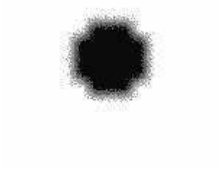
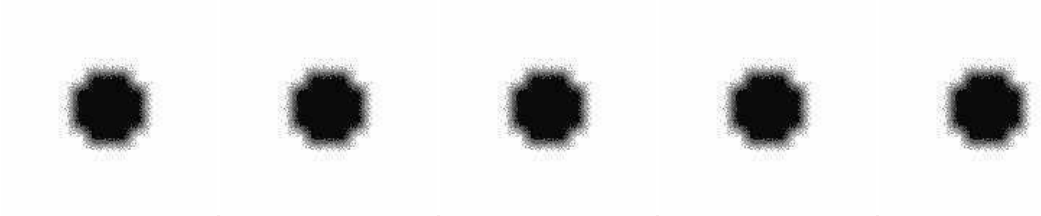
11 results for PROCESS AND HAEMATITE AND PIGMENTS AND (IRON OXIDE) - Collection: FAMPAT

#	Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
1.	Improved method for producing particulate hematite and **iron oxide** red **pigments**	CA2849957	2012-09-28	LANXESS DEUTSCHLAND*	2013-04-04	2013-04-04

The invention relates to an improved method for producing finely divided **haematite** and **iron oxide** red **pigments** composed of the finely divided **haematite**, and to the use of the finely divided **haematite** and **iron oxide** red **pigments** produced according to said method.



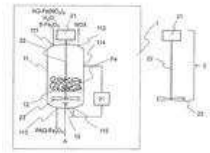


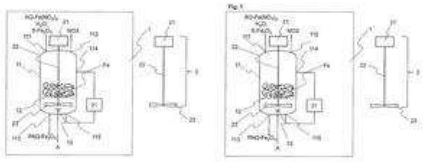
2.	Method of preparation for **iron oxide pigments**	CA2326765	1999-12-02	BAYER LANXESS DEUTSCHLAND*	2001-06-02	2001-06-02

A red **iron oxide** pigment (I) has a color saturation value (C asterisk) of greater than 39 Cielab units. An Independent claim is included for the preparation of the pigment (I) by producing a fine suspension of hematite by mixing dilute nitric acid with elemental **iron** at above 90 degrees C followed by reaction of the suspension with **iron** (II) salts and alkali hydroxide in the presence of an oxygen containing gas or reaction of **iron**, **iron** (II) salt and oxygen-containing gas to form a hematite pigment suspension with optional isolation of the resulting pigment.

3.	Preparation of red **iron oxide pigments**	CA2960442	2015-09-04	LANXESS DEUTSCHLAND*	2016-03-10	2016-03-10

The present invention relates to an improved method for preparing **iron oxide** red **pigments** in a Penniman **process** with nitrate (also called nitrate **process** or direct red **process**).





4.	**Iron oxide pigments** containing manganese	BE653488	1963-09-27	BAYER*	1965-03-24	1965-03-24

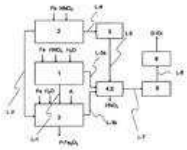
Iron oxide pigments containing manganese in solid solution and having a uniform **haematite** structure are prepared by a **process** of oxidizing metallic **iron** with an aromatic nitro compound in the presence of manganese metal or a manganese compound (see Division C1), black **pigments** being produced when the weight ratio of Fe: Mn is from 14: 1 to 5: 1 and reddish brown to brown **pigments** when the ratio is from 100: 1 to 15: 1.ALSO:**Iron oxide pigments** containing manganese and having a uniform **haematite** structure are produced by oxidizing metallic **iron** with an aromatic nitro compound at a pH of 3.5 to 6.5 in the presence of manganese metal or a manganese compound and an aqueous ferrous salt solution, and/or a concentrated aqueous solution of a salt which can be hydrolysed or an aqueous suspension of a difficultly water soluble **oxide**, hydroxide, or basic salt of a trivalent or tetravalent metal, or phosphoric acid, or a dissolved or suspended lead compound, or **iron oxide** or hydroxide nuclei obtained from yellow, reddish brown or red **iron** hydroxides or oxides, and working up the resulting pigment sludge by filtering, washing and calcining at 600 DEG to 800 DEG C. The **pigments** produced consist of a solid solution of alpha-Mn2O3 and alpha-Fe2O3. Reddish brown to brown **pigments** are formed if the weight ratio of **iron** to manganese is from 100:1 to 15:1 and black **pigments** when the ratio is from 14:1 to 5:1. Specified manganese sources are manganese alloys, MnCl2, MnSO4, Mn(OCOCH3)2, pyrolusite and rhodochrosite.
(From GB1082847 A)

