

Implementation Guidelines: ANSI X12 Transaction Set 863

Report of Test Results

DOCUMENT NUMBER ICS 004010 863 S Customer

Algoma Steel Inc..

Information Systems and Business Process Improvement

Author: Margale Clarke

Effective date: 2017-03-22

TABLE OF CONTENTS

SECTION 1. REVISION STATUS..... 1.1

SECTION 2. PREFACE..... 2.1

SECTION 3. SUMMARY..... 3.1

SECTION 4. INTERCHANGE ENVELOPE..... 4.1

 4.1 ISA - Interchange Control Header 4.2

 4.2 Element separators and segment terminator 4.4

 4.3 IEA - Interchange Control Trailer 4.5

SECTION 5. FUNCTIONAL GROUP ENVELOPE..... 5.1

 5.1 GS - Functional Group Header 5.2

 5.2 GE - Functional Group Trailer 5.3

SECTION 6. 863 TRANSACTION SET..... 6.1

 6.1 Data Segment Sequence 6.2

 6.2 ST - Transaction Set Header 6.3

 6.3 BTR - Beginning Segment for Test Results 6.4

 6.4 NTE - Note/Special Instruction 6.5

 6.5 DTM - Date/Time Reference 6.6

 6.6 N1 - Name 6.7

 6.7 LIN - Item Identification 6.8

 6.8 PID - Product/Item Description 6.10

 6.9 MEA - Measurements 6.11

 6.10 CID - Characteristic/Class ID 6.12

 6.11 PSD - Physical Sample Description 6.13

 6.12 TMD - Test Method 6.14

 6.13 MEA - Measurements 6.15

 6.14 CID - Characteristic/Class ID 6.17

 6.15 PSD - Physical Sample Description 6.18

 6.16 MEA - Measurements 6.19

 6.17 CTT - Transaction Totals 6.20

 6.18 SE - Transaction Set Trailer 6.21

SECTION 7. DATA ELEMENT DICTIONARY..... 7.1

SECTION 8. 863 SAMPLE TRANSACTION..... 8.1

SECTION 1. REVISION STATUS

REVISION NUMBER	DATE	PAGES	AUTHOR
R00/A	2003 12 15	original draft	M. Clarke
R00	2004 04 12	Added NTE	G. Masters
R01	2005 02 23	Removed Margale	G. Masters
R02	2005 02 23	Revised MEA & PSD	K. Rathwell
R03	2008 06 23	name change	G. Masters
R04	2008 10 30	Added '055' to 751	K. Rathwell
R05	2011 08 18	Add 'NR' to 352	G. Masters
R06	2016 06 15	Update data fields	G. Masters
R06	2016 06 15	to match SAP.	G. Masters
R07	2016 07 22	Updated BSR01	G. Masters
R08	2017 03 22	Changed contacts	G. Masters

SECTION 2. PREFACE

This document is intended to provide the details for an electronic Report of Test Results for Algoma shipments into one of our trading partner's facilities. If this specification does not meet your requirements, please forward a copy of your specification to the address below.

Algoma Steel Inc.. is committed to supporting and using the Automotive Industry Action Group/American National Standards Institute (AIAG/ANSI) X12 national standards.

Any questions or concerns regarding the Algoma Report of Test Results or electronic data communication with Algoma may be directed to:

Algoma Steel Inc..
Information Systems & Business Process Improvement
105 West Street
Sault Ste. Marie, ON
P6A 7B4

Brian Dale	705 297-2947	Brian.Dale@algoma.com
EDI Support		EDISupport@algoma.com
Fax	705 945-2366	

SECTION 3. SUMMARY

Algoma Steel Inc.. has implemented this Report of Test Results ANSI X12 863 transaction set for our trading partner's facilities. This transaction set will be used to send Test Result information.

The "original" 863 will be sent at the time of shipment from Algoma. A "replace" 863 will be sent if the shipment information is modified at Algoma after the "original" 863 was sent. The "replace" 863 will contain all of the test result information, which should be used to overlay the information that was sent on the "original" 863.

Algoma does require the use of the Functional Acknowledgement, 997 transaction set, in order for Algoma to ensure the receipt of the 863.

Algoma Steel Inc.. uses the GXS network for electronic data interchange.

Algoma's DUNS number is 201495124.

