

Implementation Guidelines: ANSI X12 Transaction Set 856

Advance Ship Notice/Manifest

DOCUMENT NUMBER ICS 004010 856 S Transfer Facility

ESSAR Steel Algoma Inc.

Information Systems and Business Process Improvement

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SECTION 1. REVISION STATUS

REVISION NUMBER	DATE	PAGES	AUTHOR
R00/A	2000 03 13	original draft	G. Masters
R00	2000 03 27	original	G. Masters
R01	2000 03 31	new sample trans	G. Masters
R02	2000 09 07	added PKG segment	G. Masters
R02		and tally number	G. Masters
R03	2000 11 29	update PID & PKG	G. Masters
R04	2002 01 13	added DTM segment	M. Clarke
R05	2004 10 05	added RN&MO to LIN	G. Masters
R06	2005 01 14	Fixed N102 ST & BU	G. Masters
R06		to display codes	G. Masters
R07	2007 06 11	added new REF cds:	K. Rathwell
R07		HC, SN, VX	K. Rathwell
R08	2007 10 26	updated TD504 vals	K. Rathwell
R09	2008 06 23	name change	G. Masters

SECTION 2. PREFACE

This document is intended to provide the details for an electronic Advance Ship Notice (ASN) for Algoma shipments into a transfer facility. If this specification does not meet your requirements, please forward a copy of your specification to the address below.

Essar Steel Algoma 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 ASN or electronic data communication with Algoma may be directed to:

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SECTION 3. SUMMARY

Essar Steel Algoma Inc. has implemented this Advance Shipment Notice/Manifest (ASN) ANSI X12 856 transaction set for transfer facilities. This transaction set will be used to send shipping, carrier, order, and piece specific information for a shipment. There are three levels of hierarchy implemented: shipment, order and item.

The shipment level will contain the carrier details, bill of lading, shipment weight, and ship-to/ship-from/bill-to information for the shipment.

The order level will contain the customer's purchase order, item and part number. This area will also include Algoma's mill order number and a free-form description of the order.

The item level will contain the physical details for the item such as weight, dimensions, heat number and Algoma's mill/coil number.

The "original" 856 will be sent at the time of shipment from Algoma. A "replace" 856 will be sent if the shipment information is modified at Algoma after the "original 856 was sent. The "replace" 856 will contain all of the information for the shipment, which should be used to overlay the information that was sent on the "original" 856

Algoma does require the use of the Functional Acknowledgement, 997 transaction set, in order for Algoma to ensure the receipt of the 856.

Essar Steel Algoma 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*9999999999 *940901*1312*U*00302*000000001*1*
 P*~ N/L

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	"00302"
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 then the element separator.

4.2 Element separators and segment terminator

Algoma uses the following characters:

- Segment terminator EBCDIC Hex "1C"
- Element separator EBCDIC Hex "5C"
- Sub element separator EBCDIC Hex "A1"

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*3*000000001 N/L

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*SH*999999999*201495124*940901*1312*1*X*004010 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
GS01	479	Functional ID	M ID 02/02	"SH"
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*3*1 N/L

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. 856 TRANSACTION SET

6.1 Data Segment Sequence

ST	Transaction Set Header
BSN	Beginning Segment for Advance Ship Notice
DTM	Date/Time Reference
HL	Hierarchical Level - Shipment
TD1	Carrier Details (Quantity & Weight)
TD5	Carrier Details (Routing Sequence/Transit Time)
TD3	Carrier Details (Equipment)
REF	Reference Numbers
N1	Name
N3	Address Information
HL	Hierarchical Level - Order
LIN	Item Identification
PRF	Purchase Order Reference
PID	Product/Item Description
PKG	Marking
DTM	Date/Time Reference
HL	Hierarchical Level - Item
SN1	Item Detail
PID	Product/Item Description
MEA	Measurements
REF	Reference Numbers
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*856*0001 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
ST01	143	Transaction Set ID Code	M ID 03/03	Use "856"
ST02	329	Transaction Set Control Number	M AN 04/09	A unique number assigned to each transaction set within a functional group.

6.3 BSN - Beginning Segment for Advance Ship Notice

Segment: BSN - Beginning Segment for Advance Ship Notice
 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.
 The original 856 will be sent at the time of shipment from Algoma. A replace 856 will be sent if the shipment information is modified at Algoma after the original 856 has been sent.

