Implementation Guidelines for the X.12 870 Transaction Set

Production Reporting (Order Status)

DOCUMENT NUMBER ICS 004010 870 R Consignment

Algoma Steel Inc.

Information Technology

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SECTION 1. REVISION STATUS

REVISION NUMBER	DATE	PAGES	AUTHOR
R00/A	2000 07 22	original draft	G. Masters
R00	2000 08 04	issued	G. Masters
R01	2001 04 16	MEA ID optional	G. Masters
R02	2008 06 23	name change	G. Masters
R03	2009 10 19	clarified pickle	G. Masters
R03	2009 10 19	damage example.	G. Masters
R04	2011 03 21	e-mail changes	G. Masters
R05	2011 08 01	Rewrite for SAP	G. Masters
R05	2011 08 01	project Phoenix	G. Masters
R06	2013 05 01	post Phoenix changes	G. Masters
R07	2015 07 09	Updated PID for	G. Masters
R07	2015 07 09	cut to length	G. Masters
R08	2016 03 02	Specify actual Width	G. Masters
R08	2017 03 22	Changed contacts	G. Masters

SECTION 2. PREFACE

This document is intended to provide the details on how to construct an electronic Production Report (Order Status) 870 transaction set to satisfy Algoma's requirements.

Algoma Steel Inc. is committed to supporting and using the American National Standards Institute (ANSI) X12 national standards. However, the standards are broad in scope and flexible in methods of implementing. These are the Algoma specific requirements for the Production Report (Order Status).

Any questions or concerns regarding the Algoma ASN or electronic data communication with Algoma may be directed to:

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SECTION 3. SUMMARY

In order for Algoma to support our inventory tracking system, Algoma requires a Production Reporting (Order Status) (870) transaction from all outside processors. The 870 transaction must be sent to Algoma at the time of processing. A prerequisite to sending Algoma an 870 transaction is to send the Receiving Advice (861) transaction.

Algoma will respond to each 870 with a Functional Acknowledgement (997). It is the responsibility of the sender of the 870 to notify Algoma of any unacknowledged 870s.

The Application Advice (824) transaction will be sent in response to the 870. If the 824 identifies errors in the 870 information, the supplier of the 870 must use this information to resolve the errors and retransmit the corrected portion of the 870. For example: A production report consisted of three charged coils and the associated production. Algoma accepted and processed two of the charged coils and rejected the third coil due to errors. A resend would only be required for the rejected charged coil and associated production. If all three charged coils are resent, the production reporting for the two previously accepted charged coils will be rejected as duplicate reporting.

Algoma Steel Inc. uses the GXS network for electronic data interchange. Algoma's qualifier is 01 and production ID is 201495124.

SECTION 4. INTERCHANGE ENVELOPE

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 ~110401~1312~U~00401~000000001~1~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	Use your company's DUNS number. Left justified.
ISA07	704	Interchange Receiver ID Qualifier	M ID 02/02	"01" for DUNS number
ISA08	706	Interchange Receiver ID	M ID 15/15	Use "201495124" left justified.
ISA09	373	Interchange Date	M DT 06/06	Date of Transmission (YYMMDD)

Segment: ISA - Interchange Control Header

Elem ID	Elem#	Name	Features	Comments
ISA10	337	Interchange Time	M TM 04/04	Time of Transmission (HHMM) 24 hour clock
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 acknowledge-ment not required.
ISA15	748	Test Indicator	M ID 01/01	"P"
ISA16	701	Sub Element Separator	M AN 01/01	Must be different than the element separator.

