

PART 6
SPECIAL CONTRACT RULES FOR METALS

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PART 6

SPECIAL CONTRACT RULES FOR HIGH GRADE PRIMARY ALUMINIUM

1 QUALITY

Aluminium deliverable under this contract shall be:

- (a) Primary aluminium with impurities no greater than in the registered designation P1020A in the North American and International Registration Record entitled “International Designations and Chemical Composition Limits for Unalloyed Aluminum” (revised March 2007), or
- (b) Primary aluminium that conforms to the registered designation A199.70 in the GB/T 1196-2008 Standard entitled “Unalloyed aluminium ingots for remelting”, or
- (c) For warrants created up to and including 31 December 2009 primary aluminium of minimum 99.70% purity with maximum permissible iron content 0.20% and maximum permissible silicon content 0.10%.

All delivered aluminium shall be of brands listed in the LME-approved list of aluminium brands.

2 SHAPES AND WEIGHTS

Aluminium delivered may be in the form of ingots, T-bars or sows. Ingots shall be securely strapped in bundles suitable for stacking. Ingot weight shall be within the permitted range 9kgs to 26kgs each. T-bar weight shall not exceed 5% more than 750kgs. The weight of each sow shall not exceed 5% more than 750kgs.

3 SIZE OF LOT

25 tonnes

4 WARRANTS

- 4.1 Warrants shall be for 25 tonnes each (2% either more or less).
- 4.2 Each parcel particularised in each Warrant shall comprise either ingots, T-bars or sows, shall lie at one warehouse, be the production of one country and shall consist of aluminium of one brand shape and size subject, in the case of ingots, to the necessity of including different shapes and sizes at the bottom of each parcel for the purpose of palletisation. Each parcel of ingots placed on Warrant shall be delivered securely strapped in bundles not exceeding two tonnes each and shall be securely strapped for handling and transport in bundles to permit safe handling without bundle distortion and breakage.
- 4.3 Warrants must contain the warning regarding entrapped moisture referred to in the Special Rules for Placing Aluminium on Warrant.
- 4.4 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market.

SPECIAL RULES GOVERNING THE PLACING OF HIGH GRADE PRIMARY ALUMINIUM ON WARRANT

- 1 Each delivery of aluminium for placing on Warrant shall be accompanied by a Certificate of Origin and a producer's Certificate of Analysis both of which must be lodged with the warehouseman. The Certificate of Analysis shall state the brand name and be within the quality specification set out in Special Rule 1 for the relevant grade of aluminium as above set out. A Bulk Analysis Certificate or a copy thereof is acceptable but if a producer's Certificate is not available an Analysis certificate must be prepared and signed by an assayer on the list of approved assayers. All analysis certificates must show each heat number.
- 2 The party intending to place on Warrant aluminium for delivery in satisfaction of any Contract must advise the warehouseman of the name of a Category 1, 2 or 3 member of the London Metal Exchange who will accept responsibility for the initial placing of the Warrants on the market. Such Warrant(s) must be issued to the order of the said member who, prior to its or their endorsement, must be satisfied that the documentation is evidence of good delivery.

This rule will only apply to Warrants issued prior to 17 March 2005. From 18 March 2005 all primary aluminium Warrants are to be issued to bearer.

- 3 Each Warrant shall be made up from the production of one country and shall consist of one brand which is listed as being a good delivery. Each Warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand and the date(s) and reference number(s) of the Certificates of Analysis lodged with the warehouseman. Each Warrant shall be of 25 tonnes (2% either more or less) and shall state the number of bundles of ingots or T-bars or sows. The Warehouse Company is required to keep a record of the date and reference number of the Certificate of Origin. In the case of T-bars or sows the Warehouse Company is required to keep a record of the piece weight of each and in the case of bundles of ingots the Warehouse Company is required to keep a record of the number of ingots making up each bundle.
- 4 The warning clause set out below must appear on the Warrant:

WARNING The buyer is advised that this metal may contain crevices and hidden recesses holding entrapped moisture. The metal should be handled and processed with this possibility in mind. Entrapped moisture may cause an explosion if the metal is introduced into a melting- furnace without proper drying.

- 5** On request, the warehouseman is obliged to submit to the holder of the Warrant Certificates of Origin/Analysis or copies thereof if the 25 tonne parcel forms a part of a larger delivery covered by Bulk Analysis.
- 6** All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR ALUMINIUM ALLOY

1 QUALITY

The aluminium alloy delivered under this contract shall be:

- (a) aluminium alloy conforming to one of the specifications listed below:
- (1) **A380.1** produced in conformity with The Aluminum Association Inc. specification (2009);
 - (2) **226** produced in conformity with LME 226 as described below: -

Elements	Composition, % (m/m)
Cu	2.0 – 3.5
Si	8.0 – 11.0
Mg	0.1 – 0.5
Zn	1.2 max
Fe	1.0 max
Mn	0.1 – 0.4
Ni	0.3 max
Sn	0.1 max
Ti	0.15 max
Pb	0.2 max
Others	0.05 max each
Al	Remainder
The sum of 'others' 0.15% max	

- (3) **AD12.1** produced in conformity with JIS H2118-2006, Class 12: (Note: this specification to be read in conjunction with the provision that there be an allowance as follows: Others, total 0.50% max, Al remainder).

- (b) of brands listed in the LME-approved list of aluminium alloy brands.

2 SHAPES AND WEIGHTS

Aluminium Alloy delivered may be in ingot form or, for aluminium alloy delivered on and after 25 January 2005 may be in the form of small sows (four-way entry sows), large sows (low profile sows), and T-bars. All shapes shall comply as follows

- (a) Ingots

Ingots shall be securely strapped with galvanised or protectively-coated steel or polyester bands in 500kgs to 1,000kgs bundles of equal weight suitable for stacking. On and after 17 August 1999 one makeweight bundle in any one lot will be permissible. Ingot weight shall be within the permitted range 4kgs to 25kgs each, with all ingots in any one lot being of the same weight and size. Ingots shall not exceed 800mm length - the only exception to be the cast feet on which bundles may be stacked.

- (b) Small sows (four-way entry sows)

Pieceweight shall be within the permitted range 408kgs - 590kgs each, with all sows in any one lot being of the same weight and size.

Dimensions shall be within the permitted range as follows:-

Top - Length and width shall be the same, between 837mm - 990mm.

Bottom - Length and width shall be the same, between 406mm - 559mm.

Height - Between 304mm - 432mm.

Shape - The tapering of all four sides should include an indentation to allow for the safe and easy handling by forklift trucks.

(c) Large sows (low profile sows)

Pieceweight shall be within the permitted range 300kgs - 726kgs each, with all sows in any one lot being of the same weight and size.