Example: BSN*00*123456*20000216*1421 N/L
 BSN*05*123456*20000216*1421 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
BSN01	353	Transaction Set Purpose Code	M ID 02/02	"00" - Original "05" - Replace
BSN02	396	Shipment Identification	M AN 02/30	Unique supplier assigned number that is not repeated within a one year period.
BSN03	373	Date	M DT 08/08	Creation date (CCYYMMDD)
BSN04	337	Time	M TM 04/08	Creation time (HHMM) 24 hour clock.
BSN05	1005	Hierarch Structure Code	O ID 04/04	Not used.
BSN06	640	Transaction Type Code	C ID 02/02	Not used.
BSN07	641	Status Reason Code	O ID 03/03	Not used.

6.4 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*20000216*1421 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
DTM01	374	Date/Time Qualifier	M ID 03/03	"011" Date and time shipment leaves the supplier's premises.
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	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.

6.5 HL - Hierarchical Level - Shipment

Segment: HL - Hierarchical Level - Shipment

Level: Shipment hierarchical level

Max Usage/Loops: 200,000 per advance shipment notice/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 shipment level is mandatory for the 856.

Example: HL*1**S N/L

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	Required except for the first occurrence of the HL segment.
HL03	735	Hierarchical Level Code	M ID 01/02	"S" for shipment level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

6.6 TD1 - Carrier Details (Quantity & Weight)

Segment: TD1 - Carrier Details (Quantity & Weight)

Level: Shipment hierarchical level

Max Usage/Loops: 20 per HL loop.

Purpose: To specify the transportation details relative to commodity, weight and quantity.

General Information: Required at the shipment level.

Example: TD1*COL52*2****N*43200*LB N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD101	103	Packing Code	M AN 03/05	"COL52" for coil. "LIF52" for lift.
TD102	80	Lading Quantity	M NO 01/07	Number of units of the type specified in TD101.
TD103	23	Commodity Code Qualifier	O ID 01/01	Not used.
TD104	22	Commodity Code	O AN 01/30	Not used.
TD105	79	Lading Description	O AN 01/50	Not used.
TD106	187	Weight Qualifier	M ID 01/02	"N" for net.
TD107	81	Weight	M NO 01/10	Shipment weight.
TD108	355	Unit of Measurement Code	M ID 02/02	"LB" for pounds. "KG" for kilograms.
TD109	183	Volume	O R 01/08	Not used.
TD110	355	Unit of Measurement Code	O ID 02/02	Not used.

6.7 TD5 - Carrier Details (Routing Sequence/Transit Time)

Segment: TD5 - Carrier Details (Routing Sequence/Transit Time)

Level: Shipment hierarchical level

Max Usage/Loops: 12 per HL loop.

Purpose: To specify the carrier, sequence of routing and to provide transit time information.

General Information: Optional at the shipment level.

Example: TD5*B*2*CP*M N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD501	133	Routing Sequence Code	O ID 01/02	"B" - origin.
TD502	66	Identification Code Qualifier	C ID 01/02	"2" - SCAC code
TD503	67	Identification Code	C AN 02/80	SCAC code for truck. "CP" for CP Rail.
TD504	91	Transportation Method/Type Code	C ID 01/02	"M" - common carrier: truck. "R" - rail. "V" - vessel.
TD505	387	Routing	C AN 01/35	Not used.
TD506	368	Shipment/Order Status Code	C ID 02/02	Not used.
TD507	309	Location Qualifier	O ID 01/02	Not used.
TD508	310	Location Identifier	C AN 01/30	Not used.
TD509	731	Transit Direction Code	O ID 02/02	Not used.
TD510	732	Transit Time Direction Qualifier	O ID 02/02	Not used.
TD511	733	Transit Time Code	O ID 02/02	Not used.
TD512	284	Service Level Code	O ID 02/02	Not used.
TD513	284	Service Level Code	O ID 02/02	Not used.
TD514	284	Service Level Code	O ID 02/02	Not used.
TD515	26	Country Code	O ID 02/03	Not used.