4.1 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"

4.2 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~3~000000001□

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

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~SH~999999999~201495124~20110401~1312~1~X~004010□

Elem ID	Elem#	Name	Features	Comments
GS01	479	Functional ID	M ID 02/02	"RS"
GS02	142	Application Sender Code	M ID 02/12	Use your company's DUNS number
GS03	124	Application Receiver Code	M ID 02/12	"201495124"
GS04	29	Data Interchange Date	M DT 08/08	Date created (CCYYMMDD)
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"

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~3~1□

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. 870 TRANSACTION SET

Data Segment Sequence

ST	Transaction Set Header
BSR	Beginning Segment for Order Status Report
DTM	Date/Time Reference
N1	Name
HL	Hierarchical Level – Item (charged)
REF	Reference Numbers
PO1	Baseline Item Data
MEA	Measurements
HL	Hierarchical Level – Component (discharged)
REF	Reference Numbers
DTM	Date/Time Reference
PO1	Baseline Item Data
PID	Product/Item Description
MEA	Measurements
ISR	Item Status Report
PID	Product/Item Description
CTT	Transaction Totals
SE	Transaction Set Trailer

6.1 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 this header must match the transaction set control number (SE02) in the transaction set trailer (SE).

Example: ST~870~0001□

Elem ID	Elem#	Name	Features	Comments
ST01	143	Transaction Set ID Code	M ID 03/03	Use "870"
ST02	329	Transaction Set Control Number	M AN 04/09	A unique number assigned to each transaction set within a functional group.

6.2 BSR - Beginning Segment for Order Status Report

Segment: BSR - Beginning Segment for Order Status Report

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: BSR~2~PP~740934832~20110401~~~1421□

Elem ID	Elem#	Name	Features	Comments
BSR01	850	Status Report Code	M ID 01/02	"2" – Prearranged schedule or agreement.
BSR02	847	Order/Item Code	M ID 01/02	"PP" Selected order/items.
BSR03	127	Reference Identification	M AN 01/30	Number assigned by sender uniquely identify the transaction set.
BSR04	373	Date	M DT 08/08	Transaction creation date (CCYYMMDD).
BSR05	848	Product/Date Code	O ID 01/02	Not used.
BSR06	849	Location Code	O ID 01/02	Not used.
BSR07	337	Time	M TM 04/08	Transaction creation time (HHMM) 24 hour clock.
BSR08	127	Reference Identification	O AN 01/30	Not used.
BSR09	273	Date	O DT 08/08	Not used.
BSR10	337	Time	O TM 04/08	Not used.
BSR11	352	Transaction Set Purpose Code	O ID 02/02	Not used.
BSR12	306	Action Code	O ID 01/02	Not used.

6.3 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 for status as of date/time.

Example: DTM~041~20110401~1421□

Elem ID	Elem#	Name	Features	Comments
DTM01	374	Date/Time Qualifier	M AN 03/03	"041" Status (prior and including).
DTM02	373	Date	M DT 08/08	Date (CCYYMMDD)
DTM03	337	Time	M TM 04/08	Time (HHMM) 24 hour clock.
DTM04	623	Time Code Format Qualifier	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.

6.4 N1 - Name

Segment: N1 - Name

Level: Heading

Max Usage/Loops: 1 per loop / 200 loops.

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

General Information: Outside Processors and Supplier/Manufacturer segments are required. Algoma will provide a supplier ID for each processor location.

Example: N1~SU~Algoma Steel Inc.~1~201495124□
N1~OU~ACME~ZZ~HH22□

Elem ID	Elem#	Name	Features	Comments
N101	98	Entity Identifier Code	M ID 02/03	"OU" for outside processor. "SU" for supplier/ manufacturer.
N102	93	Name	M AN 01/60	Organization's name.
N103	66	ID Code Qualifier	M ID 01/02	"1" for DUNS number. "ZZ" required for N101 = OU only.
N104	67	ID Code	M AN 02/80	DUNS number. Assigned supplier ID.
N105	706	Entity Relationship Code	O ID 02/02	Not used.
N106	98	Entity Identifier Code	O AN 02/03	Not used.

6.5 HL - Hierarchical Level – Item (Charged)

Segment: HL - Hierarchical Level – Item (Charged)

Level: Item hierarchical level

Max Usage/Loops: 1,000 per transaction, begins the detail loop.

Purpose: To identify dependencies among the content of hierarchically related groups of data segments.

General Information: At least one occurrence of the HL segment at the item level is mandatory.

