



CAMPOS ELISEOS 400, OF 1102
COL. LOMAS DE CHAPULTEPEC, MIGUEL HIDALGO
CIUDAD DE MEXICO
11000 7

Your Ref.: H-94-2023-12/0090

Our Ref : MX2312215-GM
Date : 10th January 2024
Supervision Report

We give below details of a material described as "**Cananea Copper Concentrates**" which was weighed, loaded, sampled, tested for moisture content and prepared in the presence of our representatives.

General Details

Advised Material	Cananea Copper Concentrates
Advised Weight	11,000 WMT Lot H090
Vessel	MV "SAGA NAVIGATOR "
Material Location in Vessel	Holds 3 & 6
Supplier	Grupo Mexico
Buyer	AURUBIS
Load Port	Guaymas, Mexico
Discharge Port	Brunsbittel, GE
Vessel Arrived	January 07 th , 2023, at 19:18 hrs. LT
Vessel Berthed	January 07 th , 2023, at 20:42 hrs. LT
Loading Commenced	January 08 th , 2023, at 08:45 hrs. LT
Loading Completed	January 09 th , 2023, at 04:20 hrs. LT
Sample Preparation	January 09 th to 10 th , 2023
Sample Sealing Date	January 10 th , 2023

Lot H0090	Holds Nr. 03 & 06
Net Wet Weight (WMT)	11,185.250
Moisture (%)	8.74204
Net Dry Weight (DMT)	10,207.431



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Cargo Condition

The material was found stockpiled at Grupo Mexico Terminal, Guaymas inside the warehouse and API yards. The warehouse is located inside Guaymas Port Terminal approximately 600 m away from the berth. This warehouse has a maximum capacity of 80,000mt. Stockpile sampling per FMP/TML testing was performed by ALS staff, January 23st, 2023, as per the verbal notification of the Grupo Mexico representative.

Our surveyor attended at the shipper's stockpile prior to the loading operations and observed that the cargo was in bulk form and ready for loading. No apparent contamination or impurities were observed as far as visibly accessible.

Lot H0090



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Loading operation and conveyor details:

The material was transported by open dump trucks from the warehouse (stockpile) to the mobile conveyor belts. Afterwards, the material was loaded directly into the vessel's holds at an average speed of around 500 WMT/hr for each of the conveyors. Any cargo spillages were recovered from the quay side.

During the loading operations, there were not stoppages registered.





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Loading operation and conveyor details: H-0090





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Loading operation and conveyor details: H-0090



OPPO A15 · ©MV SAGA NAVIGATOR
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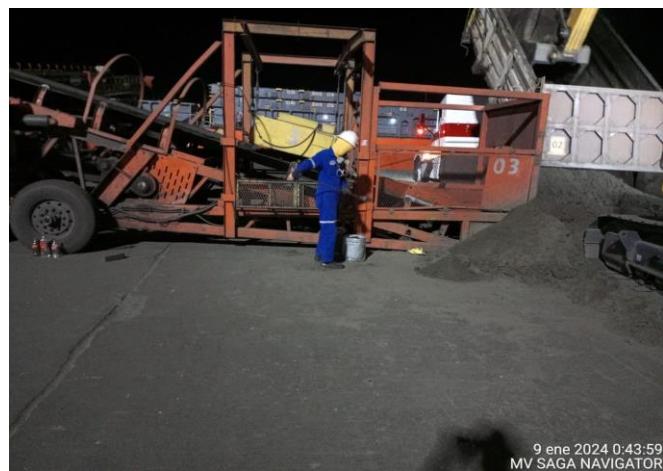
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MV SAGA NAVIGATOR

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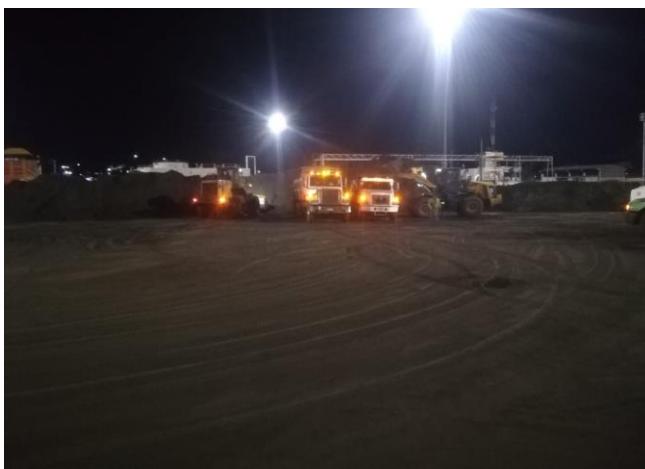
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Loading trucks operation in: API Yards lot H-0090





