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PRINTED: 08/29/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HENDERSON MILLSITE

ALTERNATE NAMES:

COCHISE COUNTY MILS NUMBER: 743

LOCATION: TOWNSHIP 20 S RANGE 22 E SECTION 10 QUARTER SE
LATITUDE: N 31DEG 42MIN 23SEC LONGITUDE: W 110DEG 05MIN 00SEC
TOPO MAP NAME: TOMBSTONE - 7.5 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:
MILL

BIBLIOGRAPHY:
ADMMR HENDERSON MILLSITE FILE

HENDERSON MILLSITE

COCHISE COUNTY
T20S R22E Sec 10 SE¼

CJH WR 7/20/84: Lance Klump (c) visited and dropped off copies of a brochure descriptive of the Henderson process of RTO, Inc., P O Box 1015, Tombstone, Arizona 85638. A copy was sent to the Phoenix office. The Henderson plant is now capable of pilot-plant scale operations.

MEMORANDUM

To: John H. Jett, Director

From: Mike Greeley, Field Engineer

Subject: C. T. Henderson Mill

On April 24, 1984, Mr. Cliff Hicks and I visited the C. T. Henderson millsite in the Tombstone mining district of Cochise Co. The Henderson property is on unpatented millsite claims in the SE¼,Sec.10,T20S,R22E. The property may be reached via the Charleston road from Tombstone (attached topographic map).

The purpose of our visit was to learn what we could about a new silver-gold recovery process reportedly developed by Mr. Henderson. He has a United States patent, no. 4,401,468, issued on August 30, 1983 (attached 2-page abstract). Another description of the Henderson process was published by the Silver Institute (attached).

Mr. Henderson believes his method can recover approximately 95% of the silver and gold traditionally available to a cyanide leach. In addition, this recovery occurs during a very short time frame of 15 minutes to 2 hours.

The process utilizes vat leaching with high-pressure aeration. The air which oxygenates the enclosed system is introduced under pressure (30-35 psi), serving also to agitate and mix the reactive solution rapidly and/or violently. Apparently Mr. Henderson is experimenting with heating of the reaction vessel.

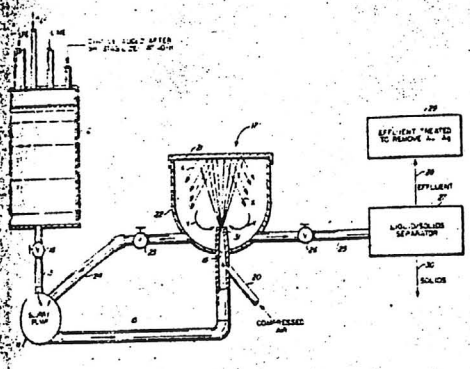
Mr. Henderson has apparently treated a number of ores particularly those from the Tombstone district. He believes his results, including recoveries on manganiferous ores, to be excellent.

MG:fd

Ref: New Silver Technology, Jan. 1984, p. 58: The Silver Institute, Washington, D.C.

one nozzle into an air atmosphere and deflecting said sprayed slurry back toward said nozzle;

(e) separating said sprayed slurry into a liquid and solid component; and



(f) processing said liquid component to remove precious metals therefrom.

4,401,469

MANUFACTURING CAST IRON WITH PRE-REDUCED IRON ORE PELLETS

John E. Rehder, Toronto, Canada, assignor to Microdot Inc., Darien, Conn.

Filed Mar. 9, 1981, Ser. No. 241,657

Int. Cl.³ C22C 33/08; C21C 7/02

U.S. Cl. 75—130 R 3 Claims

1. A method of making iron castings of low elastic modulus characterized by a randomly distributed flake graphite morphology comprising the steps of,

providing a melt charge comprising

a. 90–95% of pellets having an approximate composition 75% Fe, 20% FeO, 2% C, 3% gangue,

b. 3–5% ferrosilicon,

c. 3–5% carbon,

d. ±1% slag conditioners,

melting said charge, and

casting said melt.

4,401,470

INTAGLIO PRINTING INK AND METHOD OF EMPLOYING THE SAME

Robert F. Bridger, Hopewell, N.J., assignor to Mobil Oil Corporation, New York, N.Y.

Filed Mar. 30, 1981, Ser. No. 249,050

Int. Cl.³ C09D 11/02

U.S. Cl. 106—20 8 Claims

1. In an intaglio printing ink composition which dries by evaporation of solvent comprising a resin, pigment and volatile solvent, the improvement which comprises adding to said composition a small amount of antioxidant composition consisting of a phenolic and amine antioxidant.

