 2004) IONEX' design utilizes ASTM material that is consistently unchanged in ASTM Standards revisions.

For those document that do not have revision dates for the ASTM standards, IONEX has exhausted every available

**NOTES:**
1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

# Supplier Deviation Disposition Request
# Engineering Disposition



**PROJECT:** River Protection Project Waste Treatment Plant **JOB NO.:** 24590 **SDDR:** 24590-WTP-SDDR-MS-11-00245 **Rev.** N/A

**8. Proposed Disposition and Technical Justification (plus Cost/Schedule if applicable):** (Attach extra sheets, sketches, etc., as necessary.)

means to get documents replaced or corrected that do specify ASTM revision dates. IONEX has contacted distributors, manufactures and mills (as appropriate) to get corrected documents to no avail. The documents presented herein are the "BEST AVAILABLE".

| **9. Supplier's Authorized Representative** | Signature |
|---|---|
| Donald R. Wern | Donald R. Wern |
| Title | Date |
| Project Manager | 10/26/11 |

**10. RPP-WTP Engineering Action** ☒ Approved ☐ Disapproved ☒ See Below

**Distribution:** Procurement & Subcontracts Construction

**NOTES:**

1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

# Supplier Deviation Disposition Request
# Engineering Disposition



**PROJECT:** River Protection Project Waste Treatment Plant **JOB NO.:** 24590 **SDDR:** 24590-WTP-SDDR-MS-11-00245 **Rev.** N/A

**Title of SDDR:** LAW Carbon Bed Adsorber Standards Latest Issue at Time of Award Deviation.

**11. (OPTIONAL) RPP-WTP Provisional Disposition Statement** (Attach extra sheets, sketches, etc., as necessary).
N/A

**RPP-WTP Provisional Disposition Justification** (Attach extra sheets, sketches, etc., as necessary).
N/A

**ATS Number: 24590-WTP-ATS-QAIS-** -

**RPP-WTP Provisional Disposition Approval:**

| | *Print/Type Name* | *Signature* | *Date* |
|---|---|---|---|
| RE/Originator: | | | |
| E&NS Review (when required): | | | |
| Approver: | | | |

**12. RPP-WTP Procurement & Subcontracts Action:** Commercial Terms Impact:

☐ Yes *This SDDR grants relief from requirements or changes the requirements and; check each (consideration) item that applies:*

- ☐ Modifications to governing terms are required and/or;
- ☐ An increase in price is requested by Seller and/or;
- ☐ A price credit from the Supplier is due and/or;
- ☐ An increase/decrease in the Seller promise delivery date is required.
- ☐ Cost impact, if any is subject to a separate approval process as required by the changes clause.

☒ No *This SDDR grants relief from requirements or changes the requirements and all of the following apply:*

- No commercial impact (No modification of governing commercial terms is required) and;
- No increase in price is requested by Seller and;
- No decrease in price is anticipated or required by Buyer and;
- No extension of promised shipment is required

**NOTES:**

1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

# Supplier Deviation Disposition Request
# Engineering Disposition



**PROJECT:** River Protection Project Waste Treatment Plant **JOB NO.:** 24590 **SDDR:** 24590-WTP-SDDR-MS-11-00245 **Rev.** N/A

**Title of SDDR:** LAW Carbon Bed Adsorber Standards Latest Issue at Time of Award Deviation.

**13. Part of DCP?** ☐ Yes ☒ No DCP Number: Rev

**14. ACA Needed?** ☐ Yes ☒ No ACA Number: Rev

**15. RPP-WTP Final Disposition Statement** (Attach extra sheets, sketches, etc., as necessary).

*See provisional disposition above. Is the final disposition the same as the provisional disposition?* ☐ Yes ☐ No ☒ N/A

Bechtel accepts IONEXs proposed use of materials and the year revisions as listed in attachment and as follows: Bechtel accepts the material test reports that are attached that do not have revision dates listed (See below list of Heat Numbers) as reviewed by MET in CCN 235983.

| Heat Number | Page | ASTM | Notes | CGV |
|---|---|---|---|---|
| 6221809 | 17-18 | A36 | No Code Year | 24590-QL-POA-MWK0-00001-16-00047 |
| FIA2315 / 220110120 | 21-23 | Weld Rod | No Code Year | 24590-QL-POA-MWK0-00001-16-00048 |
| N2461 | 24-26 | A36 | No Code Year | 24590-QL-POA-MWK0-00001-16-00038 |
| T03192 | 27-28 | A36 | No Code Year | 24590-QL-POA-MWK0-00001-16-00038 |

**RPP-WTP Justification** (Attach extra sheets, sketches, etc., as necessary).

The use of alternate year editions is allowed per CCN 235970 "ASTM Material Specification Update". Standards not covered by this CCN have been evaluated by MET. The attached material test reports and Heat Numbers as listed above with no code year have been reviewed and found acceptable by MET per CCN 235983. These heat numbers have been commercially dedicated which include chemical and physical property confirmed as reported in the listed CGV documents (see list above).

Approval of this SDDR does not affect form, fit or function.

**REQUIREMENTS REVIEW**

| | | | |
|---|---|---|---|
| Client Approval Required* | ☐ Yes ☒ No | E&NS Screening Required | ☒ Yes ☐ No |
| Interface Resolution Required* | ☐ Yes ☒ No | | |

*Address these "yes" answers in the RPP-WTP Disposition Statement (above).

**Affected RPP-WTP Documents:**

| Document Number | Rev | Remarks | Specification Retroactive? Yes | Specification Retroactive? No | Incorporation by: Design Change | Incorporation by: Reference |
|---|---|---|---|---|---|---|
| 24590-WTP-3PS-MWK0-T0001 | 5 | | ☒ | ☐ | ☐ | ☒ |

**Affected Supplier Submittals:**

| Document Number | Rev | Document Number | Rev |
|---|---|---|---|
| N/A | | | |

**NOTES:**

1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

# Supplier Deviation Disposition Request
# Engineering Disposition



**PROJECT:** River Protection Project Waste Treatment Plant **JOB NO.:** 24590 **SDDR:** 24590-WTP-SDDR-MS-11-00245 **Rev.** N/A

**Title of SDDR:** LAW Carbon Bed Adsorber Standards Latest Issue at Time of Award Deviation.

**Reference Documents:**

| Document Number | Rev | Document Number | Rev |
|---|---|---|---|
| CCN: 235970 | N/A | CCN: 235983 | N/A |
| 24590-QL-POA-MWK0-00001-16-00038 | A | 24590-QL-POA-MWK0-00001-16-00048 | A |
| 24590-QL-POA-MWK0-00001-16-00047 | A | | |

**16. RPP-WTP Disposition Approval:**

| | Print/Type Name | Signature | Date |
|---|---|---|---|
| RE/Originator: | Ryan Brown | | 11/7/11 |
| Checker: | Ryan Rickenbach | | 11/7/11 |
| Reviewer(s): | (PEQ) Grant Goolsby | | 7N9V11 |
| Reviewer: | (MET) ~~Debbie Adler~~ ROB PAVIS P&C 11/7/11 | | 11/7/11 |
| Reviewer: | N/A | | |
| E&NS Review (when required): | ~~Dwight Krahn~~ RF CARLSTROM | | 11/7/11 |
| Procurement & Subcontracts Representative: | Debra Hanigan | | 11/7/11 |
| Approver(s): | ~~John Schneider~~ DAVID WILSEY | | 11/7/11 |
| Approver: | N/A | | |

**NOTES:**
1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

# Supplier Deviation Disposition Request
# Engineering Disposition



**PROJECT: River Protection Project Waste Treatment Plant** **JOB NO.: 24590** **SDDR:** 24590-WTP-SDDR-MS-11-00245 **Rev.** N/A

**Title of SDDR:** LAW Carbon Bed Adsorber Standards Latest Issue at Time of Award Deviation.

## Supplier Acknowledgement:

The Supplier accepts the RPP-WTP's disposition herein and agrees to implement the RPP-WTP's disposition accordingly. Return the signed SDDR to the RPP-WTP Project Document Control (PDC).