Example: HL~2~1~I□

Elem ID	Elem#	Name	Features	Comments
HL01	628	Hierarchical ID Number	M AN 01/12	"1" for the initial HL segment and incremented by 1 in each subsequent HL segment within the transaction.
HL02	734	Hierarchical Parent Number	O AN 01/12	The ID of the parent HL segment.
HL03	735	Hierarchical Level Code	M ID 01/02	"I" for item level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

6.6 REF - Reference Numbers

Segment: REF - Reference Numbers

Level: Item hierarchical level

Max Usage/Loops: 1 per loop / 999,999 loops.

Purpose: To transmit identifying numbers.

General Information: One REF is required to specify the processor's charged material ID.

Example: REF~RV~3232418□

Elem ID	Elem#	Name	Features	Comments
REF01	128	Reference Number Qualifier	M AN 02/03	"RV" for processor's charged material ID.
REF02	127	Reference Number	M AN 01/30	Processor's charged material ID or
REF03	352	Description	O AN 01/80	Not used.

6.7 PO1 – Baseline Item Data

Segment: PO1 – Baseline Item Data

Level: Item hierarchical level

Max Usage/Loops: 1 per loop / 1,000 loops.

Purpose: To specify basic and most frequently used line item data.

General Information: One PO1 segment is required at the item level.
PI qualifier required at item level only.

Example:

PO1~~1~UN~~~VO~8002312~VN~000131~SN~9212345~HN~1234J1~PI~4400005222□

Elem ID	Elem#	Name	Features	Comments
PO101	350	Assigned Identification	O AN 01/20	Not used.
PO102	330	Quantity Ordered	M R 01/15	Default to one.
PO103	355	Unit or Basis for Measurement Code	M ID 02/02	"UN" for unit.
PO104	212	Unit Price	O R 01/17	Not used.
PO105	639	Basis of Unit Price	O ID 02/02	Not used.
PO106	235	Product/Service ID Qualifier	M ID 02/02	"VO" for Vendor's Order number.
PO107	234	Product/Service ID	M AN 01/48	Algoma's sales order number.
PO108	235	Product/Service ID Qualifier	M ID 02/02	"VN" for Vendors Item number.
PO109	234	Product/Service ID	M AN 01/48	Algoma's sales item number.
PO110	235	Product/Service ID Qualifier	M ID 02/02	"SN" for serial number.
PO111	234	Product/Service ID	M AN 01/48	Algoma's charged material ID.
PO112	235	Product/Service ID Qualifier	M ID 02/02	"HN" for heat number.
PO113	234	Product/Service ID	M AN 01/48	Algoma's heat number.

						(6 or 9 characters)
PO114	235	Product/Service ID Qualifier	M	ID	02/02	"PI" Service PO.
PO115	234	Product/Service ID	M	AN	01/48	Service PO number.
PO116	235	Product/Service ID Qualifier	O	ID	02/02	Not used.
.						
.						
.						
PO125	234	Product/Service ID	O	AN	01/48	Not used.

6.8 MEA - Measurements

Segment: MEA - Measurements

Level: Item hierarchical level

Max Usage/Loops: 40 per PO1 loop.

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

General Information: One MEA segment is required at the item level to specify the charged material weight.
Note: The sum of the weights reported at the component level must equal the charged weight.

Example: MEA~PD~WT~42000~LB□

Elem ID	Elem#	Name	Features	Comments
MEA01	737	Measurement Reference ID Code	M ID 02/02	"PD" for physical dimension.
MEA02	738	Measurement Qualifier	M ID 01/03	"WT" for weight
MEA03	739	Measurement Value	M R 01/18	Required.
MEA04	355	Unit of Measurement Code	M ID 02/02	"LB" for pound.
MEA05	740	Range Minimum	O R 01/18	Not used.
MEA06	741	Range Maximum	O R 01/18	Not used.
MEA07	935	Measurement Significance Code	O ID 02/02	Not used.
MEA08	936	Measurement Attribute Code	O 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.

6.9 HL - Hierarchical Level – Component (Discharged)

Segment: HL - Hierarchical Level - Component

Level: Component hierarchical level

Max Usage/Loops: 1,000 per transaction, begins the component loop.

Purpose: To identify dependencies among the content of hierarchically related groups of data segments.