4,401,471

INORGANIC CELLULAR MATERIAL AND PROCESS FOR THE MANUFACTURE THEREOF

Peter Eckardt, Hofheim am Taunus, and Walter Dürsch, Königstein, both of Fed. Rep. of Germany, assignors to Hoechst Aktiengesellschaft, Frankfurt am Main, Fed. Rep. of Germany

Filed Dec. 18, 1981, Ser. No. 332,235

Claims priority, application Fed. Rep. of Germany, Dec. 20, 1980, 3048354; Oct. 8, 1981, 3140011

Int. Cl.³ C04B 21/02

U.S. Cl. 106—87 23 Claims

1. Inorganic substantially water-free cellular material having a density of from 100 to 500 g/l, open or closed pores having a diameter of from 0.5 to 3 mm, a thermal shrinkage of below 1%, the following composition in the solid phase:

18–50 weight % CaO

2–20 weight % Al_2O_3

5–35 weight % SiO_2

15–50 weight % P_2O_5

0–1 weight % alkali metal oxides

0–8 weight % ZnO, MgO, FeO, and/or Fe_2O_3

0–2 weight % SO_3

0–5 weight % C

0–8 weight % B_2O_3

and an equivalent ratio of (Al+Mg+Ca+Fe) to phosphate of from 0.8:1 to 3.0:1.

4,401,472

HYDRAULIC CEMENT MIXES AND PROCESSES FOR IMPROVING HYDRAULIC CEMENT MIXES

Arthur H. Gerber, Beachwood, Ohio, assignor to Martin Marietta Corporation, Bethesda, Md.

Filed Feb. 26, 1982, Ser. No. 352,626

Int. Cl.³ C04B 7/35

U.S. Cl. 106—90 27 Claims

1. A hydraulic cement mix comprising a hydraulic cement, aggregate in an amount of up to 80% by weight based upon the total weight of said cement mix, sufficient water to effect hydraulic setting of the cement, and an additive comprising a poly(hydroxyalkylated)polyethyleneamine or a poly(hydroxyalkylated)polyethyleneimine or mixtures of each or both, said additive being present in an amount sufficient to increase the compressive strength of the hardened mix.

4,401,473

USE OF DIMETHYLPHOSPHINYLALKANEPHOSPHONIC ACID AS A SETTING RETARDER IN GYPSUM

Hans-Jerg Kleiner, Kronberg; Volker Knittel, Wiesbaden, and Gerhard Debus, Ruedesheim, all of Fed. Rep. of Germany, assignors to Hoechst Aktiengesellschaft, Fed. Rep. of Germany

Division of Ser. No. 283,511, Jul. 15, 1981. This application Feb. 23, 1982, Ser. No. 351,576

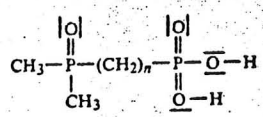
Claims priority, application Fed. Rep. of Germany, Jul. 17, 1980, 3027040

Int. Cl.³ C04B 11/00, 11/14; C01F 11/46

U.S. Cl. 106—109 1 Claim

1. Gypsum containing, as a setting retarder, a dimethylphosphinylalkanephosphonic acid of the general formula I

I



in which n is 1 or 2.

4,401,474

PYROLYTIC COATING REACTANT FOR DEFECT AND DURABILITY CONTROL

Harold E. Donley, Oakmont, Pa., assignor to PPG Industries, Inc., Pittsburgh, Pa.

Division of Ser. No. 99,459, Dec. 3, 1979, Pat. No. 4,292,347. This application May 11, 1981, Ser. No. 262,285

Int. Cl.³ B05D 3/02; C08F 11/00; C09K 3/[illegible]

U.S. Cl. 106—243 [illegible] Claims

1. A composition for the pyrolytic deposition of a durable metal oxide film comprising:

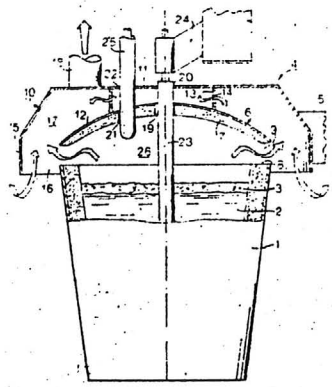
a. a diketonate of a metal capable of thermal decomposition to the oxide of said metal; and

4,401,464

INJECTION METALLURGY METHOD AND EQUIPMENT FOR ITS EXECUTION

Bertil G. Tivelius, Viken, Sweden, assignor to Scandinavian Lancers Aktiebolaget, Hoganas, Sweden

Filed Apr. 12, 1982, Ser. No. 367,794
Int. Cl.³ C21C 7/10, 5/52
U.S. Cl. 75—49 15 Claims