| **17. Supplier** | | | |
|---|---|---|---|
| | *Print/Type Supplier Representative Name and Position* | *Signature* | *Date* |

**NOTES:**
1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.
4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

# ASTM/ASME NUMBER AND DATE MATRIX

## PIPING

| IONEX PO No. | Material Description | ASTM/ASME No. and Date |
|---|---|---|
| 6910040-004 | Pipe, 3" sch 40 | ASTM/ASME A/SA 106/A 106M-06 |
| 6910040-007 | Pipe, 1-1/2" sch 80S | ASME SA312-07 |
| | Pipe, ½" sch 80S | ASME SA312-08 |
| | Pipe, 16" sch 40S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 18" sch 80S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 18" sch 80S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 18" sch 80S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 18" sch 80S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 8" sch 40S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 8" sch 40S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 2" sch 80S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 3" sch 80S | ASTM A312-09 ASME SA312-07, 09 add |
| | Pipe, 2" sch 40S | ASTM A312-09 ASME SA312-07, 09 add |
| 6910040-009 | Slip on flange, 16" x 150# | A/SA 182/M-07 |
| | Slip on flange, 18" x 150# | A/SA 182/M-07 |
| | Slip on flange, 1-1/2" x 150# | A/SA 182/M-07 |
| | Weld neck flange, 18" x 150# | A/SA 182/M-07 |
| | Weld neck flange, 18" x 150# | A/SA 182/M-07 |
| | Weld neck flange, 18" x 150# | A/SA 182/M-07 |
| | Weld neck flange, ½" x 150# | ASME SA182-08 |
| | Weld neck flange, 2" x 150# | A/SA 182/M-07 |
| | Weld neck flange, 3" x 150# | ASME SA182-08 |
| | Blind flange, 1-1/2" x 150# | A/SA 182/M-07 |
| | Blind flange, ½" x 150# | A/SA 182/M-07 |
| | Blind flange, 16" x 150# | A/SA 182/M-07 |
| | Blind flange, 2" x 150# | A/SA 182/M-07 |
| | Blind flange, 4" x 150# | A/SA 182/M-07 |
| | Blind flange, 3" x 150# | A/SA 182/M-07 |
| | Blind flange, 8" x 150# | A/SA 182/M-07 |
| | Elbow, ½" sch 80S | A403-07A/SA403-08 |
| | Elbow, 2" sch 80S | A403-07A/SA403-08 |
| | Elbow, 18" sch 80S | A403-07A/SA403-08 |
| | Elbow, 18" sch 80S | A403-07A/SA403-08 |
| | Elbow, 2" sch 40S | A403-07A/SA403-08 |
| | Tee, 2" sch 40S | A403-07A/SA403-08 |
| | Tee, 18" sch 80S | A403-07A/SA403-08 |
| | Weld neck flange, 2" x 150# | A/SA 182/M-07 |
| 6910040-012 | Pipe, 8" sch 80S | ASME SA312-06 |
| 6910040-041 | Pipe, ½" sch 40 | ASME SA312-09 |
| 6910040-051 | Slip-on flange, 8" x 150# | ASTM A182M-09a / ASME SA-182M |

# ASTM/ASME NUMBER AND DATE MATRIX

## RAW MATERIALS

ASTM A36-05
ASTM A36-08
ASTM A36-10
ASTM A240-04
ASTM A240-06
ASTM A240-07
ASTM A240-08
ASTM A240-09
ASTM A240-10
ASTM A240-11
ASTM A269-08
ASTM A276-04
ASTM A276-06
ASTM A276-08
ASTM A276-10
ASTM A500 GR B-07
ASTM A500 GR B-10
ASTM A554-08
ASTM A554-10
ASTM A572 GR 50-07, ASTM A992-06
ASTM A992-06
ASTM A992-11

ASME SA36-03
ASME SA36-07
ASME SA36-10
ASME SA240-07
ASME SA240-10
ASME SA479-07
ASME SA479-08
ASME SA572-07
ASME SA572/ASME SA992-06

Samuel, Son & Co. Inc - Denver

# CERTIFICATION OF CONFORMANCE

**CUSTOMER:** Ionex Research Inc.
1301 Eastwind
Lafayette, CO. 80026

**DATE:** 7/6/2011
**CUSTOMER P.O. No.:** 6910040-079
**OUR ORDER No.:** 8982453

**MATERIAL DESCRIPTION:** Stainless Steel Sheet
**ALLOY:** 316/316L
**SPECIFICATION:** Stainless Steel Sheet
**DIMENSIONS:** 11 Ga 48 X 120
**SPECIFICATION:** ASTM-A240

FOR YOUR REFERENCE, THE FOLLOWING MILL HEAT NUMBERS WERE SUPPLIED ON THIS ORDER:

| HEAT NUMBER | PIECES | LBS |
|---|---|---|
| 518858 | 1 | 202 |

TO THE BEST OF OUR KNOWLEDGE, MATERIAL FURNISHED TO YOUR ABOVE PURCHASE ORDER COMPLIES WITH REQUIREMENTS CALLED FOR.

Samuel Rep: _____

IONEX 2 JUL 18 2011

WTP SDC 102

Effective 03-24-07
Rev Date: 10-01-10

Herstellerwerk / Manufacture's works / Usine productrice

ThyssenKrupp Nirosta

Art der Prüfbescheinigung / Type of inspection document / Type du document

**ABNAHMEPRUEFZEUGNIS**
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
nach / according to / suivant
**EN 10204-3.1**

Bescheinigungsnr. 10.11.2010
Document number
Numéro de document
**1000250950 /**

Seite / Page / Page:
**1 / 1**

Oberschlesienstrasse 16, 47807 Krefeld

THYSSENKRUPP NIROSTA
NORTH AMERICA INC.
2275 HALF DAY ROAD, SUITE 300
BANNOCKBURN, IL 60015
USA

Besteller/Empfänger / Customer/Consignee / Acheteur/Destinataire
THYSSENKRUPP NIROSTA, BANNOCKBURN,

Kundenbestellnr. / Customer's order number / Numéro de la commande du client
51002010 - 6896413

Werksauftragsnr. / Manufacturer's works order no / N° de la commande de l'usine productrice
900395649 / 002

Lieferanzeige Nr. / Delivery Note No. / Avis d' expédition N°.
87250492 / 020

Erzeugnis / Product / Produit
BLECH/SHEET/TOLE

Lieferbedingungen / Terms of delivery / Conditions de livraison
acc. to PED 97/23/EC
ASTM A 240/A 240M
ASME SA 240/SA 240M Sec.II Part A Ed.2010

Stahlsorte und Gütegruppe / Steel grade and quality / Nuance de l'acier
TYPE 316 L

| Kundenmaterial-Nr. Customer's material number N° de matière du client | Maße des Erzeugnisses ( Dicke / Breite / Länge ) Product dimensions ( Thickness / Width / Length ) Dimensions du produit ( Epaisseur / Largeur / longeur ) | Herstellart Steelmaking proc. Mode d'élabor. | Ausführung Finish Fini |
|---|---|---|---|
| | 0.1177 inch x 48.0000 inch x 120.0000 inch | AOD | IIIc/2B |

| Paket-Nr. Packing-No. N° Paquet | Stückzahl No of pieces N° de pièces | Ist-Gewicht Actual weight Masse effective | Ident.-Nr. Erzeugnis Ident.-No of product Ident.-N° du produit | Schmelzennr. Cast number Id. de la coulée | Proben-Id. Sample Id. Empl.du prélèvement | Proben-Id. Sample Id. Empl.du prélèvement |
|---|---|---|---|---|---|---|
| 8134304 | 12 | 2.381 lbs | 213500 | 518858 | 1002351920 | 1002351921 |
| 8134306 | 12 | 2.381 lbs | 213500 | 518858 | 1002351920 | 1002351921 |
| | 24 | 4.762 lbs | | | | |

Chemische Zusammensetzung / Chemical composition / Composition chimique

| Schmelznr./ Cast no. | % C | % Si | % Mn | % P | % S | % Cr | % Mo | % Ni | % N | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 518858 | 0.021 | 0.43 | 0.82 | 0.027 | 0.0010 | 16.90 | 2.02 | 10.01 | 0.044 | | |

Prüflos/Inspection lot
Lot de contrôle: QUER

| Proben-Id./-Lage Sample Id./-Position Ident./empl.du prélèvement | YS0,2% PSI | YS1,0 PSI | TS PSI | El.A2* % | HV | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1002351920 | 47716 | 52357 | 86729 | 63.3 | 156 | | | | | | |
| 1002351921 | 47716 | 52357 | 86004 | 63.4 | 155 | | | | | | |

ASTM A 262 02a PRACTICE E I.O.