Dimensions shall be within the permitted range detailed as follows:-

Top - Length shall be between 1,015mm - 1,320mm. Width shall be between 812mm - 1142mm.

Bottom - Length shall be between 900mm - 1,320mm. Width between 406mm - 520mm.

Height - Between 200mm - 305mm.

Shape - The tapering of the long sides should include an indentation to allow for the safe and easy handling by forklift trucks.

(d) T-bars

Pieceweight shall be within the permitted range 408kgs - 726kgs each, with all T-bars in any one lot being of the same weight and size.

Dimensions:-

Top - Length shall be between 837mm - 1320mm.

Width - shall be between 760mm - 1015mm.

Bottom - Length shall be between 837mm - 1320mm.

Width shall be between 406mm - 634mm.

Height - Overall between 254mm - 432mm. To shoulder minimum 76mm.

Shape - The indentation of the shoulder on the long sides should be a minimum of 101mm on each side and allow for the safe and easy handling by forklift trucks.

Other Requirements

All ingots and sows shall be produced by a single pouring process. "Multi-pour" or "Capping" the surface with additional metal after the ingot or sow is formed is not permitted.

All ingots, T-bars and sows delivered under the contract shall be flat in order to permit stacking and safe handling using forklifts.

3 SIZE OF LOT

20 tonnes

4 WARRANTS

- 4.1 Warrants shall be for 20 tonnes each (2% either more or less).
- 4.2 Each parcel particularised in each Warrant shall comprise ingots, small sows (four-way entry sows) large sows (low profile sows) or T-bars, shall lie at one warehouse, be the production of one plant and shall consist of aluminium alloy of a single aluminium alloy type. Each parcel of ingots placed on Warrant shall be delivered securely strapped in bundles not exceeding 1,000kgs each. Each parcel shall contain aluminium alloy derived from no more than five melts, and in the case of ingots, each bundle shall contain aluminium alloy from one melt. Additionally, each parcel placed on Warrant shall be securely strapped for handling and transport in bundles to permit safe handling without bundle distortion and breakage.
- 4.3 Warrants must contain the warning regarding entrapped moisture referred to in the Special Rules Governing the Placing of Aluminium Alloy on Warrant.
- 4.4 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market

SPECIAL RULES GOVERNING THE PLACING OF ALUMINIUM ALLOY ON WARRANT

- 1** Each delivery of aluminium alloy for placing on Warrant shall be accompanied by a Certificate of Origin. A producer's Certificate of Analysis shall be provided for each melt represented within the lot and shall contain the melt number and melt date. Each bundle of ingots and each small sow (four-way entry sow), large sow (low profile sow) or T-bar shall be tagged with a die-stamped or indelible tag stating the aluminium alloy type, melt numbers and brand name. The Certificates of Analysis shall state the brand name and be within the quality specification set out in Special Contract Rule 1 for the relevant aluminium alloy type.

- 2 Aluminium Alloy delivered for Warranting must be in lots of 20 tonnes, comprising bundles of ingots, small sows (four-way entry sows), large sows (low profile sows) or T-bars in accordance with the Shape and Weights requirements as set out in Special Contract Rule 2.
- 3 With effect from 4 June 2002 Aluminium Alloy must meet the following physical characteristics:-
- (a) surfaces shall be smooth and free of open shrinkage, porosity, layers and/or seams.
 - (b) the visible presence of foreign substances such as white/grey residue on the surface, imbedded inclusions, skim/dross, salt cake, iron oxide flakes or dirt will not be acceptable.
 - (c) product edges and surfaces shall be free of sharp edges, spurs and/or flashings that might present hazards in handling.
- 4 The party intending to place on Warrant aluminium alloy for delivery in satisfaction of any Contract must advise the warehouseman of the name of a Category 1, 2 or 3 Member of the London Metal Exchange who will accept responsibility for the initial placing of the Warrants on the market. Such Warrant(s) must be issued to the order of the said member who, prior to its or their endorsement, must be satisfied that the documentation is evidence of good delivery.

This rule will only apply to Warrants issued prior to 17 March 2005. From 18 March 2005 all Aluminium Alloy Warrants are to be issued to bearer.

- 4.1 Each Warrant shall be made up from the production of one plant and shall consist of one brand which is listed as being good delivery. Each Warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand and the date(s) and reference number(s) of the Certificates of Analysis lodged with the warehouseman. Each Warrant shall be of 20 tonnes (2% either more or less) and, in the case of ingots, shall state the number of bundles making up each parcel; and in the case of either small sows (four-way entry sows), large sows (low profile sows) or T-bars, shall state the number of pieces making up each parcel. The Warehouse Company is required to keep a record of the date and reference number of the Certificate of Origin. The Warehouse Company is required to keep a record of the number of ingots making up each bundle. In the case of small sows (four-way entry sows), large sows (low profile sows) and T-bars, the warehouse company is required to keep a record of the piece weight of each.
- 5 The warning clause set out below must appear on the Warrant:

WARNING The buyer is advised that this metal may contain crevices and hidden recesses holding entrapped moisture. The metal should be handled and processed with this possibility in mind. Entrapped moisture may cause an explosion if the metal is introduced into a melting-furnace without proper drying.

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
 - (b) that there is a risk of disruption to the LME's market.
- 7** On request, the warehouseman is obliged to submit to the holder of the Warrant the Certificates of Origin and Analysis or copies thereof if the 20 tonne parcel forms part of a larger delivery covered by bulk certificates.
- 8** All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR COPPER - GRADE A

1 QUALITY

- (a) The copper delivered under this contract must be electrolytic copper in the form of cathodes - Grade A.
- (b) All copper delivered must be of brands listed in the LME-approved list of Copper - Grade A brands and must conform to the chemical composition of one of the following Standards:
 - (i) BS EN 1978:1998 (cathode grade designation Cu-CATH-1)
 - (ii) GB/T 467-2010 (high purity Copper Cathode (Cu-CATH-1))
 - (iii) ASTM B115-10 (cathode Grade 1)

2 SHAPES AND WEIGHTS

Each parcel of 25 tonnes of full plate cathodes shall lie at one warehouse and be of one brand, shape and size. Each parcel of copper cathodes placed on Warrant shall be delivered securely strapped in bundles not exceeding 4 tonnes. Each parcel of copper cathodes placed on Warrant shall be securely strapped for handling and transport in bundles to permit safe handling without bundle distortion and breakage.

3 SIZE OF LOT

25 tonnes

4 WARRANTS

- 4.1 Warrants shall be for 25 tonnes each (2% either more or less).
- 4.2 Each Warrant must state the total weight of the parcel, the brand, the country of origin and the number of bundles making up each parcel.
- 4.3 Each Warrant must be identified as Copper - Grade A.
- 4.4 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market.