SECTION 4. INTERCHANGE ENVELOPE

4.1 ISA - Interchange Control Header

Segment: ISA - Interchange Control Header

Level: n/a

Max Use/Loops: 1 per interchange/none

Purpose: To start and identify an interchange of one or more functional groups and interchange related control segments.

General Information: None

Example: ISA~00~ ~00~ ~01~201495124 ~
 01~999999999 ~940901~1312~U~00401~000000001~0~
 P~|□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
ISA01	744	Authorization Information Qual	M ID 02/02	"00" (Zeros) No authorization information present
ISA02	745	Authorization Information	M AN 10/10	Use 10 spaces
ISA03	746	Security Information Qual	M ID 02/02	"00" (Zeros) No security information present
ISA04	747	Security Information	M AN 10/10	Use 10 spaces
ISA05	704	Interchange Sender ID Qualifier	M ID 02/02	"01" for DUNS number
ISA06	705	Interchange Sender ID	M ID 15/15	"201495124"
ISA07	704	Interchange Receiver ID Qualifier	M ID 02/02	"01" for DUNS number
ISA08	706	Interchange Receiver ID	M ID 15/15	Your company's DUNS number.
ISA09	373	Interchange Date	M DT 06/06	Date of Transmission (YYMMDD)
ISA10	337	Interchange Time	M TM 04/04	Time of Transmission (HHMM) 24 hour clock

Segment: ISA - Interchange Control Header

Elem ID -----	Elem# -----	Name -----	Features -----	Comments -----
ISA11	726	Interchange Standard ID	M ID 01/01	"U" for USA
ISA12	703	Interchange Version ID	M ID 05/05	"00401"
ISA13	709	Interchange Control ID	M N0 09/09	Sequential Number starting with 1 and incremented by 1 for each ISA sent.
ISA14	749	Acknowledgement ID	M ID 01/01	"0" for TA1 not required.
ISA15	748	Test Indicator	M ID 01/01	"P" for production "T" for test
ISA16	701	Sub Element Separator	M AN 01/01	Must be different than the element separator.

4.2 Element separators and segment terminator

Algoma uses the following characters:

- Segment terminator ANSI Hex "1C"
- Element separator ANSI Hex "7E"
- Sub element separator ANSI Hex "3A"

4.3 IEA - Interchange Control Trailer

Segment: IEA - Interchange Control Trailer
Level: n/a
Max Use/Loops: 1 per interchange/none
Purpose: To define the end of an interchange of one or more functional groups and interchange related control segments.
General Information: None
Example: IEA~1~000000004□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
IEA01	405	Number of Included Groups	M N0 01/05	Number of GS segments included between ISA and this IEA
IEA02	709	Interchange Control Number	M N0 09/09	Must match ISA13

SECTION 5. FUNCTIONAL GROUP ENVELOPE

5.1 GS - Functional Group Header

Segment: GS - Functional Group Header

Level: n/a

Max Usage/Loops: 1/none

Purpose: The GS segment is used to indicate the beginning of a functional group and to provide control information

General Information: None

Example: GS~RT~201495124~999999999~20000331~1220~4~X~004010□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
GS01	479	Functional ID	M ID 02/02	"RT"
GS02	142	Application Sender Code	M ID 02/12	"201495124"
GS03	124	Application Receiver Code	M ID 02/12	Your company's DUNS number.
GS04	29	Data Interchange Date	M DT 06/06	Date created (YYMMDD)
GS05	30	Data Interchange Time	M TM 04/04	Time created (HHMM)
GS06	28	Data Interchange Control Number	M N0 01/09	Start with 1 and increment by 1 for each subsequent GS between interchanges
GS07	455	Responsibility Agency	M ID 01/02	Use "X" for ANSI X12 code formats
GS08	480	Version	M ID 01/12	"004010"

5.2 GE - Functional Group Trailer

Segment: GE - Functional Group Trailer
Level: n/a
Max Usage/Loops: 1 per functional group/none
Purpose: To define (specify) the end of a functional group of related transaction sets.
General Information: None
Example: GE~1~4□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
GE01	97	Number of Included Transaction Sets	M N0 01/06	Total count of transaction sets in functional group
GE02	28	Data Interchange Control Number	M N0 01/09	Same as GS06 in the associated group header

SECTION 6. 863 TRANSACTION SET

6.1 Data Segment Sequence

ST Transaction Set Header
BTR Beginning Segment for Test Results
NTE Note/Special Instruction
DTM Date/Time Reference
N1 Name
LIN Item Identification

*** Mechanical ***

PID Product/Item Description
MEA Measurements
CID Characteristic/Class ID
PSD Physical Sample Description
TMD Test Method
MEA Measurements

*** Chemistry ***

CID Characteristic/Class ID
PSD Physical Sample Description
MEA Measurements
CTT Transaction Totals
SE Transaction Set Trailer

6.2 ST - Transaction Set Header

Segment: ST - Transaction Set Header

Level: Heading

Max Usage/Loops: 1/none

Purpose: To indicate the start of a transaction set and to assign a control number.

