

RODRÍGUEZ DE LIRA Y ASOCIADOS S.A. DE C.V.

**CALLE: VENUSTIANO CARRANZA 1060 INT. #303
COL. MODERNA, SAN LUIS POTOSÍ, SLP, MÉXICO
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El hierro es un mineral que prácticamente no se encuentra puro en la naturaleza, por ello es necesario aplicar un procedimiento metalúrgico especial que recibe el nombre de siderurgia, a través del cual se purifica el mineral de hierro.

Los procesos que intervienen en la siderurgia son reducción o fundición, que consiste en so-meter al mineral en los hornos a temperaturas muy elevadas con la presencia de fundentes y combustibles.

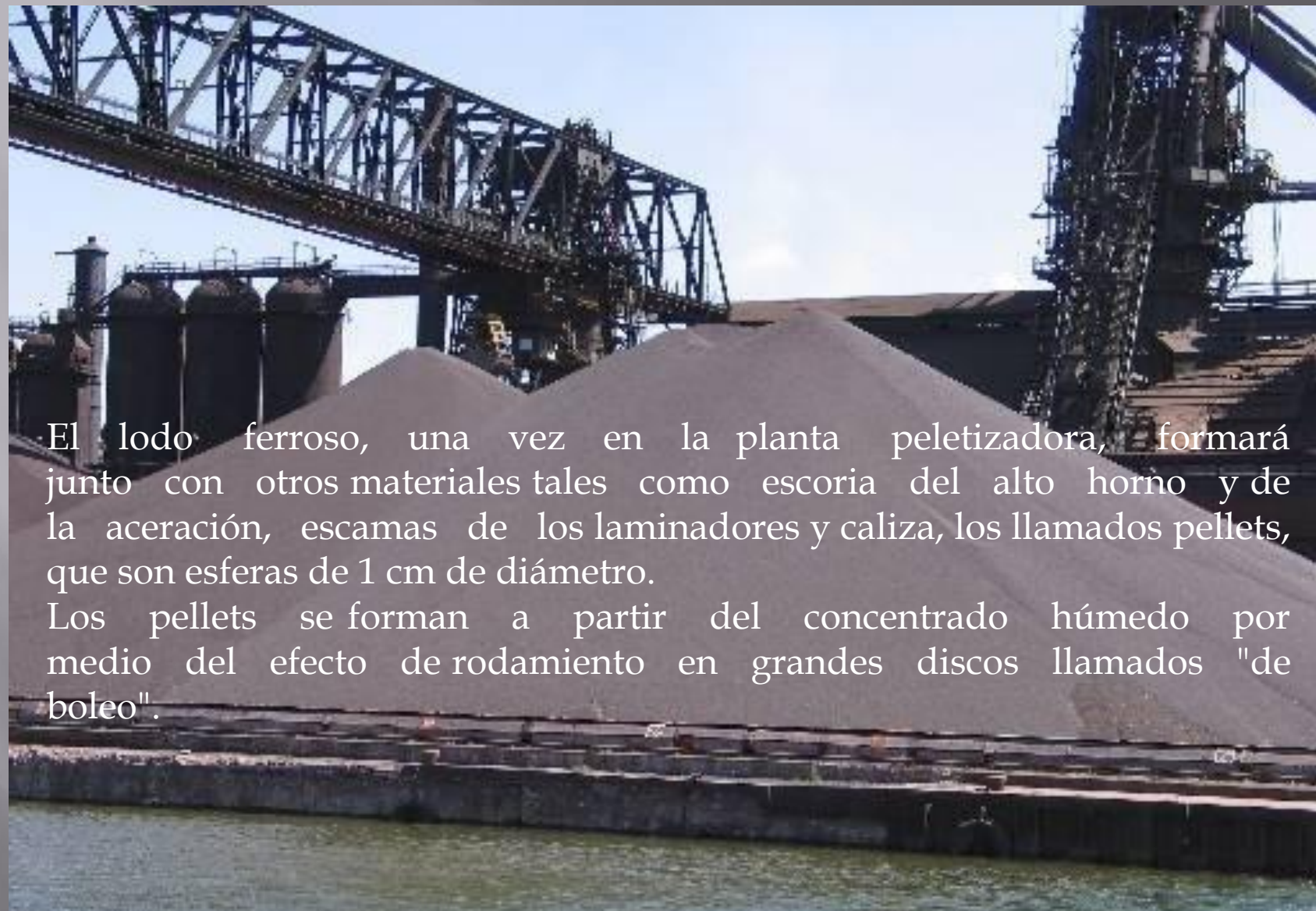
El hierro es un elemento que se caracteriza por ser magnético, al calentarse pierde su Magnetismo; es blando, maleable, con brillo metálico y de color gris acerado a negro; su punto de fusión es de 1536°C , el de ebullición de 2740°C y tiene una densidad de 7.8 gr/ml . En estado puro es muy reactivo químicamente y se corroe en condiciones de aire húmedo o a temperaturas elevadas.