SPECIAL RULES GOVERNING THE PLACING OF COPPER - GRADE A ON WARRANT

- 1** Each parcel of copper cathodes placed on Warrant shall when delivered to the warehouse company, have the brand name indelibly marked on clips attached to the producer's bundle strapping or the brand name indelibly marked continuously on the producer's bundle strapping. Where it is necessary to break a bundle in order to obtain a warrant weight, this will be permitted provided that at least 80% of the bundles in the Warrant have the original producer clips or producers strapping showing the brand name. The remaining bundles in the Warrant must have an indelible label produced by the warehouse company attached to the strapping showing the brand name.

SPECIAL CONTRACT RULES FOR STANDARD LEAD

1 QUALITY

The lead delivered under this contract must be refined lead (minimum 99.970% purity) and must conform to one of the following Standards and specific grades:

- i) BS EN 12659:1999 Standard entitled “Lead and Lead Alloys – Lead”. Permitted grades: Material Numbers PB970R, PB985R and PB990R.
- ii) GB/T 469/2005 Standard entitled “Lead Ingots”. Permitted Grades: 99.970%, 99.985%, 99.990% and 99.994%.
- iii) ASTM B29-03 (2009) Standard entitled “Standard Specification for Refined Lead”. Permitted grades: 99.97% and 99.995%.

All delivered lead must be:

- (a) of brands listed in the LME-approved list of lead brands;
- (b) in ingots weighing not more than 55kgs each.

2 SHAPES, WEIGHTS AND MARKINGS

Each parcel of 25 tonnes shall lie at one warehouse and be of one brand and shall consist of ingots of one shape and size, subject to the necessity of including different shapes and sizes at the bottom of each bundle for the purpose of bundle stability. Each parcel placed on Warrant shall be delivered strapped in bundles not exceeding 1.5 tonnes and shall be securely strapped for handling and transport in bundles to permit safe handling without bundle distortion and breakage.

On and after 1 August 2007, either a) the listed brand name and grade reference must be indelibly marked on each ingot within a bundle, or b) each bundle must have a durable bundle label showing the listed brand name and the grade reference. The cast number must also be indelibly marked on either i) the bundle label, ii) the top surface of the bundle or iii) each ingot within the bundle.

3 SIZE OF LOT

25 tonnes

4 WARRANTS

- 4.1 Warrants shall be for 25 tonnes each (2% either more or less).
- 4.2 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved

Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are:

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market.

SPECIAL RULES GOVERNING THE PLACING OF STANDARD LEAD ON WARRANT

- 1.1** Each delivery of lead for placing on Warrant shall be accompanied by a producer's Certificate of Analysis which must be lodged with the warehouseman. The Certificate of Analysis shall determine lead content within the minimum purity as defined in Special Contract Rule 1. A Bulk Analysis Certificate or a copy thereof is acceptable, but if a producer's Certificate is not available an analysis certificate must be prepared and signed by an independent assayer on the list of approved assayers. In all cases, it must be possible to cross-reference the metal by melt or batch numbers on the ingots or bundles to identical numbers on the Certificate.
- 1.2** Each delivery of lead for placing on Warrant on or after 1 August 2007 shall be accompanied by a producer's Certificate of Analysis for each cast number within the Warrant quoting the cast number. The Certificate of Analysis shall also quote the brand name and demonstrate compliance with the Standard by illustrating the detected level of impurity for each element. On or after 31 October 2012, the Certificate of Analysis shall also demonstrate compliance with the relevant Standard and grade by illustrating the detected level of impurity for each element.
- 1.3** If a producer's Certificate of Analysis is not available, an analysis certificate for each 25 tonne parcel must be prepared and signed by an independent sampler and assayer on the LME list of approved assayers ensuring that each cast is covered by a Certificate of Analysis and in all cases, it must be possible to cross-reference the metal by cast number to the relevant certificate.
- 2** Each Warrant shall be made up from the production of one location and shall consist of one brand which is listed as being a good delivery. Each Warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand, the number of bundles making up each parcel and the date(s) and reference number(s) of the Certificate of Analysis lodged with the warehouseman. The Warehouse Company is required to keep a record of the number of ingots making up each parcel.
- 3** On request, the warehouseman is obliged to submit to the holder of the Warrant, copies of Certificates of Analysis if the 25 tonne parcel forms a part of a larger delivery covered by Bulk Analysis.
- 4** All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR PRIMARY NICKEL

1 QUALITY

The nickel delivered under this contract must be:

- (a) Primary Nickel that conforms to either the ASTM specification B39-79 (2013) – min 99.80% purity or the GB/T specification 6516-2010 – Ni9990 grade;
- (b) in the shape of cathodes (full plate or cut), briquettes or pellets; and
- (c) of brands listed in the LME approved list.

2 SIZE OF LOT

6 tonnes (2% either more or less).

3 WARRANTIES

3.1 Warrants shall be for 6 tonnes (2% more or less).

3.2 The nickel in each Warrant shall consist of one brand which is listed as being good delivery and of one shape and size.

3.3 Each Warrant shall state:-

- (a) the name of the brand;
- (b) the country of origin;
- (c) the shape;
- (d) the date(s) and identification reference of the certificates of analysis lodged with the Warehouse¹;
- (e) the total gross and net weights; and
- (f) the number of steel drums or bags or bundles making up each lot.

3.4 Each Warrant for drummed and bagged nickel shall bear the following legend:

‘WARNING The buyer is advised that steel drums or bags (as applicable) may contain water and nickel should be handled and processed with this possibility in mind. Water contained in steel drums or bags (as applicable) may cause an explosion if the nickel is introduced into a melting-furnace without proper procedures being followed’.

3.5 Each Warrant for full plate cathode nickel shall bear the following legend:

‘WARNING The buyer is advised that full plate nickel cathode edges may pose a handling risk and proper procedures for handling should be following’.

3.6 Each Warrant shall bear an LMEsword generated barcode.

¹ For full plate nickel cathodes placed on Warrant on or before 10 January 2011 a certificate of conformity in lieu of a certificate of analysis is permissible.

4 SHAPES AND WEIGHTS

4.1 Nickel delivered under this contract shall be packed according to shape as follows:-

- (a) Cut cathodes of either 100mm x 100mm (4" x 4"), 50mm x 50mm (2" x 2") or 25mm x 25mm (1" x 1"), shall be packed in sound steel drums of uniform size and even net weight (+/- 2% more or less) of 200kgs or 250kgs or 400kgs or 500kgs each with the production batch reference, gross and net weights and brand name indelibly marked on each individual steel drum. Part filled drums are not permitted.
- (b) Briquettes and pellets shall be packed in steel drums, sizes as 4.1 (a) above, or in 2000kgs (+/- 2% more or less) bags and marked in the same manner as cut cathodes in 4.1 (a) above. Part filled bags are not permitted.
- (c) Full plate cathodes up to 1000mm x 1300mm maximum with a thickness range of 2mm to 17mm, shall be packed in bundles not exceeding 2000kgs, strapped in two dimensions with corrosion resistant material to permit safe handling and transport without bundle distortion and breakage on steel or wooden skids (pallets not permitted) with a minimum ground clearance of 75mm with the production batch reference and gross and net weights indelibly marked on the top cathode of each bundle. The brand name must be marked indelibly either a) on clips attached to the bundle strapping, or b) on the producer strapping, or c) on each cathode within each bundle.