General

Information: This segment is required. The transaction set control number (ST02) in the header must match the transaction set control number (SE02) in the transaction set trailer (SE).

Example: ST~863~0004□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
ST01	143	Transaction Set ID Code	M ID 03/03	Use "863"
ST02	329	Transaction Set Control Number	M AN 04/09	A unique number assigned to each transaction set within a functional group.

6.3 BTR - Beginning Segment for Test Results

Segment: BTR - Beginning Segment for Test Results

Level: Heading

Max Usage/Loops: 1/none

Purpose: To transmit identifying numbers, dates and other basic data relating to the transaction set.

General Information: The date and time are the date and local time of the creation of the transaction.

Example: BTR~00~20031215~2359~RT~ESA-329572□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
BTR01	353	Transaction Set Purpose Code	M ID 02/02	"00" - Original
BTR02	373	Date	M DT 08/08	Creation date (CCYYMMDD)
BTR03	337	Time	O TM 04/08	Creation time (HHMM) 24 hour clock.
BTR04	755	Report Type Code	O ID 02/02	"RT".
BTR05	127	Reference ID	O AN 01/30	Test Certificate number.
BTR06	127	Reference ID	O AN 01/30	Not used.
BTR07	786	Security Level Code	O ID 02/02	Not used.

6.4 NTE - Note/Special Instruction

Segment: NTE - Note/Special Instruction

Level: Heading

Max Usage/Loops: 1/none

Purpose: To transmit information in a free-form format, if necessary, for comment or special instruction.

General

Information: To provide a pointer to the terms and conditions that apply to this 863 transaction.

Example: NTE~~THIS MILL TEST REPORT (MTR) IS GOVERNED BY THE TERMS
AND CONDITIONS FOR MTRs AS□
NTE~~SET OUT AT WWW.ESSARSTEELALGOMA.COM/LEGAL-NOTICE/□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
NTE01	363	Note Reference Code	O ID 03/03	Not used.
NTE02	003	Free Form Message	M AN 80/80	Text message.

6.5 DTM - Date/Time Reference

Segment: DTM - Date/Time Reference

Level: Heading

Max Usage/Loops: 10/none

Purpose: To specify pertinent dates and times.

General Information: One occurrence of the DTM segment is required.

Example: DTM~011~20031215~2359□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
DTM01	374	Date/Time Qualifier	M AN 03/03	"011" Date and time shipment leaves the supplier's premises.
DTM02	373	Date	C DT 08/08	Date (CCYYMMDD)
DTM03	337	Time	C TM 04/08	Time (HHMM) 24 hour clock.
DTM04	623	Time Code	O ID 02/02	Not used.
DTM05	1250	Date Time Period Format Qualifier	C ID 02/03	Not used.
DTM06	1251	Date Time Period	C AN 01/35	Not used.

6.6 N1 - Name

Segment: N1 - Name

Level: Heading

Max Usage/Loops: 1/999999

Purpose: To identify a party by type of organization, name and code.

General Information: A maximum of two N1 loops will be sent.

Example: N1~SF~~1~201495124□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
N101	98	Entity Identifier Code	M AN 02/03	"SF" for Ship From "ST" for Ship To
N102	93	Name	C AN 01/60	Not used.
N103	66	ID Code Qualifier	C ID 01/02	"1" for DUNS number.
N104	67	ID Code	C AN 02/80	DUNS number.
N105	706	Entity Relationship Code	O ID 02/02	Not used.
N106	98	Entity Identifier Code	O AN 02/03	Not used.

6.7 LIN - Item Identification

Segment: LIN - Item Identification

Level: Detail

Max Usage/Loops: 1 per loop

Purpose: To specify basic item identification data.