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Scale Weighing

The official weight of the cargo loaded on board the vessel was ascertained using a Shore Scale with the following details:

Mark	: Revuelta
Model	: ERCC
Serial Number	: 86611C1280
Location	: API Terminal
Máximum Capacity	: 80 MT
Last Calibration	: April 21 st , 2023



ALS Inspectors were in attendance at all times at the Shore Scale.

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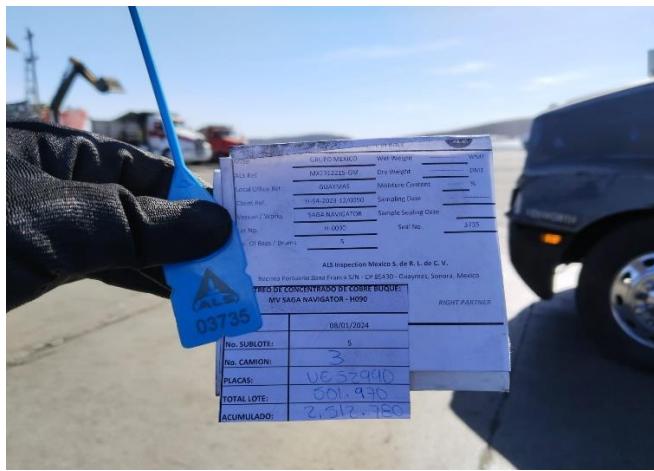
Sampling for moisture determination and quality preparation by ALS Staff H-0090

In order to determine the moisture content of the cargo loaded, samples were initially taken manually by ALS personnel from the mobile conveyor belts separately for each hold.

At the sampling point for each truck of approximately 20 WMT, 9 increments with the minimum quantity of 500g each (3 at the beginning, 3 in the middle and 3 at the end) were taken from the mobile conveyor belt for every truck discharging, using a JIS scoop No. 30. These increments were emptied into a plastic bag placed inside a plastic bucket. Samples of approximately 90-100 kg were collected representing each 500 WMT lot.

This primary sample per lot is reduced by means of spear reduction, taking 7 and 9 increments from the gross sample until obtaining approximately 15kg sample, which is collected in a polyethylene bag, sealed with tape, labelled, and taken to the TGM laboratory, which is approximately 1 km from the sampling site. Samples are transported from the sampling site to the lab by means of a GM Truck.

During the sampling operations ALS inspectors ensured there was no mixing of material, and lots were kept separate.



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Sampling for moisture determination and quality preparation by ALS Staff H0090:



Witnessing Moisture determination in TGM Laboratory Lot H0090:

Moisture determination is performed by TGM laboratory personnel under the full supervision of ALS Inspection.

Before weighing the samples, the empty trays were weighed for tare. Each bag containing the sample collected per 500 WMT lot was poured over a plastic sheet and homogenized. Afterwards, this homogenized sample was reduced by the 4x5 increment division method using a JIS scoop No. 5 to 3 x approx. 2kg which are placed into a tray each. The 3 trays are then placed into the oven for drying.

Trays dimensions are:

- Length: 35 cms
- Width: 15 cms
- Height: 5 cms
- The sample to be spread to a thickness of less than 30mm

Prior to use, the oven temperature is set at 105°C +/- 5 °C, and its temperature is controlled by means of a thermometer. This control is carried out at 08:00 hours, 12:00 hours and 16:00 hours. Further controls can be conducted if the operator deems it necessary in addition to the mandatory intervals mentioned above.

The trays were put into the oven without continuous forced ventilation at 105 °C +/- 5 °C, for 12 hours, after this time the sample was weighed and placed in the oven again for an additional 1 hour to reach constant weight. Each tray sample was weighed before and after drying in the oven. After completion of the drying process, the moisture percentage of each tray sample was obtained by calculating the difference between the wet and dry weight. The average of the samples was applied per lot.