6.8 TD3 - Carrier Details (Equipment)

Segment: TD3 - Carrier Details (Equipment)

Level: Shipment hierarchical level

Max Usage/Loops: 12 per HL loop.

Purpose: To specify transportation details relating to the equipment used by the carrier.

General Information: Required at the shipment level.

Example: TD3*RR*CP*432512 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD301	40	Equipment Description Code	M ID 02/02	"TL" for trailer. "RR" for rail car. "VL" for vessel.
TD302	206	Equipment Initial	M AN 01/04	Carrier prefix.
TD303	207	Equipment Number	M AN 01/10	Trailer/Car number.
TD304	187	Weight Qualifier	O ID 01/02	Not used.
TD305	81	Weight	C R 01/10	Not used.
TD306	355	Unit of Measurement Code	C ID 02/02	Not used.
TD307	102	Ownership Code	O ID 01/01	Not used.
TD308	407	Seal Status Code	O ID 02/02	Not used.
TD309	225	Seal Number	O AN 02/15	Not used.
TD310	24	Equipment Type	C ID 04/04	Not used.

6.9 REF - Reference Numbers

Segment: REF - Reference Numbers

Level: Shipment hierarchical level

Max Usage/Loops: 200 per HL loop.

Purpose: To transmit identifying numbers.

General Information: Used to specify bill of lading, tally number and shipper's number.

Example: REF*BM*32418 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
REF01	128	Reference Number Qualifier	M AN 02/03	"BM" for Bill of Lading "PK" for Tally Number "SI" for Shipper's Number
REF02	127	Reference Number	M AN 01/30	Bill of lading. Shipper's Number.
REF03	352	Description	O AN 01/80	Not used.

6.10 N1 - Name

Segment: N1 - Name

Level: Shipment hierarchical level

Max Usage/Loops: 1 per N1 loop whose max usage is 200 per HL loop.

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

General

Information: 3 N1 loops will be sent. For the ST and BT qualifiers a six character code will be sent in the N102 element to uniquely identify the associated address information.

Example: N1*ST*ANYCOMPANY N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
N101	98	Entity Identifier Code	M AN 02/03	"SU" for supplier "ST" for ship-to "BT" for Bill-to
N102	93	Name	M AN 01/60	Organization's name or Code.
N103	66	ID Code Qualifier	O 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.

6.11 N3 – Address Information

Segment: N3 - Address Information

Level: Shipment hierarchical level

Max Usage/Loops: 2 per N1 loop

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

General Information: Two N3 segments will be sent containing address information in free form for N101 qualifiers ST & BT.

Example: N3*ST*ANYCOMPANY*352 QUEEN ST. N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
N301	166	Address Information	M AN 01/55	Address information.
N302	166	Address Information	M AN 01/55	Address information.

6.12 HL - Hierarchical Level - Order

Segment: HL - Hierarchical Level - Order

Level: Order hierarchical level

Max Usage/Loops: 200,000 per advance shipment notice/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 order level is mandatory for original ASNs.

Example: HL*2*1*0 N/L

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	"0" for order level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

6.13 LIN - Item Identification

Segment: LIN - Item Identification

Level: Order hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To specify basic item identification.

General Information: Used to specify Algoma's mill order number and mill item number. The buyer's part number and item number may or may not be present.

Example: LIN**VO*31242*VN*001*BP*87122GP*IN*053 N/L

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	"VO" for Vendors Order number.
LIN03	234	Product/Service ID	M ID 01/48	Algoma's Mill Order Number
LIN04	235	Product/Service ID Qualifier	M ID 02/02	"VN" for Vendor's Item number.
LIN05	234	Product/Service ID	M ID 01/48	Algoma's Mill Item Number
LIN06	235	Product/Service ID Qualifier	O ID 02/02	"BP" for Buyer's Part Number.
LIN07	234	Product/Service ID	O ID 01/48	Buyer's part number
LIN08	235	Product/Service ID Qualifier	O ID 02/02	"IN" for customer's item number.
LIN09	234	Product/Service ID	O ID 01/48	Customer's item number.
LIN10	235	Product/Service ID Qualifier	C ID 02/02	"RN" for release number.
LIN11	234	Product/Service ID	O ID 01/48	Mill item number to ship on.
LIN12	235	Product/Service ID Qualifier	O ID 02/02	"MO" for movement type code.