Beständig gegen interkrist. Korros./Resistant to intercryst. corros./Resistant à la corros. intercrist.: EN ISO 3651-2 I.O.

Maße-Oberfläche/Dimensions-Surface/Dimensions-Surface: I.O.

Verwechslungsprüfung (Spektralanalyse)/Test of identity(spectrum analysis)/Contrôle d'identification (analyse spectrale): I.O.

WAERMEBEHANDLUNG : 1050 GRAD C / LUFT

TRAITEMENT TERMIQUE : 1050 GRAD C / AIR

HEAT - TREATMENT : 1050 DEGREE / AIR

Schmelze auf Radioaktivität geprüft /

Heat tested for radioactivity /

Fonte controlee en termes de radioactivite

No Ni of Cuban Origin, RoHS - Compliant

NO WELD REPAIR

"DFARS compliant"

Frei von Quecksilber / free of mercury

QC ACCEPTED
DATE 6-29-11
INTLS

Aussteller der Bescheinigung/ Originator of the document / Auteur du document

ThyssenKrupp Nirosta GmbH
Dieses Zeugnis wurde maschinell erstellt
Werk Krefeld

Abnahme

Butzen

Abnahmebeauftragter
Inspector / Expert
Tel: 02151-832447
Fax: 02151-834106

Stempel des (der) Abnahmebeauftragten
Receiving agent's stamp
Poinçon de l'agent réceptionnaire

QA

Datum der Ausstellung und Bestätigung
Date of issue and validation
date d'emission et validation 10.11.2010

7-6-11

Samuel, Son & Co. Inc - Denver

# CERTIFICATION OF CONFORMANCE

| | |
|---|---|
| CUSTOMER: | Ionex Research Inc.<br>1301 Eastwind<br>Lafayette, CO. 80026 |
| DATE: | 3/24/2011 |
| CUSTOMER P.O. No.: | 6911027-003 |
| OUR ORDER No.: | 8931594 |

| | |
|---|---|
| MATERIAL DESCRIPTION: | Stainless Steel Sheet |
| ALLOY: | 304/304L |
| SPECIFICATION: | Stainless Steel Sheet |
| DIMENSIONS: | 7 ga 48 " x 120 " |
| SPECIFICATION: | ASTM-A240 |

FOR YOUR REFERENCE, THE FOLLOWING MILL HEAT NUMBERS WERE SUPPLIED ON THIS ORDER:

| HEAT NUMBER | PIECES | LBS |
|---|---|---|
| 518883 | 1 | 315 |

TO THE BEST OF OUR KNOWLEDGE, MATERIAL FURNISHED TO YOUR ABOVE PURCHASE ORDER COMPLIES WITH REQUIREMENTS CALLED FOR.

Samuel Rep: [signature]

IONEX 8
4-21-11

WTP SO 102

524554. 524625.

Herstellerwerk / Manufacturer's works / Usine productrice

ThyssenKrupp

**ThyssenKrupp Nirosta**

Art der Prüfbescheinigung / Type of inspection document / Type du document

**ABNAHMEPRUEFZEUGNIS**
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
nach / according to / suivant
**EN 10204-3.1**

Bescheinigungsnr. / Document number / Numéro de document: 10.11.2010
**1000250827 /**

Seite / Page / Page: **1 / 1**

Oberschlesienstrasse 16, 47807 Krefeld

THYSSENKRUPP NIROSTA
NORTH AMERICA INC.
2275 HALF DAY ROAD, SUITE 300
BANNOCKBURN, IL 60015
USA

Besteller/Empfänger / Customer/Consignee / Acheteur/Destinataire: THYSSENKRUPP NIROSTA, BANNOCKBURN,

Kundenbestellnr. / Customer's order number / Numéro de la commande du client: 51001784 - 6887852

Werksauftragsnr. / Manufacturer's works order no / N° de la commande de l'usine productrice: 900392831 / 002

Lieferanzeige Nr. / Delivery Note No. / Avis d' expédition N°: 87250438 / 010

Erzeugnis / Product / Produit: BLECH/SHEET/TOLE

Lieferbedingungen / Terms of delivery / Conditions de livraison:
acc. to PED 97/23/EC
ASTM A 240/A 240M
ASME SA 240/SA 240M Sec.II Part A Ed.2010

Stahlsorte und Gütegruppe / Steel grade and quality / Nuance de l'acier: TYPE 304 L / 304

| Kundenmaterial-Nr. Customer's material number N° de matière du client | Maße des Erzeugnisses ( Dicke / Breite / Länge ) Product dimensions ( Thickness / Width / Length ) Dimensions du produit ( Epaisseur / Largeur / longueur ) | Herstellart Steelmaking proc. Mode d'élabor. | Ausführung Finish Fini |
|---|---|---|---|
| | 0.1791 inch x 48.0000 inch x 120.0000 inch | AOD | IIIc/2B |

| Paket-Nr. Packing-No. N° Paquet | Stückzahl No of pieces N° de pièces | Ist-Gewicht Actual weight Masse effective | Ident.-Nr. Erzeugnis Ident.-No of product Ident.-N° du produit | Schmelzennr. Cast number N° de la coulée | Proben-Id. Sample Id. Empl.du prélèvement | Proben-Id. Sample Id. Empl.du prélèvement |
|---|---|---|---|---|---|---|
| 8124135 | 11 | 3.285 lbs | 213100 | 518883 | 1002345668 | 1002345669 |
| 8124137 | 11 | 3.289 lbs | 213100 | 518883 | 1002345668 | 1002345669 |
| | 22 | 6.574 lbs | | | | |

Chemische Zusammensetzung / Chemical composition / Composition chimique

| Schmelznr./ Cast no. | % C | % Si | % Mn | % P | % S | % Cr | % Ni | % N |
|---|---|---|---|---|---|---|---|---|
| 518883 | 0.022 | 0.37 | 1.30 | 0.030 | 0.0010 | 18.12 | 8.01 | 0.066 |

| Prüfen/inspection lot Lot de contrôle Proben-Id./-Lage Sample Id./-Position Ident.Empl.du prélèvement | QUER | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | YS0,2% PSI | YS1,0 PSI | TS PSI | El.A2" % | HRB | | | | | | |
| 1002345668 | 55257 | 60478 | 96881 | 54.1 | 91.0 | | | | | | |
| 1002345669 | 54387 | 59608 | 96011 | 54.2 | 90.0 | | | | | | |

ASTM A 262 02a PRACTICE E I.O.

Beständig gegen Interkrist. Korros./Resistant to intercryst. corros./Resistant à la corros. intercrist.: EN ISO 3651-2 I.O.

Maße-Oberfläche/Dimensions-Surface/Dimensions-Surface: I.O.

Verwechslungsprüfung (Spektralanalyse)/Test of identity(spectrum analysis)/Contrôle d'identification (analyse spectrale): I.O.