5 REQUIREMENTS FOR NICKEL WARRANTS

5.1 Nickel may be placed on Warrant provided that:-

- (a) Drummed nickel is in original sound producer steel drums with producer listed markings and with ring sealing and tamper proof producer seals intact.
- (b) For drummed nickel received in original but unsound producer steel drums with broken/damaged producer seals or damaged while stored in the warehouse from an unintended incident, the Warehouse must, without exception, open every such drum and inspect the contents for conformance with the producer listed product and weight before re-packing in sound steel drums of capacity of 200kgs or 250kgs or 400kgs or 500kgs using the sizing of drums initially supplied and with ring sealing system and with unique Warehouse tamper proof numbered seals. All replacement steel drums must be marked with the original producer batch reference, listed brand and Warehouse established gross and net weights.
- (c) Bagged nickel is in original sound producer bags with producer listed markings and with tamper proof seals intact.
- (d) For bagged nickel received in original but unsound producer bags with broken/damaged producer seals or damaged while stored in the warehouse from an unintended incident, the Warehouse must, without exception, open every such bag and inspect the contents for conformance with the producer listed product and weight before re-packing in replacement bags supplied by the producer or in new bags in compliance with ISO 21898:2004 (or National equivalent) with unique Warehouse tamper proof numbered seals. All replacement bags must be marked with the original producer batch reference, listed brand and Warehouse established gross and net weight.
- (e) For both drummed and bagged nickel producer approved third party packaging is permitted provided sealing methods are as per 5.1 (a) and 5.1 (c) above, using unique tamper proof numbered seals.

- (f) For full plate bundled nickel received in original sound producer bundles with producer listed markings no opening of bundles is permitted except as follows:
- a. Where it is necessary to break bundles in order to ensure nickel is placed on acceptable skids.
 - b. Where packaging is damaged such that it may cause a hazard in subsequent handling and storage.
 - c. Where to create a Warrant lot it is necessary to break one or more bundles from a single shipment quantity. Note that only two bundles in a lot may be constructed by a Warehouse, all other bundles must be original producer bundles. The Warehouse must indelibly mark each replacement strap with the brand name.
- 5.2 Straps replaced by a Warehouse must be of corrosion resistant material to permit safe handling and transport without bundle distortion and breakage and in compliance with LME strap Standards. The Warehouse must mark the top cathode of any new/reconstructed bundles with the producer production batch reference together with the gross and net weights.

6. ADDITIONAL REQUIREMENTS FOR NICKEL WARRANTS

- 6.1 All drummed nickel must be securely stored in warehouses on pallets.
- 6.2 The Warehouse must keep a record of all seals by number and date cross reference to each Warrant.
- 6.3 Drummed or bagged nickel previously on Warrant which has been supplied to another Warehouse may be placed back on Warrant provided that any drum or bag opened by the previous Warehouse is re-opened and their seal(s) replaced by the new Warehouse unique tamper proof seal(s). This rule does not apply to original sound producer drums or bags with producer listed markings and with tamper proof producer seals intact and to producer third party packaging where listed by the LME or for such packaging supported by an LME Listed Sampler and Assayer (LSA) certificate of analysis and having LSAs seals.
- 6.4 Drummed or bagged nickel previously on Warrant which has been returned to the same Warehouse may be placed back on Warrant without the need to open any packaging provided that all seals at the time of original warranting remain intact.
- 6.5 All markings on packaging and information on supporting documentation required for placing nickel on Warrant must include the English language.

- 6.6 (a) Each delivery of nickel for placing on Warrant shall be accompanied by a producer certificate of analysis stating the brand name and production batch reference and demonstrating quality is as per 1 (a) above. ²The producer's certificate of analysis must report all individual elements of the ASTM specification B39-79 (2013). If a producer's certificate of analysis is not available a certificate of analysis must be prepared and signed by an LSA who will sample and analyse material in accordance with LME specified instructions to LSAs. The LSA certificate of analysis must show the same detail as required of listed producer certificates of analysis. In all cases, it must be possible to cross-reference the production batch reference on the drums/bags/bundles to identical numbers on the certificate of analysis and the LSA seal numbers in the case of drums and bags. LSA sampling of nickel in drums and bags must be carried out on the premises of the Warehouse issuing the Warrants.
- (b) On request, the Warehouse is obliged to submit to the identified holder of any Warrant the certificate(s) of analysis or copies thereof.

7 MAJOR CURRENCY

US dollars

8 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LSA to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the LME's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market.

² For full plate cathodes placed on Warrant on or before 10 January 2011 a certificate of conformity in lieu of a certificate of analysis is permissible.

SPECIAL CONTRACT RULES FOR NORTH AMERICAN SPECIAL ALUMINIUM ALLOY

1 QUALITY

The aluminium alloy delivered under this contract shall be:

- (a) aluminium alloy conforming to the “LME NA380.1” specification (an LME modification of The Aluminum Association Inc. A380.1 specification (1989)), produced in conformity with the following specification:-

<u>Element</u>	<u>Minimum</u>	<u>Maximum</u>
Copper	3.00	3.50
Silicon	8.50	9.50
Iron	0.80	1.00
Magnesium	-	0.10
Zinc	-	3.00
Manganese	-	0.45
Nickel	-	0.50
Tin	-	0.10
Lead	-	0.10
Titanium	-	0.10
Chrome (chromium)	-	0.10
Others – each	-	0.10
Others – total	-	0.50
Sludge = Fe + 2Mn + 3Cr		1.80

Production must be filtered.

- (b) of brands listed in the LME-approved list of North American Special Aluminium Alloy brands.

2 SHAPES AND WEIGHTS

Aluminium alloy delivered may be in the form of ingots, small sows (four-way entry sows), large sows (low profile sows) and T-bars, as follows: -

- (a) Ingots

Pieceweight shall be within the permitted range 4kgs - 17.3kgs (9lbs - 38lbs) each, with all ingots in any one lot being of the same weight and size. Ingots shall not exceed 800mm length - the only exception to be the cast feet on which bundles may be stacked.