General Information: At least one occurrence of the HL segment is required at the component level.

Example: HL~3~2~F□

Elem ID	Elem#	Name	Features	Comments
HL01	628	Hierarchical ID Number	M AN 01/12	"1" for the initial HL segment and incremented by 1 in each subsequent HL segment within the transaction.
HL02	734	Hierarchical Parent Number	O AN 01/12	The ID of the parent HL segment.
HL03	735	Hierarchical Level Code	M ID 01/02	"F" for component level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

6.10 REF - Reference Numbers

Segment: REF - Reference Numbers

Level: Component hierarchical level

Max Usage/Loops: 1 per loop / 999,999 loops.

Purpose: To transmit identifying numbers.

General Information: One REF segment is required to specify the processor's discharged material ID.

Example: REF~SE~3232419□

Elem ID	Elem#	Name	Features	Comments
REF01	128	Reference Number Qualifier	M AN 02/03	"SE" for processor's discharged material ID.
REF02	127	Reference Number	M AN 01/30	For processor's discharged material ID.
REF03	352	Description	O AN 01/80	Not used.

6.11 DTM - Date/Time Reference

Segment: DTM - Date/Time Reference

Level: Component hierarchical level

Max Usage/Loops: 999,999 per REF

Purpose: To specify pertinent dates and times.

General Information: One occurrence of the DTM segment is required to specify processed date/time.

Example: DTM~009~20110401~1421□

Elem ID	Elem#	Name	Features	Comments
DTM01	374	Date/Time Qualifier	M AN 03/03	"009" Process.
DTM02	373	Date	M DT 08/08	Processed date (CCYYMMDD)
DTM03	337	Time	M TM 04/08	Processed time (HHMM) 24 hour clock.
DTM04	623	Time Code Format Qualifier	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.

6.12 PO1 – Baseline Item Data

Segment: PO1 – Baseline Item Data

Level: Component hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To specify basic and most frequently used line item data.

General Information: One PO1 segment is required at the component level. **See note on PO111 element below.**

Example: PO1~~1~UN~~~VO~8002312~VN~000131~SN~ZZ00000121~HN~1234J1□

Elem ID	Elem#	Name	Features	Comments
PO101	350	Assigned Identification	O AN 01/20	Not used.
PO102	330	Quantity Ordered	M R 01/15	Default to one.
PO103	355	Unit or Basis for Measurement Code	M ID 02/02	"UN" for unit.
PO104	212	Unit Price	O R 01/17	Not used.
PO105	639	Basis of Unit Price	O ID 02/02	Not used.
PO106	235	Product/Service ID Qualifier	M ID 02/02	"VO" for vendor's order number.
PO107	234	Product/Service ID	M AN 01/48	Algoma's sales order.
PO108	235	Product/Service ID Qualifier	M ID 02/02	"VN" for vendor's item number.
PO109	234	Product/Service ID	M AN 01/48	Algoma's sales item.
PO110	235	Product/Service ID Qualifier	M ID 02/02	"SN" for serial number.
PO111	234	Product/Service ID	M AN 01/48	Algoma's discharged material ID.

Note: Algoma requires unique coil IDs to meet customer, tracking and audit requirements. To satisfy this requirement each processor will be provided a unique starting coil (batch) ID number (ZZ00000000). Were ZZ will be unique to each processor and the numeric value will be increased by 1 for each product coil or bundle produced. A new batch ID will be created at each process with the exception of receipt of the material and shipping. The new Algoma batch ID created by the current process will become the Algoma charge ID for the next process.

PO112	235	Product/Service ID Qualifier	M	ID 02/02	"HN" for heat number.
PO113	234	Product/Service ID	M	AN 01/48	Algoma's heat number. (6 or 9 characters)
PO114	235	Product/Service ID Qualifier	M	ID 02/02	Not used.
.					
.					
.					
PO125	234	Product/Service ID	M	AN 01/48	Not used.

6.13 PID - Product/Item Description

Segment: PID - Product/Item Description

Level: Component hierarchical level

Max Usage/Loops: 1000 per PO1.