WAERMEBEHANDLUNG : 1050 GRAD C / LUFT

TRAITEMENT TERMIQUE : 1050 GRAD C / AIR

HEAT - TREATMENT : 1050 DEGREE / AIR

Schmelze auf Radioaktivität geprüft /

Heat tested for radioactivity /

Fonte controlee en termes de radioactivite

No Ni of Cuban Origin,RoHS - Compliant

NO WELD REPAIR

"DFARS compliant"

Frei von Quecksilber / free of mercury

QC ACCEPTED
DATE 1-11-11
INTLS RP

Aussteller der Bescheinigung/ Originator of the document / Auteur du document

ThyssenKrupp Nirosta GmbH
Dieses Zeugnis wurde maschinell erstellt
Werk Krefeld
Abnahme

Butzen
Abnahmebeauftragter
Inspector / Expert
Tel: 02151-832447
Fax: 02151-834106

Stempel des (der) Abnahmebeauftragten Receiving agent's stamp Poinçon de l'agent réceptionnaire: QA

Datum der Ausstellung und Bestätigung Date of issue and validation date d'emission et validation: 10.11.2010

JONES 8 4-2-11

JONES 10 4-4-11

Samuel, Son & Co. Inc - Denver

# CERTIFICATION OF CONFORMANCE

| | |
|---|---|
| **CUSTOMER:** | Ionex Research Inc.<br>1301 Eastwind<br>Lafayette, CO. 80026 |
| **DATE:** | **4/13/2011** |
| **CUSTOMER P.O. No.:** | **6910040-044** |
| **OUR ORDER No.:** | **8939786** |

| | |
|---|---|
| **MATERIAL DESCRIPTION:** | **Stainless Steel Plate** |
| **ALLOY:** | **316/316L** |
| **SPECIFICATION:** | **Stainless Steel Plate** |
| **DIMENSIONS:** | **3/16 " x 48 " x 120 "** |
| **SPECIFICATION:** | **ASME-SA240** |

FOR YOUR REFERENCE, THE FOLLOWING MILL HEAT NUMBERS WERE SUPPLIED ON THIS ORDER:

| HEAT NUMBER | PIECES | LBS |
|---|---|---|
| 519947 | 1 | 343 |

TO THE BEST OF OUR KNOWLEDGE, MATERIAL FURNISHED TO YOUR ABOVE PURCHASE ORDER COMPLIES WITH REQUIREMENTS CALLED FOR.

Samuel Rep: _____

IONEX 2

WTP SDC 102

MAY 03 2011

Effective: 03-24-07
Rev. Date: 10-01-10

Herstellerwerk / Manufacturer's works / Usine productrice

ThyssenKrupp

**ThyssenKrupp Nirosta**

Art der Prüfbescheinigung / Type of inspection document / Type du document

# ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
nach / according to / suivant
**EN 10204-3.1**

54184J

Bescheinigungsnr. / Document number / Numéro de document: 14.01.2011
**1000267065 / 1**

Seite / Page / Page: **1 / 1**

Oberschlesienstrasse 16, 47807 Krefeld

THYSSENKRUPP NIROSTA
NORTH AMERICA INC.
2275 HALF DAY ROAD, SUITE 300
BANNOCKBURN, IL 60015
USA

Besteller/Empfänger / Customer/Consignee / Acheteur/Destinataire: THYSSENKRUPP NIROSTA, BANNOCKBURN,

Kundenbestellnr. / Customer's order number / Numéro de la commande du client: 51002267 - ~~6902902~~ 6907902

Werksauftragsnr. / Manufacturer's works order no / N° de la commande de l'usine productrice: 900401194 / 003

Lieferanzeige Nr. / Delivery Note No. / Avis d' expédition N°: 87271825 / 030

Erzeugnis / Product / Produit: BAND/COIL/ROULEAU

Lieferbedingungen / Terms of delivery / Conditions de livraison:
ASTM A 240/A 240M
ASME SA 240/SA 240M Sec.II Part A Ed.2010
SAE AMS 5507 F
acc. to PED 97/23/EC

Stahlsorte und Gütegruppe / Steel grade and quality / Nuance de l'acier: TYPE 316 L / 316

| Kundenmaterial-Nr. / Customer's material number / N° de matière du client | Maße des Erzeugnisses ( Dicke / Breite / Länge ) / Product dimensions ( Thickness / Width / Length ) / Dimensions du produit ( Epaisseur / Largeur / longeur ) | Herstellart / Steelmaking proc. / Mode d'élabor. | Ausführung / Finish / Fini |
|---|---|---|---|
| | 0.1890 inch x 48.0000 inch | AOD | IIa / ID / No.1 |

| Paket-Nr. / Packing-No. / N° Paquet | Stückzahl / No of pieces / N° de pièces | Ist-Gewicht / Actual weight / Masse effective | Ident.-Nr. Erzeugnis / Ident.-No of product / Ident.-N° du produit | Schmelzennr. / Cast number / Id. de la coulée | Proben-Id. / Sample Id. / Empl.du prélèvement | Proben-Id. / Sample Id. / Empl.du prélèvement |
|---|---|---|---|---|---|---|
| 8168792 | 1 | 19.996 lbs | 218140 | 519947 | 1002381153 | 1002381154 |
| | 1 | 19.996 lbs | | | | |

Chemische Zusammensetzung / Chemical composition / Composition chimique

| Schmelznr / Cast no. | % C | % Si | % Mn | % P | % S | % Cr | % Mo | % Ni | % N | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 519947 | 0.026 | 0.58 | 0.82 | 0.034 | 0.0010 | 16.64 | 2.02 | 10.12 | 0.036 | | |

| Prüflos/Inspection lot / Lot de contrôle / Proben-Id./-Lage / Sample Id./-Position / Ident./empl.du prélèvement | QUER | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | YS0,2% PSI | YS1,0 PSI | TS PSI | El.A2" % | HRB | | | | | | |
| 1002381153 | 44090 | 50471 | 90065 | 56.4 | 83.5 | | | | | | |
| 1002381154 | 43510 | 49456 | 89630 | 54.0 | 83.3 | | | | | | |

ASTM A 262 02a PRACTICE E I.O.

Beständig gegen interkrist. Korros./Resistant to intercryst. corros./Resistant à la corros. intercrist.: EN ISO 3651-2 I.O.

Maße-Oberfläche/Dimensions-Surface/Dimensions-Surface: I.O.

Verwechslungsprüfung (Spektrsanalyse)/Test of identity(spectrum analysis)/Contrôle d'identification (analyse spectrale): I.O. 4-20-11

WAERMEBEHANDLUNG : 1050 GRAD C / LUFT

TRAITEMENT TERMIQUE : 1050 GRAD C / AIR

HEAT - TREATMENT : 1050 DEGREE / AIR

Frei von Quecksilber / free of mercury

NO WELD REPAIR

No Ni of Cuban Origin,RoHS - Compliant

"DFARS compliant"

IONIZED

**QC ACCEPTED**
DATE 3-22-11
INTLS TS

Aussteller der Bescheinigung/ Originator of the document / Auteur du document

ThyssenKrupp Nirosta GmbH
Dieses Zeugnis wurde maschinell erstellt
Werk Krefeld

Abnahme

Butzen
Abnahmebeauftragter
Inspector / Expert
Tel: 02151-832447
Fax: 02151-834106

Stempel des (der) Abnahmebeauftragten / Receiving agent's stamp / Poinçon de l'agent réceptionnaire: QA

Datum der Ausstellung und Bestätigung / Date of issue and validation / date d'emission et validation: 14.01.2011

Samuel, Son & Co. Inc - Denver

# CERTIFICATION OF CONFORMANCE

| | |
|---|---|
| **CUSTOMER:** | Ionex Research Inc.<br>1301 Eastwind<br>Lafayette, CO. 80026 |
| **DATE:** | **3/31/2011** |
| **CUSTOMER P.O. No.:** | **6910040-045** |
| **OUR ORDER No.:** | **8934902** |

| | |
|---|---|
| **MATERIAL DESCRIPTION:** | **Stainless Steel Plate** |
| **ALLOY:** | **316/316L** |
| **SPECIFICATION:** | **Stainless Steel Plate** |
| **DIMENSIONS:** | **1/4" X 48 " X 120 "** |
| **SPECIFICATION:** | **ASME-SA240** |

FOR YOUR REFERENCE, THE FOLLOWING MILL HEAT NUMBERS WERE SUPPLIED ON THIS ORDER:

| HEAT NUMBER | PIECES | LBS |
|---|---|---|
| 519947 | 4 | 1,800 |

4-6-11

TO THE BEST OF OUR KNOWLEDGE, MATERIAL FURNISHED TO YOUR ABOVE PURCHASE ORDER COMPLIES WITH REQUIREMENTS CALLED FOR.