LIN13	234	Product/Service ID	O ID 01/48	"T" to indicate transload material. "S" to indicate storage material.
LIN14	235	Product/Service ID Qualifier	O ID 02/02	Not used.
.				
.				
.				
LIN31	234	Product/Service ID	C ID 01/48	Not used.

6.14 PRF – Purchase Order Reference

Segment: PRF - Purchase Order Reference

Level: Order hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To provide reference to a specific purchase order.

General Information: Will contain the customer's purchase order number.

Example: PRF*7638948 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
PRF01	324	Purchase Order Number	M AN 01/22	Customer purchase order number.
PRF02	328	Release Number	O AN 01/30	Not used.
PRF03	327	Change Order Sequence Number	C AN 01/08	Not used.
PRF04	373	Date	C DT 08/08	Not used.
PRF05	350	Assigned Identification	M AN 01/20	Not used.
PRF06	367	Contract Number	O AN 01/30	Not used.
PRF07	92	Purchase Order Type	O ID 02/02	Not used.

6.15 PID - Product/Item Description

Segment: PID - Product/Item Description

Level: Order hierarchical level

Max Usage/Loops: 200 per HL loop.

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

General Information: Up to six PID segments can be provided (up to four free-form and up to two structured).

Example: PID*F***COLD ROLLED SHEET, ASTM A366, OIL N/L
 PID*S*18*ST*37 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
PID01	349	Item Description Type	M ID 01/01	"F" for free-form format. "S" for structured format.
PID02	750	Product/Process Characteristic Code	O ID 02/03	AISI table number.
PID03	559	Agency Qualifier Code	C ID 02/02	"ST" for Steel Industry.
PID04	751	Product Description Code	C AN 01/12	AISI table value.
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.

6.16 PKG - Marking

Segment: PKG - Marking

Level: Order hierarchical level

Max Usage/Loops: 25 per HL loop.

Purpose: To describe marking, packaging, loading and unloading requirements.

General Information: Up to three PKG segments can be provided for Algoma's mark/pack/load information.

Example: PKG*F**ZZ** (C3.27,C3.107,C3.108)-TARP LOAD N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
PKG01	349	Item Description Type	M ID 01/01	"F" for free-form format.
PKG02	753	Packaging Characteristic Code	O ID 01/05	Not used.
PKG03	559	Agency Qualifier Code	M ID 02/02	"ZZ" for mutually defined.
PKG04	754	Packaging Description Code	O AN 01/07	Not used.
PKG05	352	Description	M AN 01/80	MPL description.
PKG06	400	Unit Load Option Code	O ID 02/02	Not used.

6.17 DTM - Date/Time Reference

Segment: DTM - Date/Time Reference

Level: Order hierarchical level

Max Usage/Loops: 1/None

Purpose: To specify pertinent dates.

General Information: Used to specify planned ship week for delivery to customer.

Example: DTM*039*20020113

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
DTM01	374	Date/Time Qualifier	M ID 03/03	"039" Ship Week of
DTM02	373	Date	M DT 08/08	Date (CCYYMMDD)
DTM03	337	Time	M TM 04/08	Not used.
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.

6.18 HL - Hierarchical Level - Item

Segment: HL - Hierarchical Level - Item

Level: Item hierarchical level

Max Usage/Loops: 200,000 per advance shipment notice/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 for original ASNs. One HL loop is required for each item of an order.

Example: HL*3*2*I N/L

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.

6.19 SN1 – Item Detail

Segment: SN1 - Item Detail

Level: Item hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To specify line item detail relative to shipment.

General Information: One SN1 will be provided per HL item loop. SN103 will have a value of CX to indicate coil.

Example: SN1**3*PC N/L
 SN1**1*CX N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
SN101	350	Assigned Identification	O AN 01/20	Not used.
SN102	382	Number of Units Shipped	M R 01/10	Number of pieces.
SN103	355	Unit or Basis for Measurement Code	M ID 02/02	"PC" - Piece. "CX" - Coil.
SN104	646	Quantity Shipped to Date	O R 01/15	Not used.
SN105	330	Quantity Ordered	C R 01/15	Not used.
SN106	355	Unit or Basis for Measurement Code	C ID 02/02	Not used.
SN107	728	Returnable Container Load Make-up Code	O ID 01/02	Not used.
SN108	668	Line Item Status Code	O ID 02/02	Not used.