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

General Information: For element PID02, qualifiers PP, MA, MAC, 02 are required on the product piece.
For element PID02, qualifier MAC is required for scrap.

Example: PID~S~PP~ST~13□
PID~S~MA~ST~8□
PID~S~MAC~ST~01□
PID~S~02~ST~01□ - coil
PID~S~02~ST~01□ - cut to length
PID~S~02~ST~02□ - for plate only

Elem ID	Elem#	Name	Features	Comments
PID01	349	Item Description Type	M ID 01/01	"S" Structured format.
PID02	750	Product/Process Characteristic Code	O ID 02/03	"PP" Process Code. "MA" Material status. "MAC" Material Classification. "02" General product form
PID03	559	Agency Qualifier Code	C ID 02/02	"ST" Steel (AISI).
PID04	751	Product Description Code	C AN 01/12	For "PP" use AISI tbl 66. For "MA" use AISI tbl 70. For "MAC" use AISI tbl 67. For "02" use AISI tbl 02.
PID05	352	Description	M AN 01/80	Not used.
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.

6.14 MEA - Measurements

Segment: MEA - Measurements

Level: Item hierarchical level

Max Usage/Loops: 40 per PO1.

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

General Information: Used to specify the following:

1. Actual weight in pounds (always required).
2. Actual width in inches (always required).
3. Gauge in inches (always required).
4. Inner coil diameter in inches (required for coil product).
5. Number of pieces (for cut to length product only).
6. Length in inches, to be provided for cut to length material only. Do not provide for other material (for cut to length product only).

Note: The sum of the weights reported at the component level must equal the charged weight, including scrap.

Example: MEA~PD~WT~23115~LB□

Elem ID	Elem#	Name	Features	Comments
MEA01	737	Measurement Reference ID Code	M ID 02/02	"PD" for physical dimension. "CT" for counts.
MEA02	738	Measurement Qualifier	M ID 01/03	"WT" for weight. "WD" for width. "TH" for gauge. "LN" for length. "ID" for inner diameter. "NB" for number per bundle.
MEA03	739	Measurement Value	M R 01/18	Required.
MEA04	355	Unit of Measurement Code	M ID 02/02	"IN" for inch. "LB" for pound. "PC" for piece.
MEA05	740	Range Minimum	O R 01/18	Not used.
MEA06	741	Range Maximum	O R 01/18	Not used.
MEA07	935	Measurement Significance Code	O ID 02/02	Not used.

MEA08	936	Measurement Attribute Code	O	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.

6.15 ISR – Item Status Report

Segment: ISR - Item Status Report

Level: Component hierarchical level

Max Usage/Loops: 1 per loop / 104 loops.

Purpose: To specify detailed purchase order/item status.

General Information: Used to specify the beginning of the damage/fault area. The ISR should only be present if followed by 2 PIDs.

Example: ISR~PH□

Elem ID	Elem#	Name	Features	Comments
ISR01	368	Shipment/Order Status Code	M ID 02/02	"PH" for product on hold.
ISR02	373	Date	O DT 08/08	Not used.
ISR03	641	Status Reason Code Code	O ID 03/03	Not used.

6.16 PID - Product/Item Description

Segment: PID - Product/Item Description

Level: Component hierarchical level

Max Usage/Loops: 6 per ISR.

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

General Information: Used to provide damage type and damage fault. Damage type and damage fault must be sent following an ISR segment.

Example: PID~S~DAC~ST~108□

Elem ID	Elem#	Name	Features	Comments
PID01	349	Item Description Type	M ID 01/01	"S" Structured format.
PID02	750	Product/Process Characteristic Code	O ID 02/03	"DAC" Damage Code Type. "DAF" Damage Code Fault.
PID03	559	Agency Qualifier Code	C ID 02/02	"ST" Steel (AISI).
PID04	751	Product Description Code	C AN 01/12	For "DAC" AISI table 73. For "DAF" AISI table 72.
PID05	352	Description	M AN 01/80	Not used.
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.