Samuel Rep: _____

WTP 102

tgH 22/1/65

| Herstellerwerk / Manufacture's works / Usine productrice | Art der Prüfbescheinigung / Type of inspection document / Type du document | Bescheinigungsnr. / Document number / Numéro de document |
|---|---|---|
| ThyssenKrupp<br>ThyssenKrupp Nirosta | **ABNAHMEPRUEFZEUGNIS**<br>INSPECTION CERTIFICATE<br>CERTIFICAT DE RECEPTION<br>nach / according to / suivant<br>**EN 10204-3.1** | 14.01.2011<br>**1000267115 / 1**<br>Seite / Page / Page: 1 / 1 |

Oberschlesienstrasse 16, 47807 Krefeld

THYSSENKRUPP NIROSTA
NORTH AMERICA INC.
2275 HALF DAY ROAD, SUITE 300
BANNOCKBURN, IL 60015
USA

Besteller/Empfänger / Customer/Consignee / Acheteur/Destinataire: THYSSENKRUPP NIROSTA, BANNOCKBURN,

Kundenbestellnr. / Customer's order number / Numéro de la commande du client: 51002187 - 6904330

Werkauftragsnr. / Manufacturer's works order no / N° de la commande de l'usine productrice: 900399411 / 001

Lieferanzeige Nr. / Delivery Note No. / Avis d' expédition N°: 87271909 / 010

Erzeugnis / Product / Produit: BLECH/SHEET/TOLE

Lieferbedingungen / Terms of delivery / Conditions de livraison:
ASTM A 240/A 240M
ASME SA 240/SA 240M Sec.II Part A Ed.2010
SAE AMS 5507 F
acc. to PED 97/23/EC

Stahlsorte und Gütegruppe / Steel grade and quality / Nuance de l'acier: TYPE 316 L / 316

| Kundenmaterial-Nr. / Customer's material number / N° de matière du client | Maße des Erzeugnisses ( Dicke / Breite / Länge ) / Product dimensions ( Thickness / Width / Length ) / Dimensions du produit ( Epaisseur / Largeur / longeur ) | Herstellart / Steelmaking proc. / Mode d'élabor. | Ausführung / Finish / Fini |
|---|---|---|---|
| | 0.2500 inch x 48.0000 inch x 120.0000 inch | AOD | IIa / 1D / No.1 |

| Paket-Nr. / Packing-No. / N° Palette | Stückzahl / No of pieces / N° de pièces | Ist-Gewicht / Actual weight / Masse effective | Ident.-Nr. Erzeugnis / Ident.-No of product / Ident.-N° du produit | Schmelzennr. / Cast number / N. de la coulée | Proben-Id. / Sample Id. / Empl.du prélèvement | Proben-Id. / Sample Id. / Empl.du prélèvement |
|---|---|---|---|---|---|---|
| 8180485 | 9 | 3.642 lbs | 218059 | 519947 | 1002391053 | 1002391054 |
| | 9 | 3.642 lbs | | | | |

Chemische Zusammensetzung / Chemical composition / Composition chimique

| Schmelznr. / Cast no. | % C | % Si | % Mn | % P | % S | % Cr | % Mo | % Ni | % N | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 519947 | 0.026 | 0.58 | 0.82 | 0.034 | 0.0010 | 16.64 | 2.02 | 10.12 | 0.036 | | |

| Prüfloc/Inspection lot / Lot de contrôle / Proben-Id./-Lage / Sample Id./-Position / Ident./empl.du prélèvement | QUER | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | YS0,2% PSI | YS1,0 PSI | TS PSI | El.A2" % | HRB | | | | | | |
| 1002391053 | 52792 | 58593 | 90645 | 53.3 | 87.0 | | | | | | |
| 1002391054 | 53517 | 59028 | 90790 | 53.6 | 86.0 | | | | | | |

ASTM A 262 02a PRACTICE E I.O.

Beständig gegen Interkrist. Korros./Resistant to Intercryst. corros./Resistant à la corros. Intercrist.: EN ISO 3651-2 O.B.

Maße-Oberfläche/Dimensions-Surface/Dimensions-Surface: I.O.

Verwechslungsprüfung (Spektralanalyse)/Test of identity(spectrum analysis)/Contrôle d'identification (analyse spectrale): I.O.

WAERMEBEHANDLUNG : 1050 GRAD C / LUFT

TRAITEMENT TERMIQUE : 1050 GRAD C / AIR

HEAT - TREATMENT : 1050 DEGREE / AIR

Frei von Quecksilber / free of mercury

NO WELD REPAIR

No Ni of Cuban Origin,RoHS - Compliant

"DFARS compliant"

3/15/11

4-6-11

Aussteller der Bescheinigung/ Originator of the document / Auteur du document

ThyssenKrupp Nirosta GmbH
Dieses Zeugnis wurde
maschinell erstellt
Werk Krefeld

Abnahme

Butzen

Abnahmebeauftragter
Inspector / Expert
Tel: 02151-832447
Fax: 02151-834106

Stempel des (der) Abnahmebeauftragten / Receiving agent's stamp / Poinçon de l'agent réceptionnaire: QA

Datum der Ausstellung und Bestätigung / Date of issue and validation / date d'émission et validation: 14.01.2011

10 NEX 0

R&S STEEL
TRIPLE-S STEEL SUPPLY CO.
INTSEL STEEL DISTRIBUTORS

3811 Joliet Street
Denver, CO 80239
Tel: 303.321.9660
Fax: 303.321.9677
Toll Free: 800.308.9660

# CERTIFICATE OF CONFORMANCE

We certify that the material supplied on the below referenced order number conforms in all respects to the purchased requirements as described by the purchase order number referenced below. We hereby certify the material meets ASME-SA-36

Q A Mgr – R&S Steel Co
Tyler Georgine
4/19/2011

SO#- 308606
Cust PO#- 6910040-043
Size- PL 1" 48X120
Heat#- 6221809

IONEX 2
WTP 102
APR 20 2011

# TEST CERTIFICATE

BLUESCOPE STEEL


*Certificate No. : L17988/A*
*Replacement For : L17988*
Transmission Date: 15/12/10

| | | | |
|---|---|---|---|
| Customer: | BLUESCOPE STEEL AMERICAS LLC<br>111 W. OCEAN BLVD SUITE 1370<br>LONGBEACH CALIFORNIA<br>United States | Supplier: | BLUESCOPE STEEL (AIS) PTY LTD<br>PORT KEMBLA, N.S.W., AUSTRALIA<br>A.B.N. 19 000 019 625 |
| | | Sales Order No: | X0280 |
| Cust Order No: | 104270 | Printed At: | Supplier MWS |
| Ship To: | HOUSTON | on: | 16/12/2010 |

STEELMAKING: Basic Oxygen - Slab Cast
SPECIFICATION: ASTM A 36/ASME SA-36
PRODUCT: XLERPLATE

INSPECTION: Supplier
CERTIFICATION: Supplier

## CHEMICAL ANALYSIS

Percentage of element by mass (L=Cast, P=Product, -S=Soluble, -T=Total, CF=Chemical Formula, n=Min, x=Max)

| Item No | Heat / Unit No | NATA Lab | L/P | C | P | Mn | Si | S | Ni | Cr | Mo | Cu | Al-T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0813 | 6221809 | 0632 | L | .146 | .020 | 1.12 | .18 | .010 | .024 | .047 | .006 | .028 | .030 |
| 0813 | 8777399 | 0632 | L | .134 | .013 | 1.10 | .18 | .010 | .017 | .021 | <.002 | .019 | .034 |
| 0813 | 8780749 | 0632 | L | .143 | .019 | 1.11 | .19 | .009 | .019 | .027 | <.002 | .024 | .031 |
| 0813 | 8780849 | 0632 | L | .143 | .018 | 1.07 | .19 | .011 | .019 | .021 | <.002 | .026 | .031 |
| 0813 | 8783249 | 0632 | L | .142 | .015 | 1.10 | .19 | .012 | .018 | .021 | .004 | .033 | .029 |

| Item No | Heat / Unit No | NATA Lab | L/P | Ti | N | Nb | Sn | V |
|---|---|---|---|---|---|---|---|---|
| 0813 | 6221809 | 0632 | L | .014 | .0025 | .001 | <.002 | <.003 |
| 0813 | 8777399 | 0632 | L | .014 | .0033 | .001 | <.002 | .003 |
| 0813 | 8780749 | 0632 | L | .015 | .0033 | .001 | <.002 | .003 |
| 0813 | 8780849 | 0632 | L | .015 | .0028 | .001 | <.002 | .003 |
| 0813 | 8783249 | 0632 | L | .014 | .0033 | .001 | .002 | <.003 |