General

Information: Used to specify Algoma's Heat Number, Serial Number (**up to 10 characters in length**), Sales Order and Sales Item. The Buyer's Purchase Order Number and Part Number may or may not be present.

Example: LIN~~HN~9450B4 05~SN~TBG9117~VO~8040660~VN~000010~PO~998877~BP~87122GP□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
LIN01	350	Assigned Identification	O AN 01/20	Not used.
LIN02	235	Product/Service ID Qualifier	M ID 02/02	"HN" for Vendor's Heat Number.
LIN03	234	Product/Service ID	M AN 01/48	Algoma's Heat Number.
LIN04	235	Product/Service ID Qualifier	C ID 02/02	"SN" for Vendor's Serial Number.
LIN05	234	Product/Service ID	C AN 01/48	Algoma's Piece ID. Up to 10 characters in length.
LIN06	235	Product/Service ID Qualifier	C ID 02/02	"VO" for Vendor's Order Number.
LIN07	234	Product/Service ID	C AN 01/48	Algoma's Mill Order Number
LIN08	235	Product/Service ID Qualifier	C ID 02/02	"VN" for Vendor's Item Number.
LIN09	234	Product/Service ID	C AN 01/48	Algoma's Mill Item Number.
LIN10	235	Product/Service ID Qualifier	C ID 02/02	"PO" for Buyer's Purchase Order Number.
LIN11	234	Product/Service ID	C AN 01/48	Buyer's Purchase Order Number.
LIN12	235	Product/Service	C ID 02/02	"BP" for Buyer's Part

		ID Qualifier		Number.
LIN13	234	Product/Service ID	C AN 01/48	Buyer's Part Number.
LIN14	235	Product/Service ID Qualifier	C ID 02/02	Not used.
LIN15	234	Product/Service ID	C AN 01/48	Not used.
LIN16	235	Product/Service ID Qualifier	C ID 02/02	Not used.
.				
.				
.				
LIN31	234	Product/Service ID	C AN 01/48	Not used.

6.8 PID - Product/Item Description

Segment: PID - Product/Item Description

Level: Detail

Max Usage/Loops: 1000/none

Purpose: To describe a product or process in coded or free-form format.

General Information: Up to eight PID segments can be provided.

Example: PID~F~~~~ COLD ROLLED STEEL SHEET - CARBON - SAE J403 GR
 1006 - DQ - OILED☐
 PID~F~~~~ - RESTRICTED GAUGE 1/2 TOLERANCE☐
 PID~F~~~~ JCI BRACKETS☐

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
PID01	349	Item Description Type	M ID 01/01	"F" for free-form format.
PID02	750	Product/Process Characteristic Code	O ID 02/03	Not used.
PID03	559	Agency Qualifier Code	C ID 02/02	Not used.
PID04	751	Product Description Code	C AN 01/12	Not used.
PID05	352	Description	C AN 01/80	Product description.
PID06	752	Surface/Layer/Position Code	O ID 02/02	Not used.
PID07	822	Source SubQualifier	O AN 01/15	Not used.
PID08	1073	Yes/No Condition Or Response Code	O ID 01/01	Not used.
PID09	819	Language Code	O ID 02/03	Not used.

6.9 MEA - Measurements

Segment: MEA - Measurements

Level: Detail

Max Usage/Loops: 20 per loop

Purpose: To specify physical measurements including dimensions, tolerances, weights and counts.

General Information: There will be as many MEA segments as required to provide all physical dimensions.

Example: MEA~PD~WT~23115~LB□
 MEA~PD~TH~0.125~EM□
 MEA~PD~WD~44.25~IN□
 MEA~CT~~1~PC□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
MEA01	737	Measurement Reference ID Code	O ID 02/02	"PD" for physical dimensions. "CT" for counts.
MEA02	738	Measurement Qualifier	O ID 01/03	"WT" for weight. See the Data Element Dictionary for a complete list.
MEA03	739	Measurement Value	C R 01/18	Required.
MEA04	355	Unit of Measurement Code	C ID 02/02	"LB" for pounds. See the Data Element Dictionary for a complete list.
MEA05	740	Range Minimum	C R 01/18	Not used.
MEA06	741	Range Maximum	C R 01/18	Not used.
MEA07	935	Measurement Significance Code	O ID 02/02	Not used.
MEA08	936	Measurement Attribute Code	C ID 02/02	Not used.
MEA09	752	Surface/Layer/Position Code	O ID 02/02	Not used.
MEA10	1373	Measurement Method Or Device	O ID 02/04	Not used.