6.20 PID - Product/Item Description

Segment: PID - Product/Item Description

Level: Item hierarchical level

Max Usage/Loops: 4 per HL loop.

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

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

Example: PID*F***COLD ROLLED SHEET, ASTM A366, OIL N/L

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	M 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.

6.21 MEA - Measurements

Segment: MEA - Measurements

Level: Item hierarchical level

Max Usage/Loops: 40 per HL 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 N/L
 MEA*PD*TH*0.125*EM N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
MEA01	737	Measurement Reference ID Code	M ID 02/02	"PD" for physical dimensions
MEA02	738	Measurement Qualifier	M ID 01/03	"WT" for weight. See the Data Element Dictionary for a complete list.
MEA03	739	Measurement Value	M R 01/18	Required.
MEA04	355	Unit of Measurement Code	M ID 02/02	"LB" for pounds. See the Data Element Dictionary for a complete list.
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.

6.22 REF - Reference Numbers

Segment: REF - Reference Numbers
 Level: Item hierarchical level
 Max Usage/Loops: 200 per HL loop.
 Purpose: To transmit identifying numbers.

General Information: Used to specify heat number and mill serial/tag Number, of both Supplier and Algoma. All information required for cross-referencing purposes if re-tagging of material is required at the storage/processor facility; however, tag number is only required if it is different from the mill serial number.

Example: REF*LS*9211425 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
REF01	128	Reference Number Qualifier	M AN 02/03	"HC" for Algoma's heat number. "HN" for Supplier's heat number. "LS" for Algoma's mill serial number. "PIN" for Algoma's plate lift number. "SN" for Supplier's mill serial number. "VX" for Supplier's tag number.
REF02	127	Reference Number	M AN 01/30	Heat number. Mill/tag number.
REF03	352	Description	O AN 01/80	Not used.
REF04	128	Reference Identification Qualifier	O AN 01/03	Not used.

6.23 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 N/L

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 01/08	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.

6.24 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 N/L

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
SE01	96	Number of Included Segments	M NO 01/06	
SE02	329	Transaction Set Control Number	M AN 04/09	Same as ST02

SECTION 7. DATA ELEMENT DICTIONARY

40	Equipment Description Code
	RR Rail car
	TL Trailer
	VL Vessel
66	ID Code Qualifier
	1 DUNS number
	2 SCAC ID
91	Transportation Method/Type Code
	M Common Carrier
98	Entity Identifier Code
	BT Bill-to
	ST Ship-to
	SU Supplier
103	Packing Code
	COL52 Coil
	LFT52 Lift
128	Reference Number Qualifier
	BM Bill of lading
	HC Algoma's heat number
	HN Supplier's heat number
	LS Algoma's mill serial number
	PIN plate lift number
	PK tally number
	SI Shipper's number
	SN Supplier's mill serial number
	VX Supplier's tag number
133	Routing Sequence Code
	B Origin
146	Shipment Method of Payment
	CC Collect
	PP Prepaid
187	Weight Qualifier
	N Net
235	Product/Service ID Qualifier
	BP Buyer's part number
	IN customer item number
	MO Movement type
	RN Release number
	VN Vendor's item number
	VO Vendor's order number
349	Item Description Type
	F Free-form format
355	Transaction Set Purpose Code
	00 Original
	05 Replace

355 Unit of Measurement Code
CX Coil
ED Inches decimal
EM Inch minimum
FT Feet
IN Inch
KL Kilograms per meter
KG Kilogram
LB Pound
MZ Millimeter minimum
MM Millimeter
P2 Pounds per foot
PC Piece