Bundleweight shall be within the permitted range 500kgs – 1000kgs (1,100lbs – 2,200lbs) of equal weight suitable for stacking. One makeweight bundle in any one lot will be permissible. Ingots shall be securely strapped with galvanised or protectively coated steel or polyester bands.

(b) Small sows (four-way entry sows)

Pieceweight shall be within the permitted range 408kgs - 590kgs (900lbs - 1,300lbs) each, with all sows in any one lot being of the same weight and size.

Dimensions shall be within the permitted range as follows: -

- Top - Length and width shall be the same, between 837mm - 990mm (33 - 39 inches).
- Bottom - Length and width shall be the same, between 406mm – 559mm (16 - 22 inches).
- Height - Between 304mm - 432mm (12 - 17 inches).
- Shape - The tapering of all four sides should include an indentation to allow for the safe and easy handling by forklift trucks.

(c) Large sows (low profile sows)

Pieceweight shall be within the permitted range 500kgs - 726kgs (1,100lbs - 1,600lbs) each, with all sows in any one lot being of the same weight and size.

Dimensions shall be within the permitted range detailed as follows: -

- Top - Length shall be between 1,015mm - 1,320mm (40 - 52 inches).
Width shall be between 812mm - 1142mm (32 - 45 inches).
- Bottom - Length shall be between 1,015mm - 1,320mm (40 - 52 inches).
Width between 406mm - 533mm (16 - 21 inches).
- Height - Between 216mm – 305mm (8.5 – 12 inches).
- Shape - The tapering of the long sides should include an indentation to allow for the safe and easy handling by forklift trucks.

(d) T-bars

Pieceweight shall be within the permitted range 408kgs - 726kgs (900lbs - 1,600lbs) each, with all T-bars in any one lot being of the same weight and size.

Dimensions: -

- Top - Length shall be between 837mm - 1320mm (33 - 52 inches)
Width shall be between 760mm - 1015mm (30 - 40 inches)
- Bottom - Length shall be between 837mm - 1320mm (33 - 52 inches)
Width shall be between 406mm - 634mm (16 - 25 inches)
- Height - Overall between 254mm - 432mm (10 - 17 inches)
To shoulder minimum 76mm (3 inches)

Shape - The indentation of the shoulder on the long sides should be a minimum of 101mm (4 inches) on each side and allow for the safe and easy handling by forklift trucks.

Other Requirements

All ingots and sows shall be produced by a single pouring process. “Multi-pour” or “capping” the surface with additional metal after the ingot or sow is formed is not permitted.

All ingots, T-bars and sows delivered under the contract shall be flat in order to permit stacking and safe handling using forklifts.

3 SIZE OF LOT

20 tonnes

4 WARRANTS

4.1 Warrants shall be for 20 tonnes each (2% either more or less).

4.2 Each parcel particularised in each Warrant shall comprise ingots, small sows (four-way entry sows), large sows (low profile sows) or T-bars, shall lie at one warehouse, be the production of one plant and shall consist of aluminium alloy of one brand, and grade. Each parcel shall contain aluminium alloy derived from no more than five melts, and, in the case of ingots, each bundle shall contain aluminium alloy from one melt. Each parcel of ingots placed on Warrant shall be securely strapped for handling and transport in bundles to permit safe handling without bundle distortion and breakage.

4.3 Warrants must contain the warning regarding entrapped moisture referred to in the Special Rules Governing the Placing of North American Special Aluminium Alloy on Warrant.

4.4 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange’s cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME’s market.

SPECIAL RULES GOVERNING THE PLACING OF NORTH AMERICAN SPECIAL ALUMINIUM ALLOY ON WARRANT

- 1** Each delivery of aluminium alloy for placing on Warrant shall be accompanied by a Certificate of Origin. A producer's Certificate of Analysis shall be provided for each melt represented within the lot and shall contain the melt number and melt date. Each bundle of ingots and each small sow (four-way entry sow), large sow (low profile sow) or T-bar shall be tagged with a die-stamped or indelible tag stating the aluminium alloy grade, melt numbers and brand name. The Certificates of Analysis shall state the brand name and be within the quality specification set out in Special Contract Rule 1.
- 2** Aluminium alloy delivered for Warranting must be in lots of 20 tonnes, comprising bundles of ingots, small sows (four-way entry sows), large sows (low profile sows) or T-bars in accordance with the Shapes and Weights requirements as set out in Point 2 of the Special Contract Rules for North American Special Aluminium Alloy.
- 3** Aluminium alloy must meet the following physical characteristics:-

 - (a) surfaces shall be smooth and free of open shrinkage, porosity, layers and/or seams.
 - (b) the visible presence of foreign substances such as white/grey residue on the surface, imbedded inclusions, skim/dross, salt cake, iron oxide flakes or dirt will not be acceptable.
 - (c) product edges and surfaces shall be free of sharp edges, spurs and/or flashings that might present hazards in handling.
- 4** The party intending to place on Warrant aluminium alloy for delivery in satisfaction of any Contract must advise the warehouseman of the name of a Category 1, 2 or 3 Member of the London Metal Exchange who will accept responsibility for the initial placing of the Warrants on the market. Such Warrant(s) must be issued to the order of the said member who, prior to its or their endorsement, must be satisfied that the documentation is evidence of good delivery.

This rule will only apply to Warrants issued prior to 17 March 2005. From 18 March 2005 all NASAAC Warrants are to be issued to bearer.
- 5** Each Warrant shall be made up from the production of one plant and shall consist of one brand which is listed as being good delivery. Each Warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand and the date(s) and reference number(s) of the Certificates of Analysis lodged with the warehouseman. Each Warrant shall be of 20 tonnes (2% either more or less) and, in the case of ingots, shall state the number of bundles making up each parcel; and in the case of either small sows (four-way entry sows), large sows (low profile sows) or T-bars, shall state the number of pieces making up each parcel. The Warehouse Company is required to keep a record of the date and reference number of the Certificate of Origin. The Warehouse Company is required to keep a record of the number of ingots making up each bundle. In the case of small sows (four-way entry sows), large sows (low profile sows) and T-bars, the warehouse company is required to keep a record of the piece weight of each.
- 6** The warning clause set out below must appear on the Warrant:

WARNING The buyer is advised that this metal may contain crevices and hidden recesses holding entrapped moisture. The metal should be handled and processed with this possibility in mind. Entrapped moisture may cause an explosion if the metal is introduced into a melting-furnace without proper drying

- 7 On request, the warehouseman is obliged to submit to the holder of the Warrant the Certificates of Origin and Analysis or copies thereof if the 20 tonne parcel forms part of a larger delivery covered by bulk certificates.
- 8 All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR TIN

1 QUALITY

The tin delivered under this contract must be refined tin of minimum 99.85% purity and must conform to the chemical composition of BS EN 610:1996. All tin delivered must be of brands listed in the LME-approved list of tin brands in ingots each weighing not less than 12kgs or more than 30kgs.