The samples were weighed hot with the trays taken directly from the oven.

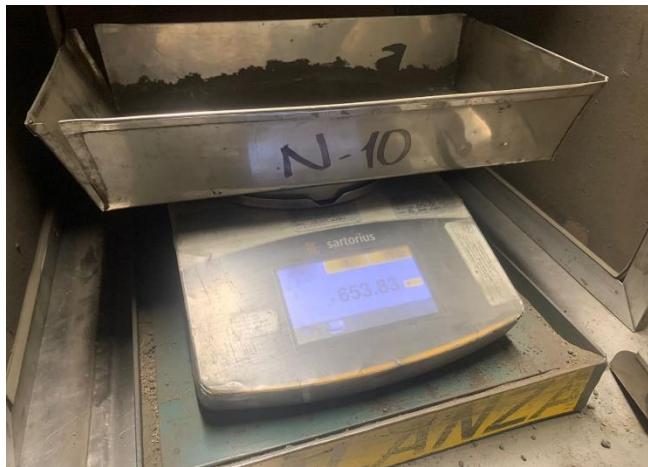
During moisture determination ovens are sealed by ALS Inspection and all moisture data is recorded.

The final moisture of 500 WMT lot samples was calculated by averaging the moistures from the 3 trays.





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DETERMINACION DE HUMEDAD						
MUESTRA	TARA	SUB-LOTE 17			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	520.560	2000	1.810.560	8.57	492.79	8.57
B	520.560	2000	1.810.560	8.57		
C	730.680	2000	2.560.460	8.55		
MUESTRA	TARA	SUB-LOTE 18			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	655.770	2000	2.478.810	8.83	500.92	8.83
B	655.770	2000	2.478.810	8.83		
C	737.100	2000	2.960.310	8.84		
MUESTRA	TARA	SUB-LOTE 19			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	520.810	2000	2.334.590	8.67	500.92	8.67
B	520.810	2000	2.334.590	8.67		
C	531.000	2000	2.815.460	9.07		
MUESTRA	TARA	SUB-LOTE 20			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	673.930	2000	2.487.920	8.96	500.92	8.96
B	673.930	2000	2.487.920	8.96		
C	728.560	2000	2.923.540	8.80		
MUESTRA	TARA	SUB-LOTE 21			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	652.060	2000	2.487.680	8.93	500.92	8.93
B	652.060	2000	2.487.680	8.93		
C	718.340	2000	2.546.060	8.61		
MUESTRA	TARA	SUB-LOTE 22			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	673.930	2000	2.487.770	9.09	500.92	9.09
B	673.930	2000	2.487.770	9.09		
C	673.930	2000	2.487.770	9.09		

DETERMINACION DE HUMEDAD						
MUESTRA	TARA	SUB-LOTE 23			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	673.930	2000	2.487.920	8.96	500.92	8.96
B	673.930	2000	2.487.920	8.96		
C	673.930	2000	2.487.920	8.96		
MUESTRA	TARA	SUB-LOTE 24			LOTE	ACUMULADO
		PESO NETO HUMEDO/TARA	PESO NETO SECO/TARA	HUMEDAD		
A	673.930	2000	2.487.770	9.09	500.92	9.09
B	673.930	2000	2.487.770	9.09		
C	673.930	2000	2.487.770	9.09		



Equipment for moisture determination

DRYING OVEN	OVEN No. 3
Brand	SHEL LAB
MANUFACTURER*	USA
SERIAL NR.	03002717
MEASUREMENT RANGE	T= -50°C TO 260°C
TESTING COMPANY	Metrología y pruebas SA de CV
STATUS	OPERATIVE
LAST CALIBRATION	January 20, 2023

ELECTRONIC SCALE	Sartorius
MODEL	QUINTIX5101-1S
SERIAL NUMBER	0036450067
MINIMUM GRADUATION	0.1 g.
MAXIMUM CAPACITY	5.1000 g.
TESTING COMPANY	Mettler Toledo
LAST CALIBRATION	January 20, 2023



Lot by lot weight and moisture results as below:

LOT H0090 in Holds 3 & 6

SUB LOT	CLIENT REFERENCE N.	WMT	MOISTURE		DMT
			(%)	(MT)	
1	H-94-2023-12/0090	507.010	7.71000	39.090	467.920
2	H-94-2023-12/0090	484.670	8.53000	41.342	443.328
3	H-94-2023-12/0090	513.510	8.62000	44.265	469.245
4	H-94-2023-12/0090	505.620	8.83000	44.646	460.974
5	H-94-2023-12/0090	501.970	8.80000	44.173	457.797
6	H-94-2023-12/0090	484.920	8.92000	43.255	441.665
7	H-94-2023-12/0090	511.140	8.98000	45.900	465.240
8	H-94-2023-12/0090	500.170	8.79000	43.965	456.205
9	H-94-2023-12/0090	504.380	8.83000	44.537	459.843
10	H-94-2023-12/0090	496.840	8.65000	42.977	453.863
11	H-94-2023-12/0090	502.370	8.48000	42.601	459.769
12	H-94-2023-12/0090	499.790	8.66000	43.282	456.508
13	H-94-2023-12/0090	504.210	8.68000	43.765	460.445
14	H-94-2023-12/0090	488.970	9.00000	44.007	444.963
15	H-94-2023-12/0090	490.560	8.94000	43.856	446.704
16	H-94-2023-12/0090	515.080	8.86000	45.636	469.444
17	H-94-2023-12/0090	492.790	8.57000	42.232	450.558
18	H-94-2023-12/0090	508.920	8.85000	45.039	463.881
19	H-94-2023-12/0090	517.250	9.07000	46.915	470.335
20	H-94-2023-12/0090	492.560	9.09000	44.774	447.786
21	H-94-2023-12/0090	501.670	8.85000	44.398	457.272
22	H-94-2023-12/0090	660.850	8.65000	57.164	603.686
Totals		11,185.250	8.74204	977.819	10,207.431

Witnessing Sample Preparation in TGM Lab Lot H0090

Final quality sample preparation is performed by TGM laboratory personnel, fully supervised by ALS Inspection.

The dried samples per lot were combined and placed in a cone homogenizer containing two ½ "diameter stainless steel balls for approx. 15 mins in order to mix and pulverize the material. This process is repeated for all lot samples.

At this stage, portions of all lot samples are taken in proportion to create composite samples for each consignment.

Each lot sample is then reentered into the cone homogenizer without the stainless-steel balls for a period of approx. 15 mins. The mixed material is subsequently reduced by riffle divider to approximately 2500g and screened over a 100 mesh sieve. Any oversize was finely ground until all passed the 100-mesh sieve. Final quality samples of approx. 250g each are then prepared by the increment division method. The final samples were all placed inside aluminium sample bags, hermetically heat sealed and further enveloped into properly labelled sample envelopes.



Total 8 sets each composite per lot samples were prepared and distributed as per the client's original instructions.