6.17 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~21□

Elem ID	Elem#	Name	Features	Comments
CTT01	354	Number of Line Items	M N0 01/06	Total number of HL segments.
CTT02	347	Hash Total	O R 01/10	Not used.
CTT03	81	Weight	O R 01/10	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~23~0001□

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
- ZZ Mutually defined

98 Entity Identifier Code
- OU Outside processor
- SU Supplier/manufacturer

128 Reference Number Qualifier
- BM Bill of lading
- RV Processor’s charged material ID
- SE Processor’s discharged material ID

235 Product/Service ID Qualifier
- HN Heat number
- SN Serial number
- VN Vendor's item number
- VO Vendor's order number

349 Item Description Type
- S Structured

355 Unit of Measurement Code
- IN Inch
- E8 Inch decimal, actual
- LB Pound
- PC Piece
- UN Unit

368 Shipment/Order status Code
- PH Product on hold

374 Date/Time Qualifier
- 009 Process
- 041 Status prior and including

559 Agency Qualifier Code
- ST Steel (AISI)

735 Hierarchical Level Code
- F Component level
- I Item level

737 Measurement Reference ID Code
- CT Counts
- PD Physical dimension

738 Measurement Qualifier
- ID Inner diameter
- LN Length
- NB Number per bundle
- TH Gauge
- WD Width
- WT Weight

750 Product/Process Characteristic Code
- DAC Damage Code Type
- DAF Damage Code Fault

```
            MA    Material Status
            MAC   Material Classification
            PP    Process Code
            02    General product form
            18    Surface treatment chemical

      847   Order/Item Code
            PP    Selected order/items

      850   Status Report Code
            2     Prearranged schedule or agreement
```