2 SHAPES AND WEIGHTS

Each parcel of 5 tonnes shall lie at one warehouse and be of one brand, shape and size, subject to the necessity of including different shapes and sizes at the bottom of each parcel for the purpose of palletisation. Each parcel placed on Warrant shall be delivered strapped, in bundles not exceeding 1.2 tonnes, securely strapped for handling and transport in bundles and securely strapped with material protected against corrosion and of sufficient strength and fixing to permit safe handling without bundle distortion and breakage. The bundle size and shape shall be suitable for safe and secure stacking and the bundle assembly and security shall be such that on removing the security straps it remains an integral free standing bundle.

3 SIZE OF LOT

5 tonnes

4 WARRANTS

- 4.1 Warrants shall be for 5 tonnes each (2% either more or less).
- 4.2 Each Warrant must bear an LMEsword generated barcode.
- 4.3 Each parcel of metal placed on Warrant shall contain tin derived from no more than two melt lots.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market.

SPECIAL RULES GOVERNING THE PLACING OF TIN ON WARRANT

- 1** Each delivery of tin for placing on Warrant shall be accompanied by a producer's Certificate of Analysis which must be lodged with the warehouseman. For each Warrant the following shall apply: (a) a producer's Certificate of Analysis shall be provided for each melt lot represented and shall contain the melt lot number; (b) a producer's packing list shall be supplied in order to cross-reference bundle numbers to melt lot numbers; (c) the Certificate of Analysis shall state the brand name and be within the quality specification set out in Special Contract Rule 1; (d) a producer's Bulk Analysis Certificate, for no more than 30 tonnes, or a copy thereof will be acceptable; (e) if a producer's Certificate is not available, an analysis certificate, for each 5 tonne parcel, must be prepared and signed by an assayer on the LME list of approved assayers; (f) if a producer's packing list is unavailable, the LME warehouse company must produce a packing list in order to cross-reference bundle numbers to melt lot numbers
- 2** Each Warrant shall be made up from the production of one country and shall consist of one brand which is listed as being a good delivery. Each Warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand, the number of ingots making up each parcel, the number of bundles making up each parcel and the date(s) and reference number(s) of the Certificate of Analysis lodged with the warehouseman.
- 3** On request, the warehouseman is obliged to submit to the holder of the Warrant Certificates of Analysis and packing lists, or copies thereof if the 5 tonne parcel forms a part of a larger delivery covered by Bulk Analysis Certificates.
- 4** All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR SPECIAL HIGH GRADE ZINC

1 QUALITY

The zinc delivered under this contract must be zinc of minimum 99.995% purity and must conform to the chemical composition of one of the following Standards:

- (i) BS EN 1179:2003 Standard entitled “Zinc and Zinc Alloys – Primary Zinc”, 99.995% grade
- (ii) ISO 752:2004 entitled “Zinc ingots”, ZN-1 grade
- (iii) ASTM B6-12 entitled “Standard Specification for Zinc”, LME grade
- (iv) GB/T 470-2008 entitled “Zinc ingots”, Zn99.995 grade

All delivered zinc must be:

- (a) of brands in the LME-approved list of special high grade zinc brands;
- (b) in ingots weighing not more than 55kgs each. For Warrants issued on or after 25 October 2004 ingots, excluding footers, must not weigh more than 30kgs.

2 SHAPES, WEIGHTS AND MARKINGS

Each parcel of 25 tonnes shall lie at one warehouse and be of one brand and shall consist of ingots of one shape and size subject to the necessity of including different shapes and sizes at the bottom of each bundle for the purpose of bundle stability. Each parcel placed on Warrant shall be delivered securely strapped in bundles not exceeding 1.5 tonnes. Each parcel placed on Warrant shall be securely strapped for handling and transport in bundles to permit safe handling without bundle distortion and breakage.

On and after 1 August 2007, either a) the listed brand name and grade reference must be indelibly marked on each ingot within a bundle, or b) each bundle must have a durable bundle label showing the listed brand name and grade reference. The cast number must also be indelibly marked on either i) the bundle label, ii) the top surface of the bundle or iii) each ingot within the bundle.

3 SIZE OF LOT

25 tonnes

4 WARRANTS

- 4.1 Warrants shall be for 25 tonnes each (2% either more or less).
- 4.2 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules; and
- (b) that there is a risk of disruption to the LME's market.

SPECIAL RULES GOVERNING THE PLACING OF SPECIAL HIGH GRADE ZINC ON WARRANT

- 1.1** Each delivery of zinc for placing on Warrant shall be accompanied by a Certificate of Analysis which must be lodged with the warehouseman. Where possible this should be the original producer certificate, but in its absence or if there is any doubt about its authenticity or applicability, a certificate from an LME approved assayer shall be provided, evidencing that the zinc complies with the quality specified in Special Contract Rule 1 above. Bulk analysis certificates are acceptable.
- 1.2** Each delivery of zinc for placing on Warrant on or after 1 August 2007 shall be accompanied by a producer's Certificate of Analysis for each cast number within the Warrant quoting the cast number. The Certificate of Analysis shall also quote the brand name and demonstrate compliance with the Standard by illustrating the detected level of impurity for each element.
- 1.3** If a producer's Certificate of Analysis is not available, an analysis certificate for each 25 tonne parcel must be prepared and signed by an independent sampler and assayer on the LME list of approved assayers ensuring that each cast is covered by a Certificate of Analysis and, in all cases, it must be possible to cross-reference the metal by cast number to the relevant certificate.
- 2** Each Warrant shall be made up from the production of one location and shall consist of one brand which is listed as being a good delivery. Each Warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand, the number of bundles making up each parcel and the date(s) and reference number(s) of the Certificate of Analysis lodged with the warehouseman. The Warehouse Company is required to keep a record of the number of ingots making up each parcel.
- 3** On request, the warehouseman is obliged to submit to the holder of the Warrant, copies of Certificates of Analysis.
- 4** All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR STEEL BILLET

1 QUALITY

The steel billet deliverable under this contract shall be:

(a) steel billet conforming to one of the specifications listed below:

LME Grade	C	Si	Mn	S	P	Cu	Ni	Cr	N	CEV*	LME Grade
1	0.08-0.13	0.10-0.30	0.30-0.60	0.050	0.040	0.40	0.20	0.20	0.012	-	1
2	0.10-0.15	0.15-0.30	0.50-0.80	0.045	0.045	0.40	0.20	0.20	0.009**	-	2
3	0.14-0.22	0.05-0.15	0.40-0.65	0.05	0.04	0.40	0.30	0.30	0.012	-	3
4	0.14-0.22	0.15-0.30	0.40-0.65	0.05	0.04	0.40	0.30	0.30	0.012	-	4
5	0.15-0.22	0.15-0.30	0.60-1.00	0.05	0.05	0.50	0.20	0.20	0.012	0.50	5
6	0.17-0.25	0.40-0.80	1.20-1.60	0.045	0.045	0.50	0.20	0.20	-	0.52	6
7	0.28-0.37	0.05-0.15	0.50-0.80	0.05	0.04	0.40	0.30	0.30	0.012	-	7
8	0.28-0.37	0.15-0.30	0.50-0.80	0.05	0.04	0.40	0.30	0.30	0.012	-	8
9	0.36-0.42	0.15-0.30	1.00-1.40	0.05	0.05	0.50	0.20	0.20	-	-	9

All limits are max unless otherwise indicated.