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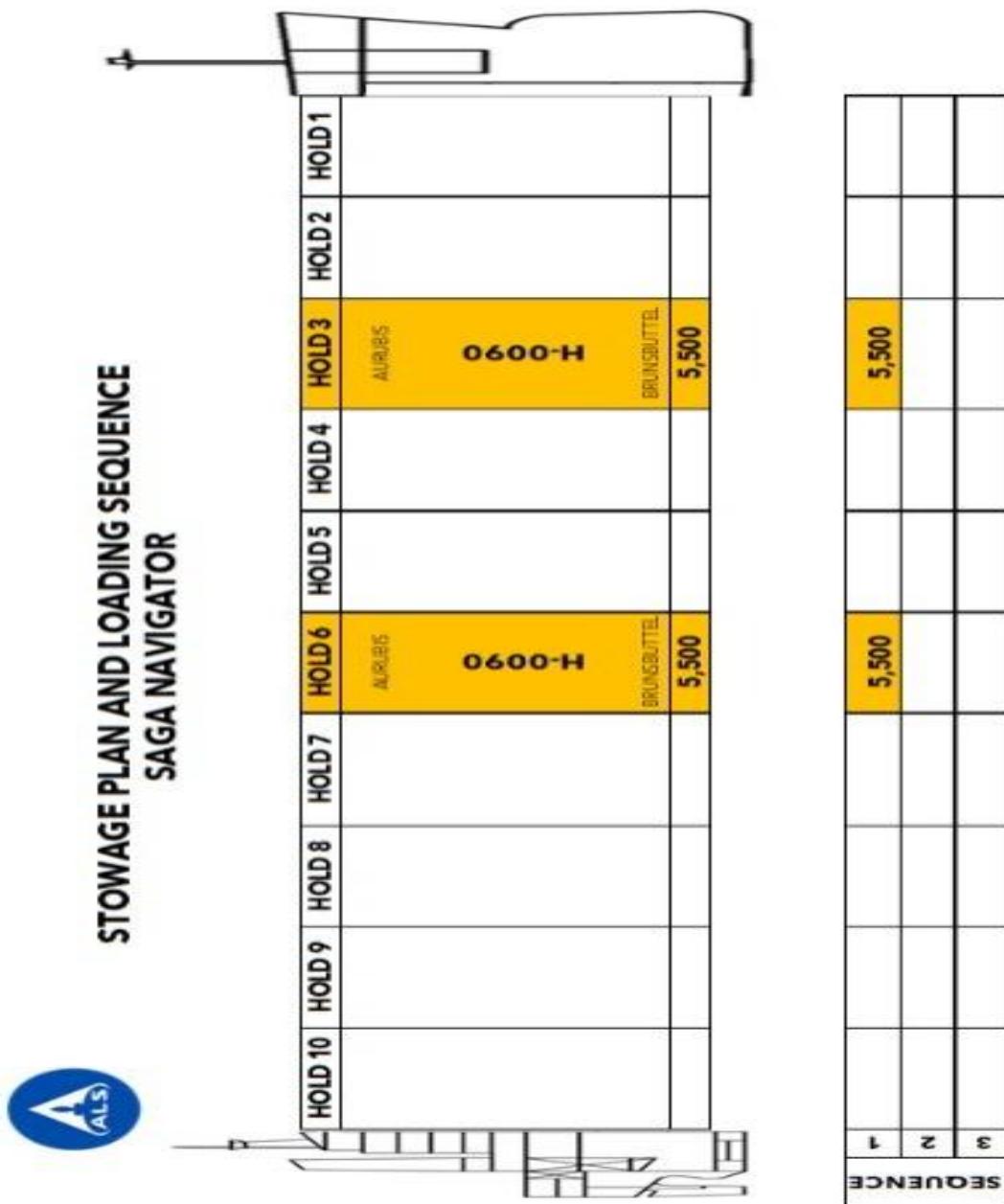
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Cargo Sequence Plan:



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Loading of the Vessel

Vessel's Particulars

Flag & Register Port	HONG KONG , NAGASAKI,JAPAN
Owners	OSHIMA SHIPBUILDING CO. LTD
Year Built	2005
NRT	14,440
GRT	29,758
Type of ship	Bulk Carrier



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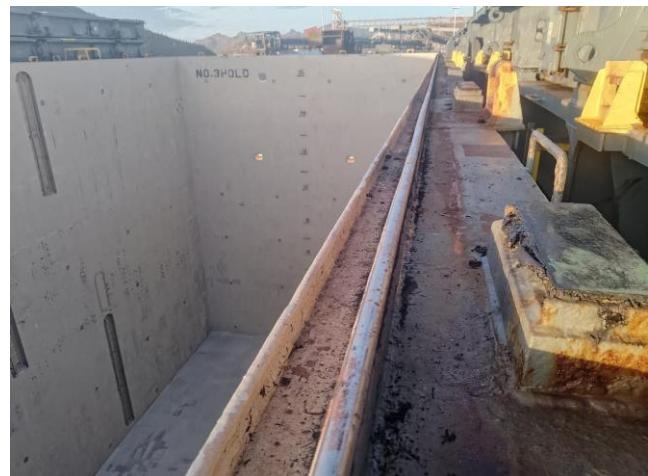


Hold and Hatch condition

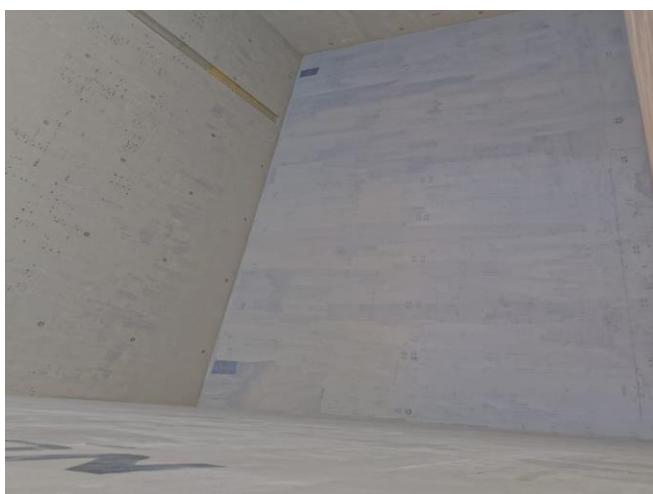
Our representative's surveyor, jointly with the shipper's surveyor, were inspected Holds Nr. 03 & 06 before loading:

HOLD N° 03 & 06	GOOD	FAIR	POOR
Hatch covers	✓		
Hatch coatings	✓		
Rubber packing, draining holes	✓		
Acting cleats, compression bars	✓		
Non return valves	✓		
Hydraulic Systems	✓		
Forward and aft bulkhead	✓		
Side/shell plating (port and stb)	✓		
Frames, brackets and bracket connection	✓		
Tank top plating	✓		
Hopper tank plating	✓		
Ventilation, void spaces	✓		
Bilges, suctions	✓		
Air vents Sounding pipes	✓		
Cleaning Condition	✓		
Observation: Cargo holds Nr. 03 & 06 were found dry, clean, and suitable to receive cargo.			

Visual Hold Inspection #3 Lot H0090



Visual Hold Inspection #6 Lot H0090





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Our surveyor also visited the designated stockpile during the loading operations to verify that there was no mixing of material.

The material was grey in colour and consisted of fines in one stockpile.

Holds #3 & 6 Lot H0090



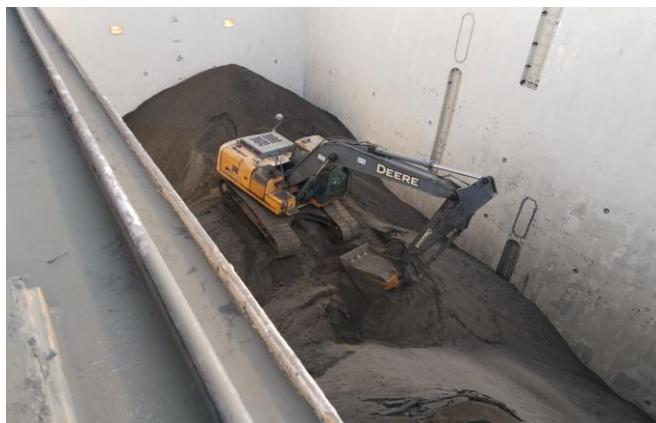


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Our surveyor also visited the vessel to perform the sealing of Holds #3 after the completion of trimming the cargo.

The material was found well-trimmed.

Hold #3 lot H-0090



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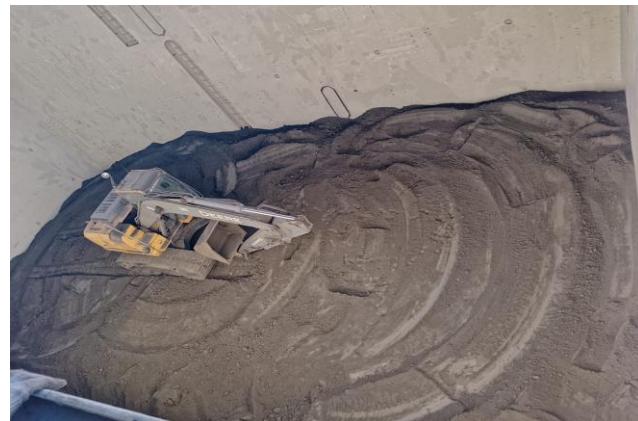


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Our surveyor also visited the vessel to perform the sealing of Hold #6 after the completion of trimming the cargo.

The material was found well-trimmed.