6.10 CID - Characteristic/Class ID

Segment: CID - Characteristic/Class ID

Level: Detail

Max Usage/Loops: 1/999999

Purpose: To transmit identifying product/process.

General Information:

Example: CID~~71~~~AR□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
CID01	738	Measurement Qualifier	C ID 01/03	Not used.
CID02	750	Product/Process Characteristics	C ID 02/03	"71" for Mechanical.
CID03	559	Agency Qualifier Code	C ID 02/02	Not used.
CID04	751	Product Description Code	C AN 01/12	Not used.
CID05	352	Description	C AN 01/80	"AR" for As Rolled. See the Data Element Dictionary for a complete list.
CID06	822	Source SubQualifier	O AN 01/15	Not used.
CID07	1073	Yes/No Condition or Response	O ID 01/01	Not used.

6.11 PSD - Physical Sample Description

Segment: PSD - Physical Sample Description

Level: Detail

Max Usage/Loops: 999999/none

Purpose: To define the physical sample parameters associated with a test resulting in discrete measurements.

General Information:

Example: PSD~02~~~~~01~11~106"□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
PSD01	939	Sample Process Status Code	O ID 02/02	"02" for Finished Product Specimen.
PSD02	940	Sample Selection Method Code	O ID 02/02	Not used.
PSD03	942	Sample Frequency Value per Unit of Measurement Code	C N0 01/09	Not used.
PSD04	355	Unit of Measurement Code	C ID 02/02	Not used.
PSD05	943	Sample Description Code	O ID 02/02	Not used.
PSD06	944	Sample Direction Code	O ID 02/02	"01" for longitudinal. See the Data Element Dictionary for a complete list.
PSD07	945	Position Code	O ID 02/02	"11" for front. See the Data Element Dictionary for a complete list.
PSD08	352	Description	O AN 01/80	Rolling Mill Source.
PSD09	1167	Sample Selection Modulus	C R 01/06	Not used.

6.12 TMD - Test Method

Segment: TMD - Test Method
 Level: Detail
 Max Usage/Loops: 1/100
 Purpose: To describe the nature of the test performed.

General Information:

Example: TMD~32~ST~016□
 TMD~32~ST~153~~~FULL□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TMD01	750	Product/Process Characteristics	O ID 02/03	"32" for Type of Test/Inspection.
TMD02	559	Agency Qualifier Code	C ID 02/02	"ST" for American Iron & Steel Institute.
TMD03	751	Product Description Code	C AN 01/12	"016" for Yield Strength - 0.2% Offset. See the Data Element Dictionary for a complete list.
TMD04	937	Test Administration Method Code	O ID 02/02	Not used.
TMD05	938	Test Medium Code	O ID 02/02	Not used.
TMD06	352	Description	O AN 01/80	"FULL" for full. See the Data Element Dictionary for a complete list.
TMD07	373	Date	O DT 08/08	Not used.
TMD08	127	Reference ID	O AN 01/30	Not used.
TMD09	822	Source SubQualifier	O AN 01/15	Not used.

6.13 MEA - Measurements

Segment: MEA - Measurements

Level: Detail

Max Usage/Loops: 999999/none

Purpose: To specify physical measurements including dimensions, tolerances, elongation type, weights and counts.

General Information: There will be as many MEA segments as required to provide all physical dimensions.

Example: MEA~TR~YB~60~KS□
 MEA~TR~IB~142~85~~~44□
 MEA~EN~ZZZ~2~IN□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
MEA01	737	Measurement Reference ID Code	O ID 02/02	"TR" for test results. "EN" for environmental conditions.
MEA02	738	Measurement Qualifier	O ID 01/03	"YB" for yield. See the Data Element Dictionary for a complete list.
MEA03	739	Measurement Value	C R 01/18	Required. "2" if elongation type is "(2)". "8" if elongation type is "(8)".
MEA04	355	Unit of Measurement Code	C ID 02/02	"KS" for 1000 pounds per square inch. See the Data Element Dictionary for a complete list.
MEA05	740	Range Minimum	C R 01/18	Not used.
MEA06	741	Range Maximum	C R 01/18	Not used.
MEA07	935	Measurement Significance Code	O ID 02/02	"44" for average (of three results). See the Data Element Dictionary for a complete list.
MEA08	936	Measurement Attribute Code	C ID 02/02	Not used.
MEA09	752	Surface/Layer/	O ID 02/02	Not used.