* $CEV = \%C + \%Mn/6 + (\%Cr + \%Mo + \%V)/5 + (\%Cu + \%Ni)/15$

** %N max may increase by 0.001% for every 0.005% reduction in %P

An allowable tolerance of analysis taken on products made from the above casting grades is permitted as follows:-

C, +0.02%; Cr, +0.05%; Cu, +0.05%; Mn, +/- 0.10%; N, +0.002%; Ni, +0.05%; S, 0.005%; Si, +/- 0.02%; P, 0.005%; CEV + 0.02%.

(b) of brands listed in the LME-approved list of steel billet brands.

2 DIMENSIONS

Steel delivered must be in the form of billets and conform to one of the following dimensions:-

Length	Metric	Imperial
100 S or 100 L	100 x 100mm	4" x 4"
120 S or 120 L	120 x 120mm	4 ³ / ₄ " x 4 ³ / ₄ "
125 S or 125 L	125 x 125mm	5" x 5"
130 S or 130 L	130 x 130mm	5 ¹ / ₄ " x 5 ¹ / ₄ "
140 S or 140 L	140 x 140mm	5 ¹ / ₂ " x 5 ¹ / ₂ "
150 S or 150 L	150 x 150mm	6" x 6"

All metric section dimensions are subject to a +/- 3mm tolerance.

All imperial section dimensions are subject to +/- one-eighth of an inch tolerance.

All metric **S** lengths are to be nominally 5,800 – 6000mm in 100mm increments. Each nominal length is subject to a +/- 100mm tolerance.

All imperial **S** lengths are 19' 8" with a tolerance of +/- 4".

All metric **L** lengths are to be nominally 11,700mm – 12,000mm in 100mm increments. Each nominal length is subject to a +/- 100mm tolerance.

All imperial **L** lengths are 39' 4" with a tolerance of +/- 4".

3 SIZE OF LOT

65 tonnes

4 WARRANTS

4.1 Warrants shall be for 65 tonnes each (3.5% either more or less).

4.2 Each parcel particularised in each warrant shall lie at one facility, be of one brand and shall consist of billets of one dimension and one specification.

4.3 Each Warrant must bear an LMEsword generated barcode.

5 MAJOR CURRENCY

US dollars

6 TESTING OF WARRANTED METAL

If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at (a) and (b) below are satisfied, he or they may instruct an LME approved Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The tests will be at the Exchange's cost.

The conditions referred to above are: -

- (a) that there are reasonable grounds to suspect that metal on Warrant does not comply with these rules, and
- (b) that there is a risk of disruption to the LME's market.

SPECIAL RULES GOVERNING THE PLACING OF STEEL BILLET ON WARRANT

- 1** Each Delivery of billet for placing on warrant shall be accompanied by a Certificate of Origin and a producer's Mill Test Certificate or certificate of Analysis, both of which must be lodged with the warehouseman. The Mill Test Certificate/Certificate of Analysis must be within the quality specification set out in Special Contract Rule 1 and must show the full chemical analysis per heat number. Additionally the Mill Test Certificate/Certificate of Analysis must be on the applicable producers headed paper stating the plant and/or brand name. Bulk certificates or a copy thereof is acceptable.
- 2** Each warrant shall state the total weight of the parcel particularised thereon, its country of origin, brand, no of billets making up each parcel and the date(s) and reference number(s) of the Mill Test Certificate/Certificate of Analysis lodged with the warehouseman. The warehouse company is required to keep a record of the date and reference number of the Certificate of Origin.
- 3** The Warehouse Company is required to inform the LME of the name of the party that requests the warrant to be issued.
- 4** On request, the warehouseman is obliged to submit to the holder of the Warrant the Certificates of Origin, plus Analysis or Mill Test Certificate, or copies thereof if the 65 tonne parcel forms part of a larger delivery covered by bulk certificates.
- 5** All documentation required for placing material on warrant must be in English.

SPECIAL CONTRACT RULES FOR COBALT

1 QUALITY

The cobalt delivered under this contract must be:-

- (a) of a minimum 99.30% purity. With effect from 19 January 2018, the minimum purity will be 99.80%. Other elements are as specified by producers of each brand in the LME-approved list;
- (b) in the shape of cathodes (broken or cut, cut cathodes must be of uniform sizes greater than 50mm and offcuts are not permitted), rounds, briquettes, ingots or coarse grain powder (must be <0.01% of a respirable size fraction); and
- (c) of brands listed in the LME approved list.

2 SIZE OF LOT

1 tonne (2% either more or less).

3 WARRANTS

3.1 Warrants shall be for 1 tonne (2% either more or less).

3.2 The cobalt in each Warrant shall consist of one brand which is listed as being good delivery, of one shape and size and from not more than two production batches.

3.3 Each Warrant shall state:-

- (a) the name of the brand;
- (b) the country of origin;
- (c) the shape;
- (d) the date(s) and reference number(s) of the certificates of analysis lodged with the Warehouse;
- (e) the gross and net weights; and
- (f) the number of steel drums making up each lot.

3.4 Each Warrant shall bear the following legend:

‘WARNING The buyer is advised that drums may contain water and cobalt should be handled and processed with this possibility in mind. Water contained in drums may cause an explosion if the cobalt is introduced into a melting-furnace without proper procedures being followed’.

3.5 Each Warrant shall bear an LMEsword generated barcode.

4 DRUMMING REQUIREMENTS

4.1 All cobalt delivered under this contract shall be packed in sound steel drums of uniform size and weight of 200kgs, 250kgs or 500kgs (+/-2%). Part filled steel drums are not permitted.

- 4.2 Each drum shall be indelibly marked with production batch reference, gross and net weights and brand name.
- 4.3 Only drums that are original sound producer or producer approved third party steel drums with the producer or approved third party ring closing system and with tamper proof seals intact may be put on Warrant.
- 4.4 Warehouses are not permitted to place on Warrant cobalt supplied in unsound producer or producer approved third party steel drums with broken seals.