1. Method of producing steel comprising transferring a steel melt which has been decarburized to a desired carbon content, together with a minor more or less uncontrolled quantity of high oxide content non-deoxidised acid furnace slag into a treatment vessel, transforming the acid furnace slag at a time not later than in said treatment vessel into a synthetic slag with high sulphur trapping capacity, pre-reducing the slag by addition of reduction agent to form a slag having an FeO content no more than about 3% while purging the melt with inert gas, measuring the oxygen content of the melt after the said pre-reduction, covering the treatment vessel with a hood directly after measuring said oxygen content while continuing inert gas purging to essentially prevent access of air to the interior of the treatment vessel above the surface of the melt, completely deoxidizing the melt by adding further reduction agent thereto while continuing said inert gas purging, wherein the amount of further reduction agent added is determined by the amount of oxygen content of the melt determined in said measuring step to be necessary for complete deoxidation, taking a melt sample and analysing same for sulphur content, thereafter refining the melt with respect to sulphur by injecting at least one member selected from the group consisting of a calcium compound, a calcium alloy, a magnesium compound and a magnesium alloy, while inert gas purging the melt under the hood, in an amount determined as a function of the analysis of said melt sample, and thereafter casting the melt, whereby said melt to be cast is effectively separated from slag while reoxidation of the melt is effectively prevented to achieve a melt of low sulphur content and substantially free of slag inclusions.

4,401,465

MAGNESIUM GRANULES COATED WITH FLUORIDE CONTAINING FLUX FOR DESULFURIZING STEEL

Ramaswami Neelameggham, Salt Lake City, Utah, and John C. Priscu, Las Vegas, Nev., assignors to AMAX Inc., Greenwich, Conn.

Filed Sep. 23, 1982, Ser. No. 421,888
Int. Cl.³ C21C 7/02
U.S. Cl. 75—58 7 Claims

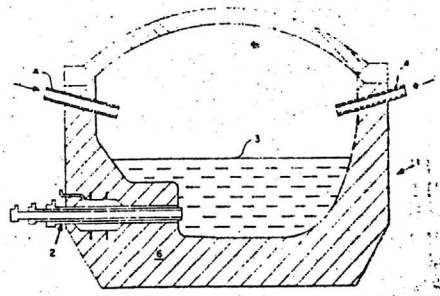
1. A desulfurizing agent comprising magnesium granules having a surface coating consisting essentially of a fluoride-containing salt in an amount ranging from about ½ to 15% by weight of the coated granules.

4,401,466

PROCESS FOR PROTECTION OF NOZZLES AND REFRACTORY LINING OF A VESSEL FOR REFINING MOLTEN METAL

William Wells, Charlotte, N.C., and Dalton Nose, Rio de Janerio, Brazil, assignors to Korf Technologies, Inc., Charlotte, N.C.

Filed Nov. 30, 1981, Ser. No. 325,958
Int. Cl.³ C21C 5/34, 5/42
U.S. Cl. 75—60 14 Claims



1. Process for protection of underbath blowing nozzles and refractory lining of a vessel for refining a bath of molten metal therein wherein an injection device projects through the vessel wall below the bath surface, said injection device being composed of at least three concentric pipes with annular gas passageways therebetween, said process comprising:

injecting oxygen through the central conduit of said device and injection a protective fluid through the annular passageways thereof, said protective fluid containing at least one of the group comprising an hydroxyl compound, water, and a blend of the two.

4,401,467

CONTINUOUS TITANIUM PROCESS

Robert K. Jordan, 3979 Tuxey Ave., Pittsburgh, Pa. 15227

Filed Dec. 15, 1980, Ser. No. 216,246
Int. Cl.³ C22B 26/10, 22/04, 34/10
U.S. Cl. 75—66 17 Claims

1. A process for the production of titanium comprising:

combining a titanium fluoride and at least one of sodium and potassium to produce titanium and at least one of sodium and potassium fluorides;

combining a molten ferrous metal and at least one of the alkali fluorides to evolve at least one alkali metal from an alkali iron fluoride, and

combining alkali iron fluoride and a mineral comprising titanium dioxide and oxygen to evolve titanium tetrafluoride from alkali iron oxide.

4,401,468

PROCESS FOR REMOVING PRECIOUS METALS FROM ORE

Charles T. Henderson, 3311 W. Camelback, Phoenix, Ariz. 85017

Filed Jan. 28, 1983, Ser. No. 461,855
Int. Cl.³ C01G 7/00, 55/00
U.S. Cl. 75—105 1 Claim

1. A process for removing precious metals from comminuted ores, comprising the steps of:

(a) contacting said comminuted ore with an effective amount of a basic aqueous solution to effect a stabilized pH of 10 to 11;

(b) allowing the pH of the ore-basic ore-aqueous solution mixture to stabilize;

(c) mixing cyanide in the stabilized ore-aqueous solution mixture to form an extraction mixture slurry;

(d) spraying said extraction mixture slurry through at least

Ref: Official Gazette of the U.S. Patent & Trademark Office—Patents, Aug 16, 30, 1983, p. 962