## MECHANICAL TESTING

### Tensile ASTM A370

| Item No | Heat No | Tested Unit | NATA Lab | Cat | Loc | THICK mm | Rt0.5 KIPS/SQIN | Rm KIPS/SQIN | Lo mm | ELONGN % |
|---|---|---|---|---|---|---|---|---|---|---|
| 0813 | 6221809 | YK339 | 0631 | B | TEF | 25.40 | 46 | 67 | 203.2 | 30 |
| 0813 | 6221809 | YK340 | 0631 | B | TEF | 25.40 | 48 | 68 | 203.2 | 30 |
| 0813 | 8777399 | XY027 | 0631 | B | TEF | 25.40 | 47 | 66 | 203.2 | 33 |
| 0813 | 8777399 | YK311 | 0631 | B | TEF | 25.40 | 46 | 68 | 203.2 | 30 |
| 0813 | 8780749 | YK341 | 0631 | B | TEF | 25.40 | 46 | 68 | 203.2 | 30 |
| 0813 | 8780749 | YK342 | 0631 | B | TEF | 25.40 | 46 | 68 | 203.2 | 29 |
| 0813 | 8780849 | YK314 | 0631 | B | TEF | 25.40 | 45 | 66 | 203.2 | 31 |
| 0813 | 8780849 | YK315 | 0631 | B | TEF | 25.40 | 45 | 66 | 203.2 | 31 |
| 0813 | 8783249 | YK346 | 0631 | B | TEF | 25.40 | 45 | 66 | 203.2 | 30 |
| 0813 | 8783249 | YK347 | 0631 | B | TEF | 25.40 | 45 | 66 | 203.2 | 32 |

## ITEMS COVERED BY THIS CERTIFICATE

| Item No | Heat No | Ordered Dimensions (inch) | No of Units | Mass (Tonnes) | Unit Identities |
|---|---|---|---|---|---|
| 0813 | 6221809 | 96.06X1.00X240 | 10 | 29.630 | YK336A1 YK336A2 YK337A1 YK337A2 YK338A1 YK338A2 YK339A1 YK339A2 YK340A1 YK340A2 |
| 0813 | 8777399 | 96.06X1.00X240 | 2 | 5.926 | YK311A1 YK311A2 |
| 0813 | 8780749 | 96.06X1.00X240 | 8 | 23.704 | YK333A1 YK333A2 YK334A1 YK334A2 YK341A1 YK341A2 YK342A1 YK342A2 |
| 0813 | 8780849 | 96.06X1.00X240 | 8 | 23.704 | YK312A1 YK312A2 YK313A1 YK313A2 YK314A1 YK314A2 YK315A1 YK315A2 |
| 0813 | 8783249 | 96.06X1.00X240 | 40 | 118.520 | YK316A1 YK316A2 YK317A1 YK317A2 YK318A1 YK318A2 YK319A1 YK319A2 YK320A1 YK320A2 YK321A1 YK321A2 YK322A1 YK322A2 YK323A1 YK323A2 YK324A1 YK324A2 YK325A1 YK325A2 YK326A1 YK326A2 YK327A1 YK327A2 YK328A1 YK329A1 YK329A2 YK330A1 YK330A2 YK331A1 YK331A2 YK332A2 YK335A1 YK335A2 YK344A1 YK344A2 YK345A1 YK345A2 YK346A1 YK346A2 |

XAH

Samuel, Son & Co. Inc - Denver

# CERTIFICATION OF CONFORMANCE

| | |
|---|---|
| CUSTOMER: | Ionex Research Inc.<br>1301 Eastwind<br>Lafayette, CO. 80026 |
| DATE: | 6/29/2011 |
| CUSTOMER P.O. No.: | 6911057-001 |
| OUR ORDER No.: | 8979921 |

| | |
|---|---|
| MATERIAL DESCRIPTION: | Stainless Steel Sheet |
| ALLOY: | 304/304L |
| SPECIFICATION: | Stainless Steel Sheet |
| DIMENSIONS: | 14 ga 48 x 120 |
| SPECIFICATION: | ASTM-A240 |

FOR YOUR REFERENCE, THE FOLLOWING MILL HEAT NUMBERS WERE SUPPLIED ON THIS ORDER:

| HEAT NUMBER | PIECES | LBS |
|---|---|---|
| 860656 | 1 | 126 |

TO THE BEST OF OUR KNOWLEDGE, MATERIAL FURNISHED TO YOUR ABOVE PURCHASE ORDER COMPLIES WITH REQUIREMENTS CALLED FOR.

Samuel Rep: _____

IONEX 2 WTP 102

JUL 18 2011

Effective: 03-24-07
Rev. Date: 10-01-10

Tg# 525235, 525237

Herstellerwerk / Manufacturer's works / Usine productrice

ThyssenKrupp

**ThyssenKrupp Nirosta**

Art der Prüfbescheinigung / Type of inspection document / Type du document

# ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
nach / according to / suivant
**EN 10204-3.1**

Bescheinigungsnr. / Document number / Numéro de document: 01.12.2010
**1000256687 /**

Seite / Page / Page: **1 / 1**

Oberschlesienstrasse 16, 47807 Krefeld

THYSSENKRUPP NIROSTA
NORTH AMERICA INC.
2275 HALF DAY ROAD, SUITE 300
BANNOCKBURN, IL 60015
USA

Besteller/Empfänger / Customer/Consignee / Acheteur/Destinataire: THYSSENKRUPP NIROSTA, BANNOCKBURN,

Kundenbestellnr. / Customer's order number / Numéro de la commande du client: 51002061 - 6900769

Werksauftragsnr. / Manufacturer's works order no / N° de la commande de l'usine productrice: 900397552 / 008

Lieferanzeige Nr. / Delivery Note No. / Avis d' expédition N°: 87258621 / 020

Erzeugnis / Product / Produit: BLECH/SHEET/TOLE

Lieferbedingungen / Terms of delivery / Conditions de livraison:
acc. to PED 97/23/EC
ASTM A 240/A 240M
ASME SA 240/SA 240M Sec.II Part A Ed.2010

Stahlsorte und Gütegruppe / Steel grade and quality / Nuance de l'acier: TYPE 304 L / 304

| Kundenmaterial-Nr. / Customer's material number / N° de matière du client | Maße des Erzeugnisses ( Dicke / Breite / Länge ) / Product dimensions ( Thickness / Width / Length ) / Dimensions du produit ( Epaisseur / Largeur / longueur ) | Herstellart Steelmaking proc. Mode d'élabor. | Ausführung Finish Fini |
|---|---|---|---|
| | 0.0740 inch x 48.0000 inch x 120.0000 inch | AOD | IIIc/2B |

| Paket-Nr. / Packing-No. / N° Paquets | Stückzahl / No of pieces / N° de pièces | Ist-Gewicht / Actual weight / Masse effective | Ident.-Nr. Erzeugnis / Ident.-No of product / Ident.-N° du produit | Schmelzennr. / Cast number / Id. de la coulée | Proben-Id. / Sample Id. / Empl.du prélèvement | Proben-Id. / Sample Id. / Empl.du prélèvement |
|---|---|---|---|---|---|---|
| 8149452 | 31 | 3.739 lbs | 214806 | 860656 | 1002366037 | 1002366038 |
| 8149453 | 31 | 3.743 lbs | 214806 | 860656 | 1002366037 | 1002366038 |
| | 62 | 7.482 lbs | | | | |

Chemische Zusammensetzung / Chemical composition / Composition chimique

| Schmelzn.-/ Cast no. | % C | % Si | % Mn | % P | % S | % Cr | % Ni | % N | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 860656 | 0.023 | 0.36 | 1.24 | 0.031 | 0.0020 | 18.08 | 8.03 | 0.058 | | | |

Prüfort/Inspection lot / Lot de contrôle: QUER

| Proben-Id./-Lage / Sample Id./-Position / Ident./empl.du prélèvement | YS0,2% PSI | YS1,0 PSI | TS PSI | El.A2" % | HV | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1002366037 | 46265 | 50761 | 98622 | 54.2 | 173 | | | | | | |
| 1002366038 | 48006 | 52502 | 99492 | 54.1 | 175 | | | | | | |

ASTM A 252 02a PRACTICE E I.O.