Position Code

MEA10 1373 Measurement Method O ID 02/04 Not used.
Or Device

6.14 CID - Characteristic/Class ID

Segment: CID - Characteristic/Class ID
 Level: Detail
 Max Usage/Loops: 1/999999
 Purpose: To transmit identifying product/process.
 General Information:
 Example: CID~~68□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
CID01	738	Measurement Qualifier	C ID 01/03	Not used.
CID02	750	Product/Process Characteristics	C ID 02/03	"68" for Chemistry.
CID03	559	Agency Qualifier Code	C ID 02/02	Not used.
CID04	751	Product Description Code	C AN 01/12	Not used.
CID05	352	Description	C AN 01/80	Not used.
CID06	822	Source SubQualifier	O AN 01/15	Not used.
CID07	1073	Yes/No Condition or Response	O ID 01/01	Not used.

6.15 PSD - Physical Sample Description

Segment: PSD - Physical Sample Description

Level: Detail

Max Usage/Loops: 999999/none

Purpose: To define the physical sample parameters associated with a test resulting in discrete measurements.

General Information:

Example: PSD~02□
PSD~~~~~10□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
PSD01	939	Sample Process Status Code	O ID 02/02	"02" for Finished Product Specimen.
PSD02	940	Sample Selection Method Code	O ID 02/02	Not used.
PSD03	942	Sample Frequency Value per Unit of Measurement Code	C N0 01/09	Not used.
PSD04	355	Unit of Measurement Code	C ID 02/02	Not used.
PSD05	943	Sample Description Code	O ID 02/02	Not used.
PSD06	944	Sample Direction Code	O ID 02/02	Not used.
PSD07	945	Position Code	O ID 02/02	"10" for Ladle.
PSD08	352	Description	O AN 01/80	Not used.
PSD09	1167	Sample Selection Modulus	C R 01/06	Not used.

6.16 MEA - Measurements

Segment: MEA - Measurements

Level: Detail

Max Usage/Loops: 999999/none

Purpose: To specify physical measurements including dimensions, tolerances, weights and counts.

General

Information: There will be as many MEA segments as required to provide all chemical properties.

Example: MEA~TR~ZAL~.045~P1□
 MEA~TR~ZCB~.001~P1~~~07□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
MEA01	737	Measurement Reference ID Code	O ID 02/02	"TR" for test results.
MEA02	738	Measurement Qualifier	O ID 01/03	"ZAL" for yield. See the Data Element Dictionary for a complete list.
MEA03	739	Measurement Value	C R 01/18	Required.
MEA04	355	Unit of Measurement Code	C ID 02/02	"P1" for percent See the Data Element Dictionary for a complete list.
MEA05	740	Range Minimum	C R 01/18	Not used.
MEA06	741	Range Maximum	C R 01/18	Not used.
MEA07	935	Measurement Significance Code	O ID 02/02	"07" for less than.
MEA08	936	Measurement Attribute Code	C ID 02/02	Not used.
MEA09	752	Surface/Layer/ Position Code	O ID 02/02	Not used.
MEA10	1373	Measurement Method Or Device	O ID 02/04	Not used.

6.17 CTT - Transaction Totals

Segment: CTT - Transaction Totals
 Level: Summary
 Max Usage/Loops: 1/none
 Purpose: To transmit hash totals for a specific element in the transaction set.
 General Information: CTT01 is required.
 Example: CTT~1□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
CTT01	354	Number of Line Items	M N0 01/06	Total number of Line Items present.
CTT02	347	Hash Total	O R 01/10	Not used.
CTT03	81	Weight	O R 01/08	Not used.
CTT04	355	Unit of Measurement Code	O ID 02/02	Not used.
CTT05	183	Volume	O R 01/08	Not used.
CTT06	355	Unit of Measurement Code	O ID 02/02	Not used.
CTT07	352	Description	O AN 01/80	Not used.

6.18 SE - Transaction Set Trailer

Segment: SE - Transaction Set Trailer

Level: Summary

Max Usage/Loops: 1/none

Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segment).

General Information:

Example: SE~125~0001□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
SE01	96	Number of Included Segments	M N0 01/06	
SE02	329	Transaction Set Control Number	M AN 04/09	Same as ST02

.