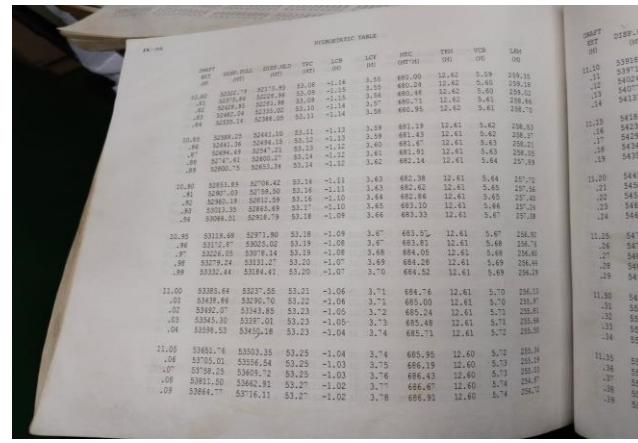
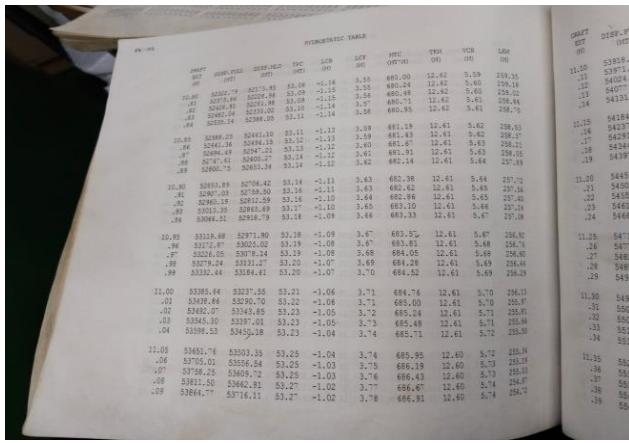
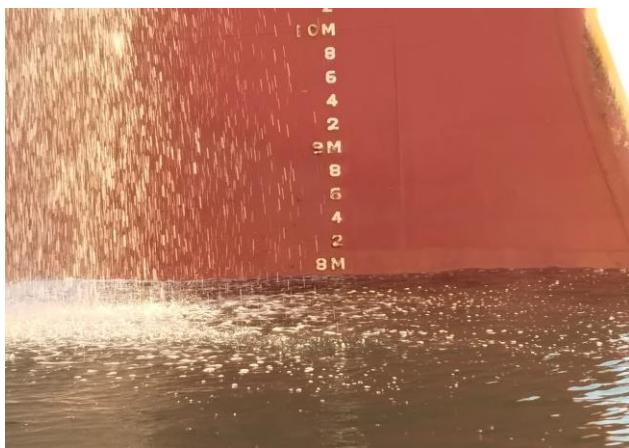
Hold #6 lot H-0090





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Draft Survey Figures Lot H0090	Holds Nr. 03 & 06
Wet Metric Tons (WMT)	11,137.487





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Hold Seals Numbers:

SEAL'S	PRODUCT	STOWAGE SHIP HOLD'S
03198	Cooper Concentrate	Hold #3 Starboard Side
03199	Cooper Concentrate	Hatch Hold #3 Fwd Side
03200	Cooper Concentrate	Hatch Hold #3 Aft Side
03726	Cooper Concentrate	Hold #6 Starboard Side
03727	Cooper Concentrate	Hatch Hold #6 Fwd Side
03728	Cooper Concentrate	Hatch Hold #6 Aft Side



Dates and Times

Date	Time	Description
January 07 th , 2023	19:18	POB for berthing manoeuvres
	20:42	Vessel berthed at pier No. 4
	20:50	Port Authorities on Board
	21:15	Free Practique Granted
January 08 th , 2023	06:00	ALS Surveyors on Board
	06:00 - 08:00	Initial Draft Survey Inspection of the Lot H-0090
	07:30 - 07:40	visual inspection of Holds 3 & 6
	08:45	Started loading operations of Lot H0090 Holds 3 & 6
January 09 th , 2023	04:20	Completed loading operations of Lot H0090 Holds 3 & 6
	06:30 - 08:30	Final Draft Survey Inspection of the lot H0085 Holds 3 & 6
	15:30	Pilot on Board
	15:42	Vessel Unberthed
January 11 th , 2023	22:00	ETA MANZANILLO, MEXICO

The above report reflects our findings at the time and place of the inspection only and does not refer to any other matters.

The inspection has been performed to the best of our knowledge and ability within the scope of the instructions we have received and in accordance with accepted international standards. This report does not relieve buyers and sellers from their contractual obligations.

For and on Behalf of ALS Inspection Mexico S. de R. L. de C.V.


Mario Castillo - Operations Manager