374 Date/Time Qualifier
011 Date/time shipment leaves the supplier's premises
039 Ship Week of

735 Hierarchical Level Code
I Item level
O Order level
S Shipment level

737 Measurement Reference ID Code
PD Physical dimension

738 Measurement Qualifier
LN Length
TH Thickness
WB Web
WD Width
WT Weight
WU Weight per unit of Measure

SECTION 8. 856 SAMPLE TRANSACTION

ISA~00~ ~00~ ~01~201495124 ~01~?????????? ~000331
 ~1220~U~00201~000000004~0~P~|"
 GS~SH~201495124 ~?????????? ~20000331~1220 ~000000004~X ~004010"
 ST~856~000000004"
 BSN~00~D1866~20000331~1220"
 DTM~011~20000327~1220"
 HL~1~~S"
 TD1~COL52~2~~~~N~76150~LB"
 TD5~B~2~CP~R"
 TD3~RR~CP~346354"
 REF~BM~D1866"
 REF~PK~923187"
 REF~SI~18~1550"
 N1~SU~ESSAR Steel Algoma Inc.~1~201495124"
 N1~ST~223301"
 N3~ ESSAR Steel Algoma Inc.~FOR NAMASCO LIMITED"
 N3~C/O NOVA STL PROC 830 SOUTH SERVICE RD~STONEY CREEK, ONTARIO"
 N1~BT~2233A0"
 N3~ ESSAR Steel Algoma Inc.~NAMASCO LIMITED"
 N3~SAULT STE MARIE ONTARIO~P6A 5P2"
 HL~2~1~O"
 LIN~~VO~78662~VN~001~BP~JC-132-0~IN~1"
 PRF~2001490"
 PID~F~~~~ HOT ROLLED STEEL SHEET - HSLA - SAE J1392 GR 050XLF - CUT EDGE"
 PID~F~~~~ RESTRICTED GAUGE 3/4 TOL"
 PKG*F**ZZ** (C3.27,C3.107,C3.108)-TARP LOAD"
 DTM~039~20020113"
 HL~3~2~I"
 SN1~~1~CX"
 MEA~PD~TH~.106~EM"
 MEA~PD~WD~44.25~IN"
 MEA~PD~WT~38050~LB"
 REF~HC~43215ABC"
 REF~LS~93-85715"
 REF~HN~2505P-52"
 REF~SN~145320"
 HL~4~2~I"
 SN1~~1~CX"
 MEA~PD~TH~.106~EM"
 MEA~PD~WD~44.25~IN"
 MEA~PD~WT~38100~LB"
 REF~HC~43215ABC"
 REF~LS~93-85716"
 REF~HN~2505P-52"
 REF~SN~145330"
 HL~5~~S"
 TD1~COL52~2~~~~N~91001~LB"
 TD5~B~2~CP~R"
 TD3~RR~CP~346354"
 REF~BM~D1866"
 REF~SI~09-1271"
 REF~PK~923188"
 N1~SU~ ESSAR Steel Algoma Inc.~1~201495124"
 N1~ST~556606"
 N3~MAKSTEEL SERVICE CENTRE~C/O NELSON STEEL"
 N3~199 ARVIN AVE~STONEY CREEK ONTARIO"
 N1~BT~5566B0"
 N3~MAKSTEEL SERVICE CENTRE~DIVISION OF MAKAGON IND LTD"
 N3~7615 TORBRAM RD~MISSISSAUGA ONTARIO L4T 4A8"
 HL~6~5~O"
 LIN~~VO~10410~VN~003"
 PRF~S003309"

PID~F~~~~ HOT ROLLED STEEL SHEET SECONDS"
PKG*F**ZZ** (C3.27,C3.107,C3.108)-TARP LOAD"
HL~7~6~I"
SN1~~1~CX"
MEA~PD~TH~.11~IN"
MEA~PD~WD~54~IN"
MEA~PD~WT~48226~LB"
REF~HC~9999A12"
REF~LS~604-06-665A"
REF~HN~1856P-04"
REF~SN~145400"
REF~VX~AA"
HL~8~5~O"
LIN~~VO~10410~VN~004"
PRF~S003309"
PID~F~~~~ HOT ROLLED STEEL SHEET SECONDS"
PKG*F**ZZ** (C3.27,C3.107,C3.108)-TARP LOAD"
HL~9~8~I"
SN1~~1~CX"
MEA~PD~TH~.11~IN"
MEA~PD~WD~54~IN"
MEA~PD~WT~42775~LB"
REF~HC~9999A12"
REF~LS~604-06-665B"
REF~HN~1856P-04"
REF~SN~145400"
REF~VX~AB"
CTT~9"
SE~0000000088~000000004"
GE~000001~000000004"
IEA~00001~000000004"