Beständig gegen interkrist. Korros./Resistant to intercryst. corros./Resistant à la corros. intercrist.: EN ISO 3651-2 I.O.

Maße-Oberfläche/Dimensions-Surface/Dimensions-Surface: I.O.

Verwechslungsprüfung (Spektralanalyse)/Test of identity(spectrum analysis)/Contrôle d'identification (analyse spectrale): I.O.

WAERMEBEHANDLUNG : 1050 GRAD C / LUFT

TRAITEMENT TERMIQUE : 1050 GRAD C / AIR

HEAT - TREATMENT : 1050 DEGREE / AIR

Schmelze auf Radioaktivität geprüft /

Heat tested for radioactivity /

Fonte controlee en termes de radioactivite

No Ni of Cuban Origin,RoHS - Compliant

NO WELD REPAIR

"DFARS compliant"

Frei von Quecksilber / free of mercury

2-2-11

Aussteller der Bescheinigung/ Originator of the document / Auteur du document:
ThyssenKrupp Nirosta GmbH
Dieses Zeugnis wurde maschinell erstellt
Werk Krefeld
Abnahme

Butzen
Abnahmebeauftragter
Inspector / Expert
Tel: 02151-832447
Fax: 02151-834106

Stempel des (der) Abnahmebeauftragten / Receiving agent's stamp / Poinçon de l'agent réceptionnaire: QA

Datum der Ausstellung und Bestätigung / Date of issue and validation / date d'emission et validation: 01.12.2010

7-5-11

GASES & ARC SUPPLY, INC.
5691 N. FRANKLIN ST. (80216)
P.O. BOX 11795 (80221-0795)
DENVER, CO

PHONE: 303-477-8037
FAX: 303-477-8098

IONEX
1301 EASTWIND DRIVE
LAFAYETTE, CO 80026

ATTN: GARY

PURCHASE ORDER # 6910040-060 DELIVERY TICKET # 38461

ON 5-4-11 WE DELIVERED THE FOLLOWING ITEMS:

| EACH | PART NO. | DESCRIPTION |
|---|---|---|
| 252 LBS. | DW316LP.045 28SP | (E316LT1-4) STAINLESS MIG WIRE (KOBELCO) |
| | HEAT/LOT# F1A2315 | (MFG #) |
| | ACTUAL CERT PROVIDED | |
| | CERT # 220110120 | |

THE CERTIFICATE OF ANALYSIS AND A COPY OF THE DELIVERY TICKET ARE ATTACHED TO THIS CERTIFICATE.

**CERTIFICATE OF COMPLIANCE**

THIS IS TO CERTIFY THAT THE MATERIALS SUPPLIED ON THE ABOVE NOTED PURCHASE ORDER ARE TO THE BEST OF OUR KNOWLEDGE FULLY IN ACCORDANCE WITH THE PURCHASING DESCRIPTION ON THE PURCHASE ORDER.

SIGNED: [signature] DATED 5-4-11

IONEX 2
MAY 05 2011

GASES & ARC SUPPLY, INC.
5691 N. FRANKLIN ST. (80216)
P.O. BOX 11795 (80221-0795)
DENVER, CO

PHONE: 303-477-8037
FAX: 303-477-8098

IONEX
1301 EASTWIND DRIVE
LAFAYETTE, CO 80026

ATTN: GARY

PURCHASE ORDER #6910040-060 DELIVERY TICKET # 38461

ON 4-30-11 WE DELIVERED THE FOLLOWING ITEMS:

| EACH | PART NO. | DESCRIPTION |
|---|---|---|
| 28LBS. | DW316LP.045 28#P (E316LT1-4) | STAINLESS MIG WIRE (KOBELCO) |
| | HEAT/LOT# F1A2315 (MFG#) | |
| | ACTUAL CERT PROVIDED | |
| | CERT# 220110120 | |

THE CERTIFICATE OF ANALYSIS AND A COPY OF THE DELIVERY TICKET ARE ATTACHED TO THIS CERTIFICATE.

**CERTIFICATE OF COMPLIANCE**

THIS IS TO CERTIFY THAT THE MATERIALS SUPPLIED ON THE ABOVE NOTED PURCHASE ORDER ARE TO THE BEST OF OUR KNOWLEDGE FULLY IN ACCORDANCE WITH THE PURCHASING DESCRIPTION ON THE PURCHASE ORDER.

SIGNED: _____ DATED 4-29-11

IONEX 2 MAY 02 2011

KSL1163-DW (15)

KOBELCO

# INSPECTION CERTIFICATE

PURCHASER

CERTIFICATE No. 220110120

FLUX CORED WIRE

DATE OF ISSUE 2011.02.17

| TRADE DESIGNATION | DIMENSION | MFG.No. | APPLICABLE SPECIFICATION AND CLASSIFICATION |
|---|---|---|---|
| DW-316LP | 0.045 inch | F1A2315 | AWS A5.22 E316LT1-1 AWS A5.22 E316LT1-4<br>ASME SFA-5.22 E316LT1-1 ASME SFA-5.22 E316LT1-4 |

CHEMICAL COMPOSITION (%)

| ELEMENTS | C | SI | MN | P | S | CU | NI | CR | MO | NB | FE | N | FN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPOSITED METAL | 0.025 | 0.71 | 1.28 | 0.022 | 0.003 | 0.11 | 12.14 | 18.13 | 2.85 | 0.02 | REM | 0.020 | 12 |

| ELEMENTS | FS | FNW |
|---|---|---|
| DEPOSITED METAL | 7 | 8 |

FS = FERRITE % (SCHAEFFLER DIAGRAM)
FN = FERRITE NUMBER (DELONG DIAGRAM)
FNW= FERRITE NUMBER (WRC)

TENSILE TEST OF DEPOSITED METAL

| YIELD POINT | YIELD STRENGTH AT 0.2% OFFSET | TENSILE STRENGTH | ELONGATION |
|---|---|---|---|
| - ksi | - ksi | 82 ksi | 41 % |

IMPACT TEST OF DEPOSITED METAL

| TEST TEMP. | ABSORBED ENERGY | |
|---|---|---|
| | AVG. | |
| - °F | - ft-lbf | |

HARDNESS TEST: -

WELDING CONDITIONS

| | | | |
|---|---|---|---|
| TYPE OF CURRENT | DCEP | SHIELDING GAS | CO2 100% |
| AMPERAGE | 200 A | | |
| ARC VOLTAGE | 29 V | | |

POSTWELD HEAT TREATMENT: - °F × - h

ACCORDING TO EN10204
3.1

WE HEREBY CERTIFY THAT THE ABOVE TEST RESULTS ARE AS DESCRIBED HEREIN AND SATISFY THE REQUIREMENTS OF THE APPLICABLE SPECIFICATION.

KOBE STEEL, LTD.
WELDING BUSINESS IBARAKI PLANT

H. Sugawara

APPROVED BY CHIEF INSPECTOR

1102171714191417161102017104R2194

REMARKS: CAPITAL LETTERS ARE USED EXCEPT FOR UNIT AND APPLICABLE SPECIFICATION / CLASSIFICATION.