5 ADDITIONAL REQUIREMENTS FOR ALL COBALT WARRANTS

- 5.1 All cobalt Warrants require supporting documentation a producer certificate(s) of analysis and a packing list cross referenced to the certificate(s) of analysis and individual producer drum seal numbers in English. Bulk certificates of analysis are permitted. The certificate of analysis must state the brand name.
- 5.2 If a producer's certificate of analysis is not available a certificate of analysis for all shapes must be prepared and signed by an LME Listed Sampler and Assayer (LSA) who will sample and analyse material in accordance with LME specified instructions to LSAs. The LSA certificate of analysis must show the same detail as required of listed producer certificates of analysis. In all cases, it must be possible to cross-reference the production batch reference on the drums to identical numbers on the certificate of analysis and the LSA seal numbers. LSA sampling of cobalt must be carried out on the premises of the Warehouse issuing the Warrants.
- 5.3 On request the Warehouse is obliged to submit to the holder of the Warrant the certificate(s) of analysis and packing list or copies thereof if the Warrant lot forms part of a larger batch.

6 MAJOR CURRENCY

US dollars

7 TESTING OF WARRANTED METAL

- 7.1 If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at rule 7.2 (a) and (b) below are satisfied, he or they may instruct an LME Listed Sampler and Assayer (LSA) to undertake such tests as are necessary to form a reasonable opinion on whether or not metal on Warrant conforms with these rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The LME will bear the costs of such tests.
- 7.2 The conditions referred to above are that:-
 - (a) there are reasonable grounds to suspect that cobalt on Warrant does not comply with these rules; and
 - (b) there is a risk of disruption to the LME's market

SPECIAL CONTRACT RULES FOR ROASTED MOLYBDENUM CONCENTRATE

1 QUALITY

The roasted molybdenum concentrate ("RMC") delivered under this contract shall be:

- (a) between 57 and 63% molybdenum purity with maximum permissible impurities of Cu 0.50%; P 0.05%; Pb 0.05%; S 0.10%; C 0.10%; Moisture 0.1%.
- (b) in the form of powder packed in drums, of which only 5% of the powder can comprise particles in excess of 4mm and 0% in excess of 10mm.
- (c) of brands listed in the LME approved list.

2 SIZE OF LOT

6 tonnes molybdenum (+/-5%) contained in RMC.

3 WARRANTS

3.1 Warrants shall be for 10 tonnes of RMC.

3.2 The RMC in each Warrant shall be of one production batch and brand and shall lie in one warehouse.

3.3 Each Warrant shall state:

- (a) the name of the brand;
- (b) the country of origin;
- (c) the date and reference number of the certificate of analysis lodged with the warehouseman;
- (d) the gross and net weights of RMC together with the net weight contained of molybdenum; and
- (e) the number of steel drums making up each Warrant.

3.4 Each Warrant shall bear the following legend:

‘WARNING. The buyer is advised that drums may contain water and RMC should be handled and processed with this possibility in mind. Water contained in drums may cause an explosion if the RMC is introduced into a melting-furnace without proper procedures being followed.’

3.5 Each Warrant shall bear an LMEsword -generated barcode.

4 WEIGHTS

4.1 All RMC delivered under this contract shall be packed in sound steel drums of uniform size and of exact net weight of 200 or 250 kilos. Part filled steel drums are not permitted.

4.2 Each steel drum shall have the gross and net weights, brand name, origin and batch reference clearly and indelibly marked or stamped on the outside of the drum.

5 DRUMMED RMC REQUIREMENTS

- 5.1 RMC contained in drums may be placed on Warrant provided that:
- (a) the steel drums are original sound producer drums with a ring closing system and tamper proof producer seals intact;
 - (b) the Warehouse opens every steel drum in a Warrant quantity of a single producer batch in the presence of an LME Listed Sampler and Assayer (LSA) for the purpose of taking samples and establishing an independent Certificate of Analysis specific to each Warrant lot. The Warehouse shall be responsible for resealing all steel drums using their own unique tamper proof numbered seals using a ring closing system and identifying the warehouse of storage after sampling is complete and still in the presence of the LSA. All costs incurred will be for account of the party instructing the warehouse to place the material on warrant; and
 - (c) all markings on steel drums conform to those of the listed brand.
- 5.2 Warehouses are not permitted to place on Warrant any RMC supplied in unsound producer steel drums or steel drums with broken seals.

6 CERTIFICATES of ANALYSIS

- 6.1 A Certificate of Analysis shall be issued for each Warrant lot by an LSA in accordance with the following:
- (a) LSAs will sample and analyse each lot for LME warranting in accordance with LME specified procedures ensuring that any one lot comes from a single producer batch; and
 - (b) LSA Certificates of Analysis shall be cross-referenced to the listed producer brand, batch number and Warehouse seal numbers.
- 6.2 Any party cancelling Warrants should note that the LSA Certificate of Analysis is subject to a variation tolerance of Mo content of +/- 0.5%. If any additional sampling and analysis is required this must be done in accordance with LME procedures within 15 working days after cancelling the Warrant at the warehouse of storage in the presence of the LSA who issued the original Certificate of Analysis. Any disputes about analysis shall be settled in accordance with LME procedures. All costs for any analysis taken at time of cancellation of warrants are for the account of the party cancelling Warrants

7 ADDITIONAL REQUIREMENTS FOR ALL RMC WARRANTS

- 7.1 Note that in order to create RMC warrants a producer weight certificate and analysis certificate covering all elements of the Contract specification in 1(a) above is to be supplied with all deliveries to a warehouse.
- 7.2 All RMC Warrants require as supporting documentation a certificate of origin and a LSA certificate of analysis in English.
- 7.3 On request the Warehouse is obliged to submit to the holder of the Warrant the certificate of origin and analysis or a copy thereof.
- 7.4 The Warehouse Company is required to inform the LME of the name of the party that requests the warrant to be issued.

8 MAJOR CURRENCY

US dollars

9 TESTING OF WARRANTED METAL

9.1 If the Chief Executive, or those empowered by him for this purpose, believe that the conditions at rule 9.2 (a) and (b) below are satisfied, he or they may instruct an LME Listed Sampler and Assayer to undertake such tests as are necessary to form a reasonable opinion of whether or not metal on Warrant conforms with these Rules. Where the Chief Executive, or those empowered by him for this purpose, reasonably believes that the situation requires it, those tests may be conducted without the prior consent of the Warrant holder. The LME will bear the costs of such tests.

9.2 The conditions referred to above are that:-

- (a) there are reasonable grounds to suspect that RMC on Warrant does not comply with these rules, and
- (b) there is a risk of disruption to the LME's market.