SECTION 8. 870 SAMPLE TRANSACTION

```
------------------------------------- Pickle example
    ISA~00~          ~00~          ~01~201495124      ~01~
    999999999      ~110401~1312~U~00401~000000001~1~P~ □
    GS~RS~999999999~201495124~20110401~1312~1~X~004010□
    ST~870~0001□
    BSR~2~PP~7583984~20110401~~~1310□
    DTM~041~20110401~1300□
    N1~SU~Algoma Steel Inc.~1~201495124□
    N1~OU~ACME~ZZ~HH22□
    HL~1~~I□
    REF~RV~3432418□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~9212345~HN~3314A4 02~PI~4400006352□
    MEA~PD~WT~42000~LB□
    HL~2~1~F□
    REF~SE~3432599□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000001~HN~3314A4 02□
    PID~S~PP~ST~01□
    PID~S~MA~ST~8□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~WT~41500~LB□
    MEA~PD~WD~60~IN□
    MEA~PD~TH~0.125~IN□
    MEA~PD~ID~25~IN□
    HL~3~1~F□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~HN~3314A4 02□
    PID~S~MAC~ST~05□
    MEA~PD~WT~500~LB□
    CTT~3□
    SE~1~0001□
    GE~1~1□
    IEA~1~000000001□

------------------------------------- Pickle & Oil example (coil was
------------------------------------- previously processed)
    HL~1~~I□
    REF~RV~3432418□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000091~HN~3314J4~PI~4400006351□
    MEA~PD~WT~42000~LB□
    HL~2~1~F□
    REF~SE~3432599□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000109~HN~3314J4□
    PID~S~PP~ST~13□
    PID~S~MA~ST~8□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~WT~41500~LB□
    MEA~PD~WD~60~IN□
    MEA~PD~TH~0.125~IN□
    MEA~PD~ID~25~IN□
    HL~3~1~F□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~HN~3314J4□
    PID~S~MAC~ST~05□
    MEA~PD~WT~500~LB□
    CTT~3□
```

```
------------------------------------- Slit example
    HL~7~~I□
    REF~RV~3432429□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~9212320~HN~3314J4~PI~4400006322□
    MEA~PD~WT~42750~LB□
    HL~8~7~F□
    REF~SE~3432418□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000081~HN~3314J4□
    PID~S~PP~ST~05□
    PID~S~MA~ST~1□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~ID~25~IN□
    MEA~PD~WT~10500~LB□
    MEA~PD~WD~10.25~IN□
    MEA~PD~TH~0.125~IN□
    HL~9~7~F□
    REF~SE~3432418□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000082~HN~3314J4□
    PID~S~PP~ST~05□
    PID~S~MA~ST~1□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~ID~25~IN□
    MEA~PD~WT~10500~LB□
    MEA~PD~WD~10.25~IN□
    MEA~PD~TH~0.125~IN□
    HL~10~7~F□
    REF~SE~3432418□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000083~HN~3314J4□
    PID~S~PP~ST~05□
    PID~S~MA~ST~1□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~ID~25~IN□
    MEA~PD~WT~10500~LB□
    MEA~PD~WD~10.25~IN□
    MEA~PD~TH~0.125~IN□
    HL~11~7~F□
    REF~SE~3432418□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000084~HN~3314J4□
    PID~S~PP~ST~05□
    PID~S~MA~ST~1□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~ID~10.25~IN□
    MEA~PD~WT~10500~LB□
    MEA~PD~WD~10.25~IN□
    MEA~PD~TH~0.125~IN□
    HL~12~7~F□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~HN~3314J04□
    PID~S~MAC~ST~05□
    MEA~PD~WT~750~LB□
    CTT~12□
```

```
------------------------------------ Cut to length example
    HL~17~~I□
    REF~RV~3432429□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~9212341~HN~3314J4~PI~4400006691□
    MEA~PD~WT~42250~LB□
    HL~18~17~F□
    REF~SE~3432418□
    REF~BM~80039231□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000184~HN~3314J4□
    PID~S~PP~ST~12□
    PID~S~MA~ST~A□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~WT~21000~LB□
    MEA~PD~WD~42.25~IN□
    MEA~PD~TH~0.125~IN□
    MEA~PD~LN~63.75~IN□
    MEA~CT~NB~12~PC□
    HL~19~17~F□
    REF~SE~3432418□
    REF~BM~80039231□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000185~HN~3314J4□
    PID~S~PP~ST~12□
    PID~S~MA~ST~A□
    PID~S~MAC~ST~01□
    PID~S~02~ST~01□
    MEA~PD~WT~21000~LB□
    MEA~PD~WD~42.25~IN□
    MEA~PD~TH~0.125~IN□
    MEA~PD~LN~63.75~IN□
    MEA~CT~NB~12~PC□
    HL~20~17~F□
    DTM~009~20110401~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~HN~3314J4□
    PID~S~MAC~ST~05□
    MEA~PD~WT~250~LB□
    CTT~20□

------------------------------------ Pickle/Damage example:
------------------------------------ This example was created to report a
------------------------------------ partially processed coil that had to
------------------------------------ cut out when a unit went down.
------------------------------------
------------------------------------ Note:
------------------------------------ The ISR/PID loop can be used for any
------------------------------------ product coil to report damage or
------------------------------------ issues.
    HL~4~~I□
    REF~RV~3432418□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000013~HN~3314J4~PI~4400000699□
    MEA~PD~WT~42000~LB□
    HL~5~4~F□
    REF~SE~3432418□
    DTM~009~20001122~1256□
    PO1~~1~UN~~~VO~8023459~VN~000101~SN~ZZ00000018~HN~3314J4□
    PID~S~PP~ST~01□
```

PID~S~MA~ST~8□
PID~S~MAC~ST~01□
PID~S~02~ST~01□
MEA~PD~WT~21000~LB□
MEA~PD~WD~42.25~IN□
MEA~PD~TH~0.125~IN□
MEA~PD~ID~25~IN□
HL~6~4~F□
REF~SE~3432419□
DTM~009~20001122~1256□
PO1~~1~UN~~~VO~8023459~VN~000101~SN~**ZZ00000019**~HN~3314J4□
PID~S~PP~ST~01□
PID~S~MA~ST~2□
PID~S~MAC~ST~01□
PID~S~02~ST~01□
MEA~PD~WT~21000~LB□
MEA~PD~WD~42.25~IN□
MEA~PD~TH~0.125~IN□
MEA~PD~ID~25~IN□
ISR~PH□
PID~S~DAC~ST~109□
PID~S~DAF~ST~1□
CTT~6□