11-2-5 (101)

MAY 02 2011 (2)

Energy & Process Corporation
A FERGUSON SUBSIDIARY
2146-B Flinstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

CERTIFICATE OF COMPLIANCE

CUSTOMER: IONEX RESEARCH
CUSTOMER P.O. NUMBER: 6910040-004
PACKING SLIP NUMBER: 0196283

20FT – ANGLE 2" X 2" X ¼" HR ASTM A36
IONEX PART#ANG-002-04 HEAT#JH4509 MFG:SDI IT#1

40FT – BEAM S6 X 17.3# HRS CS ASTM A572 GR.50 / A992
IONEX PART#BEM-006-09 HEAT#1004635 MFG:NUCOR IT#3

20FT – BEAM S8 X 18.4# HRS CS ASTM A572 GR.50 / A992
IONEX PART#BEM-008-10 HEAT#2001924 MFG:NUCOR IT#4

60FT – BEAM S10 X 25.4# HRS CS ASTM A572 GR.50 / A992
IONEX PART#BEM-010-02 HEAT#G103324 MFG:GERDAU AMERISTEEL IT#5

120FT – BEAM W8 X 48# HRS CS ASTM A572 GR.50 / A992
IONEX PART#BEM-008-11 HEAT#2007050 MFG:NUCOR IT#6

2EA – PLATE ¼"THICK X 48" X 120" ASTM A36
IONEX PART#PLT-140-46 HEAT#4123118 MFG:MONARCH IT#7

1EA – PLATE ½"THICK X 48" X 120" ASTM A36
IONEX PART#PLT-120-23 HEAT#4173240 MFG:MONARCH IT#9

1EA – PLATE 5/8"THICK X 48" X 120" ASTM A36
IONEX PART#PLT-580-09 HEAT#BOS6568 MFG:NUCOR IT#10

1EA – PLATE ¾"THICK X 48" X 120" ASTM A36
IONEX PART#PLT-034-17 HEAT#N2461 MFG:FERALLOY IT#11

1EA – PLATE 1-1/4"THICK X 48" X 120" ASTM A36
IONEX PART#PLT-114-01 HEAT#0505118 MFG:NUCOR IT#12

1EA – PLATE 1-1/2"THICK X 48" X 120" ASTM A36
IONEX PART#PLT-112-08 HEAT#2K193 MFG:EVRAZ IT#13

IONEX 2 SEP 16 2010

WTP 102

Energy & Process Corporation
A FERGUSON SUBSIDIARY
2146-B Flinstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

___X___ We hereby certify that the material is in compliance with the applicable material specification(s) and Purchase Order requirements, and that all required tests and inspections have been performed with satisfactory results.

___X___ Energy & Process Corporation has not performed welding on this material.

_____ Other:

SIGNED

Document Coordinator
TITLE

8/23/10
DATE

CC:Customer File

IONEX 2
SEP 16 2010
STP SD 102

# Material Certification

Feralloy
A Member of the PNA Group

DATE: 8/26/10

BILL OF LADING: 601 - 110380 - 10
HEAT/MILL COIL: N2461 435946
SKID NO: 120089
TAG NUMBER: 53273 - 02
CLASS: ASTM A36 Structural Steel Plate
QUALITY: ASTM A-36 Carbon Structural Steel

PART NO: 446034 - T/L
SIZE: .7500 X 48.000 X 120.000
PRODUCT: HR PL36 A36
CUSTOMER PO NUMBER: C 55438-S 2

| Element | C | Mn | P | S | Si | Cu | Ni | Cr | Mo | Sn |
|---|---|---|---|---|---|---|---|---|---|---|
| Weight % | .2000 | .3400 | .0090 | .0060 | .0100 | .1700 | .0800 | .0600 | .0230 | .0200 |
| Element | Al | B | Nb | V | Ti | N | CA | H | O | |
| Weight % | .0340 | .0000 | .0040 | .0010 | .0010 | .0070 | .0014 | | | |

We hereby represent that the above chemistry analysis is that of the supplying mill.

| Location | Yield (PSI) | Tensile (PSI) | Elongation(% in 2") |
|---|---|---|---|
| HEAD | 45200 | 65500 ✓ | 37.0 ✓ |
| CENTER | 48800 | 64700 ✓ | 35.0 ✓ |

| Bend Test | n Value | Hardness | r Value | |
|---|---|---|---|---|
| | .000 | | .00 | |

Chemical Data reported by producing mill

This is to certify that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specification and fulfills requirements in such respects.

FERALLOY MIDWEST
MIDWEST PORTAGE DIVISION
6755 WATERWAY DRIVE

PORTAGE , IN 46368

9-14-10

IONEX 9

SEP 16 2010 IONEX 2

ENERGY & PROCESS CORP.
2146-B FLINTSTONE DRIVE
TUCKER, GEORGIA 30084
(770) 934-3101

IONEX RESEARCH
PO# 6910040-004 ITEM#11

Energy & Process Corporation
A FERGUSON SUBSIDIARY
2146-B Flinstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

# CERTIFICATE OF CONFORMANCE/COMPLIANCE

CUSTOMER: IONEX RESEARCH CORPORATION
CUSTOMER P.O. NUMBER: 6910040-014
PACKING SLIP NUMBER: 197198
DESCRIPTION:

| | |
|---|---|
| 1PC | 4" X 4" X ½" X 20' SQUARE TUBE A500 GR.B<br>HEAT: S02782 MFG: SOUTHLAND TUBE ITEM: 1 P/N: TUB-400-14 |
| 7 PCS<br>(140') | S8" X 18.4 X 20' S-BEAM SA572/SA992<br>HEAT: 2006195 MFG: NUCOR ITEM: 2 P/N: BEM-008-13 |
| 1 PC | 1" THK X 48" W X 120" LONG PLATE SA36<br>HEAT: B0U7256 MFG: NUCOR ITEM: 3 P/N: PLT-100-27 |
| 1 PC | ½" THK X 48" W X 120" LONG PLATE SA36<br>HEAT: T03192 MFG: STEEL WAREHOUSE ITEM: 4 P/N: PLT-120-35 |
| 2 PCS | ¾" THK X 48" W X 120" LONG PLATE SA36<br>HEAT: N2461 MFG: FERALLOY CORP ITEM: 5 P/N: PLT-034-19 |

__X__ We hereby certify that the material described above is in compliance with the applicable material specification(s) and Purchase Order requirements, and that all required tests and inspections have been performed with satisfactory results. Receipt inspection of direct shipped material is the responsibility of the customer.

__X__ Energy & Process Corporation has not performed welding on this material.

_____ Other:

Kerry Flick
SIGNED

DOCUMENT COORDINATOR
TITLE

9-9-10
DATE

CC: Customer File



IONEX 2
WTP SC 102
OCT 04 2010

steel warehouse

CERT. #: 00051265

600 River Terminal Road
Chattanooga, TN 37406-1731

## *CERTIFICATE OF ANALYSIS AND TESTS*

FOR: KOMATSU AMERICA CORP
PO BOX 168
CHATTANOOGA TN 37401-0168
C/O ACCOUNTS PAYABLE

DATE: 08/24/10
YOUR P/O NUMBER: 4600018190-639
SHIPPER NUMBER: 00065188
OUR INVOICE NUMBER: 000000058123
OUR SALES ORDER: 00369541

## *DESCRIPTION OF MATERIAL AND SPECIFICATIONS*

1. HRTP 0001 E 0.5000 48.0000 X 120.0000

HEAT # T03192 NAFTA Y BUNDLE # 00017486TA

CHEMICAL ANALYSIS

| HEAT # | C | MN | P | S | SI | AL | CB | V |
|---|---|---|---|---|---|---|---|---|
| 1. T03192 | .1900 | .3800 | .0090 | .0030 | .0290 | .0320 | .0020 | .0010 |

** COMMENT = DOMESTIC

MECHANICAL PROPERTIES

| BUNDLE # NAF | YIELD | TENSILE | ELONGATION % IN 2 IN. | D | | MISC |
|---|---|---|---|---|---|---|
| 1. 00017486TA Y | | | 00 | L | | |
| | 53200 psi | 72000 psi | 33 | T | | |

THIS MATERIAL IS IN ACCORDANCE WITH AND CONFORMS TO

HRTP A36/ASME SA36

9-17-10

IONEX 9

We hereby certify that the foregoing data is a true copy of the data furnished us by our supplier or resulting from tests performed in a recognized laboratory or our laboratory.

By C. Lemons

Authorized Agent

FORM # SW-17 REV 2-10

IONEX 2

OCT 04 2010