La explotación del mineral se realiza por el método de minado a cielo abierto. Para desprender el mineral es necesario primeramente barrenar en los puntos seleccionados para colocar los explosivos y posteriormente realizar el tumbado por medio de voladuras, el rezagado se efectúa por medio de trascabos, el llenado de camiones se hace por medio de palas mecánicas, los camiones transportan el mineral a la planta de trituración.



El mineral de hierro después de ser extraído entra a la trituradora primaria en trozos con un tamaño aproximadamente de 54 pulgadas y sale a un tamaño máximo de 8 pulgadas, en esta etapa se realiza una pre concentración y la ley del producto obtenido se encuentra en un rango de 20 a 55% de fierro.



El lodo ferroso, una vez en la planta peletizadora, formará junto con otros materiales tales como escoria del alto horno y de la aceración, escamas de los laminadores y caliza, los llamados pellets, que son esferas de 1 cm de diámetro.

Los pellets se forman a partir del concentrado húmedo por medio del efecto de rodamiento en grandes discos llamados "de boleó".



CERTIFICACIONES

SGS



SGS de México S.A. de C.V.
Manzanillo, Colima. October 19th, 2010

ANALYSIS REPORT

SGS MEXICO REF : M-56414/10
DESCRIPTION OF PARCEL : ONE SAMPLE OF IRON ORE
PER INSTRUCTIONS OF : CORPORATIVO DE MINERALES MEXICANOS S.A. DE C.V.

In compliance with the instructions received from Messrs. CORPORATIVO DE MINERALES MEXICANOS S.A. DE C.V. we delivered the sample to our laboratory located at Durango for the analysis and for which we report the following:

ANALYSIS:

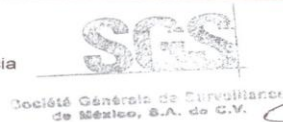
According to the report DU-12469 dated on October 19th, 2010, the results obtained were as follows:

ANALYTE	Fe	SiO2	Al2O3	CaO	MgO	K2O	Na2O	S	P
METHOD	TRITATION	ICP95A	ICP95A	ICP95A	ICP95A	ICP95A	ICP95A	ICP14B	ICP14B
DETECTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
UNITS	%	%	%	%	%	%	%	%	%
HIERRO LA TINAJA	65.00	7.41	0.43	0.61	0.08	<0.01	<0.01	0.02	<0.01

The ICP14B digest is suitable for the dissolution of sulphide minerals and iron oxides due to its oxidising properties. It is however the weakest of SGS' geochemical digestions and will not attack silicate minerals. As such, it should be considered a partial digest for most elements and should not be used for ore grade determination.

REMARK: The sample analyzed was received at our facilities.
Analysis completed on October 19th, 2010.

Elaborated by:  Mayra Romero Garcia



Authorized by:  Gredj Cadena Pineda

WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

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Minerals Services

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Member of the SGS Group (Société Générale de Surveillance)



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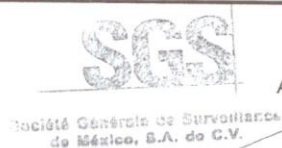
ANALYTE	Fe	SiO2	Al2O3	CaO	MgO	K2O	Na2O	S	P
METHOD	TRITATION	ICP95A	ICP95A	ICP95A	ICP95A	ICP95A	ICP95A	ICP14B	ICP14B
DETECTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
UNITS	%	%	%	%	%	%	%	%	%
HIERRO LOS NOGALES	69.40	1.50	0.31	0.14	0.17	<0.01	<0.01	0.03	0.01

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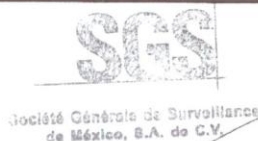
ANALYTE	Fe	SiO ₂	Al ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	S	P
METHOD	TRITATION	ICP95A	ICP95A	ICP95A	ICP95A	ICP95A	ICP95A	ICP14B	ICP14B
DETECTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
UNITS	%	%	%	%	%	%	%	%	%
HIERRO LA PERLA	67.10	2.73	0.23	0.18	<0.01	<0.01	<0.01	0.09	<0.01

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