SECTION 7. DATA ELEMENT DICTIONARY

66 ID Code Qualifier
1 DUNS Number

98 Entity Identifier Code
SF Ship From
ST Ship To

235 Product/Service ID Qualifier
BP Buyer's Part Number
HN Vendor's Heat Number
PO Buyer's Purchase Order Number
SN Vendor's Serial Number
VN Vendor's Item Number
VO Vendor's Order Number

349 Item Description Type
F Free-form

352 Description
AR As Rolled
CR Control Rolled
N Normalized
NR Normalized Roll
Q Quench
QT Quench & Tempered
FULL Full
3/4" 3/4"
1/2" 1/2"
1/4" 1/4"
1/8" 1/8"

353 Transaction Set Purpose Code
00 Original
05 Replace

355 Unit of Measurement Code
CE Celsius
DD Degree
ED Inches decimal
EM Inch minimum
FA Fahrenheit
IN Inch
KG Kilogram
KS 1000 pounds per square inch
LB Pound
M8 Mega Pascals
MM Millimeter
MZ Millimeter minimum
P1 Percent
PC Piece
PS Pounds per square inch
T2 Thousands on an inch
69 Test Specific Scale
85 Foot Pounds
86 Joules

374 Date/Time Qualifier
011 Date/time shipment leaves the supplier's premises

559 Agency Qualifier Code
ST American Iron & Steel Institute

- 737 Measurement Reference ID Code
 - CT Counts
 - EN Environmental Conditions
 - PD Physical Dimensions
 - TR Test Results

- 738 Measurement Qualifier
 - BF Brinell
 - BN Bend
 - DR Delta R
 - EA Elongation
 - IB Impact Energy
 - LN Length
 - MQ McQuaid
 - NV N Value
 - RK Rockwell-B
 - TC Temperature
 - TF Tensile
 - TH Thickness
 - WD Width
 - WT Weight
 - YB Yield
 - ZAL Aluminum
 - ZB Boron
 - ZC Carbon
 - ZCR Chromium
 - ZCB Columbium
 - ZCU Copper
 - ZMN Manganese
 - ZMO Molybdenum
 - ZNI Nickel
 - ZN Nitrogen
 - ZP Phosphorus
 - ZSI Silicon
 - ZS Sulfur
 - ZSN Tin
 - ZTI Titanium
 - ZV Vanadium
 - ZZZ Mutually Defined

- 750 Product/Process Characteristics
 - 32 Type of Test/Inspection
 - 68 Chemistry
 - 71 Mechanical

- 751 Product Description Code
 - 163 Bend Test - Base Metal
 - 112 Brinell Hardness
 - 153 Charpy V-Notch - Energy Level
 - 154 Charpy V-Notch - Lateral Expansion
 - 155 Charpy V-Notch - Percent Shear
 - 174 Delta R
 - 094 Elongation %
 - 150 Grain Size - Number
 - 055 Impact - Drop Weight Tear (DWTT)
 - 261 K Value
 - 165 n Value

236 R Value (Orientation determine by 944 Sample Direction Code)

170 R-Bar
177 Rockwell B
179 Rockwell C
090 Tensile Strength (UTS)
092 Yield Point
256 Yield Point - Lower
016 Yield Strength - 0.2% Offset
014 Yield Strength - 0.5% EUL (Extension Under Load)

755 Report Type Code
RT Report of Tests and Analysis Report

935 Measurement Significance Code
07 Less than
44 Average
83 Good

939 Sample Process Status Code
02 Finished Product Specimen

944 Sample Direction Code
01 Longitudinal
02 Transverse
05 Forty-Five Degree

945 Position Code
10 Ladle
11 Front
12 Back
13 Centre

SECTION 8. 863 SAMPLE TRANSACTION

ISA~00~ ~00~ ~01~201495124 ~01~999999999 ~000331
~1220~U~00401~000000004~0~P~;|
GS~RT~201495124~999999999~20000331~1220~4~X~004010
ST~863~40004
BTR~00~20031215~2359~RT~ESA-329572
NTE~~THIS MILL TEST REPORT (MTR) IS GOVERNED BY THE TERMS AND CONDITIONS FOR
MTRs AS
NTE~~SET OUT AT WWW.ESSARSTEELALGOMA.COM/LEGAL-NOTICE/
DTM~011~20031215~2359
N1~ST~~1~123456789
N1~SF~~1~201495124
LIN~~HN~9450B4 05~SN~TBG9117~VO~8040660~VN~000010~PO~998877~BP~87122GP
PID~F~~~~ COLD ROLLED STEEL SHEET - CARBON - SAE J403 GR 1006 - DQ - OILED
PID~F~~~~ - RESTRICTED GAUGE 1/2 TOLERANCE
PID~F~~~~ JCI BRACKETS
MEA~PD~WT~23115~LB
MEA~PD~TH~0.125~EM
MEA~PD~WD~44.25~IN
MEA~CT~~1~PC
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~016
MEA~TR~YB~60~KS
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~090
MEA~TR~TF~69~KS
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~094
MEA~EN~ZZZ~2~IN
MEA~TR~EA~31~P1
MEA~EN~ZZZ~50~MM
MEA~TR~EA~31~P1
MEA~EN~ZZZ~200~MM
MEA~TR~EA~31~P1
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~165
MEA~TR~NV~.163~69
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~261
MEA~TR~~9037~69
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~236
MEA~TR~~.847~69
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~170
MEA~TR~~1.87~69
CID~~71~~AR
PSD~02~~~~01~11~106
TMD~32~ST~174
MEA~TR~DR~.31~69
CID~~71~~AR
PSD~02~~~~01~~106
TMD~32~ST~163

MEA~TR~BN~180~DD!;5~~~83□
CID~~71~~~AR□
PSD~02~~~~~106□
TMD~32~ST~112□
MEA~TR~BF~391~69□
CID~~71~~~AR□
PSD~02~~~~~106□
TMD~32~ST~177□
MEA~TR~RK~60~69□
CID~~71~~~AR□
PSD~02~~~~~01~11~106□
TMD~32~ST~153~~~FULL□
MEA~EN~TC~-20~FA□
MEA~TR~IB~131~85□
MEA~TR~IB~150~85□
MEA~TR~IB~144~85□
MEA~TR~IB~142~85~~~44□
CID~~71~~~AR□
PSD~02~~~~~01~11~106□
TMD~32~ST~154□
MEA~TR~TC~-20~FA□
MEA~TR~IB~.053~T2□
MEA~TR~IB~.009~T2□
MEA~TR~IB~.014~T2□
CID~~71~~~AR□
PSD~02~~~~~01~11~106□
TMD~32~ST~155□
MEA~TR~TC~-20~FA□
MEA~TR~IB~16~P1□
MEA~TR~IB~5~P1□
MEA~TR~IB~5~P1□
CID~~71~~~AR□
PSD~02~~~~~106□
TMD~32~ST~150□
MEA~TR~MQ~8~69□
CID~~68□
PSD~02□
MEA~TR~ZAL~.045~P1□
MEA~TR~ZB~.1121~P1□
MEA~TR~ZC~.04~P1□
MEA~TR~ZCR~.01~P1□
MEA~TR~ZCB~.001~P1~~~07□
MEA~TR~ZCU~.01~P1□
MEA~TR~ZMN~.27~P1□
MEA~TR~ZMO~2.12~P1□
MEA~TR~ZNI~.01~P1□
MEA~TR~ZN~.000~P1□
MEA~TR~ZP~.010~P1□
MEA~TR~ZSI~.01~P1□
MEA~TR~ZS~.006~P1□
MEA~TR~ZTI~.112~P1□
MEA~TR~ZV~.001~P1~~~07□
CID~~68□
PSD~~~~~10□
MEA~TR~ZAL~.045~P1□
MEA~TR~ZB~.1121~P1□
MEA~TR~ZC~.04~P1□
MEA~TR~ZCR~.01~P1□
MEA~TR~ZCB~.001~P1~~~07□

MEA~TR~ZCU~.01~P1□
MEA~TR~ZMN~.27~P1□
MEA~TR~ZMO~2.12~P1□
MEA~TR~ZNI~.01~P1□
MEA~TR~ZN~.000~P1□
MEA~TR~ZP~.010~P1□
MEA~TR~ZSI~.01~P1□
MEA~TR~ZS~.006~P1□
MEA~TR~ZSN~.001~P1□
MEA~TR~ZTI~.112~P1□
MEA~TR~ZV~.001~P1~~~07□
CTT~1□
SE~125~40004□
GE~1~4□
IEA~1~000000004□