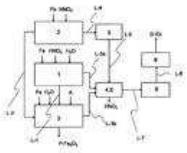
5.	**Process** for producing **iron oxide** reds by **iron oxide** alpha-modification	CS9006252	1990-12-13	USTAV ANORGANICKE CHEMIE AVCR*	1992-06-17	1992-06-17

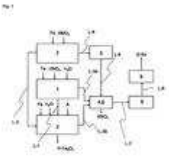
Alkaline **iron** sulphate, as a rule jarosite, acts on **iron oxide** or **haematite**, i.e. red **iron** with controlled particle size. First the sulphur ions are removed from the alkaline sulphur by means of an alkaline reagent, preferably ammoniac, whereupon hydrothermal conversion of the reaction products to **iron oxide** in an aqueous solution of **iron** sulphate occurs at a higher temperature of 90 to 200 degrees C and sulphur concentration between 0.005 and 2.0 mol of FeSO4 per litre of solution. Both reaction processes can be carried out separately, though between the first and second steps stock liquor containing sulphate of the used neutralised cations, as a rule ammonium sulphate, is separated off. Apart from preparing ferrous **pigments** the problem of utilisation of otherwise unusable waste from metallurgical and chemical processes is resolved.

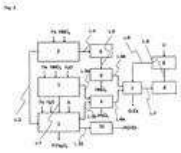
6. Production of red **iron oxide** pigment CN204310828 2013-11-08 LANXESS DEUTSCHLAND* LANXESS SPECIALTY CHEMICALS* LENKSESS SPESHALTI KEMIKALS KO 2015-05-06 2015-05-06

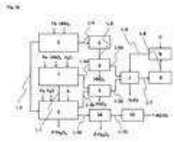
The present invention relates to an improved **process** for producing red **iron oxide pigments** by the Penniman **process** with nitrate (also called nitrate **process** or direct red **process**) and to apparatus for implementing this **process**, and also to the use of the plant for producing red **iron oxide pigments** by the Penniman **process** with nitrate.

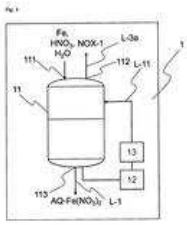


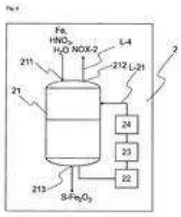


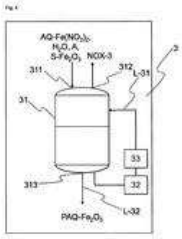


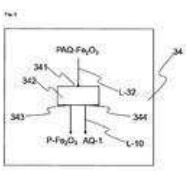


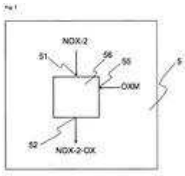


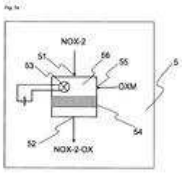










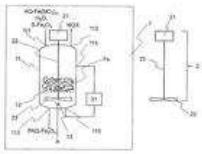


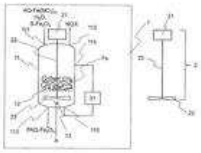
7. Production of precipitated red **iron** (iii) **oxide** pigment relatively free of .alpha.-feooh BE805704 1972-10-07 BAYER* 1974-04-05 1974-04-05

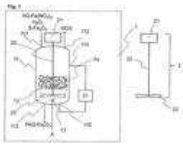
In the production of a precipitated red **iron** (III) **oxide** pigment of hematite structure wherein an aqueous **iron** (II) salt solution is mixed with an aqueous alkali solution in substantially equivalent quantities to produce an aqueous suspension of **iron** (II) hydroxide or carbonate, the suspension is oxidized by passing oxygen-containing gases through it with stirring under atmospheric pressure at a temperature of about 0 (degree) to 50 (degree) C, and the resulting **iron** (III) seed suspension is allowed to grow into precipitated red **iron** (III) **oxide** pigment by further oxidation with an oxygen-containing gas at a temperature of about 50 (degree) to 100 (degree) C in the presence of more **iron** (II) salt and alkali solution or in the presence of **iron** (II) salt and metallic **iron** at a pH-value kept in the acid range, the improvement which comprises producing the **iron** (III) seed suspension in the presence of a foreign modifying substance so that la ttice-distorted, chemically reactive finely divided delta-FeOOH seeds are formed, whereby the resulting red **iron** (III) **oxide** pigment contains less than about 15 % by weight of ALPHA -FeOOH. The modifying substance may be a chloride of magnesium, calcium or aluminum, vanadium pentoxide, sodium phosphate, erythritol, mannitol, glyceric acid, K, Na-tartrate, Na-citrate, ribose, glucose, fructose, tannin, or NH4 --, Ca--, Al--, Fe or Mg-lignin sulfonate.

8. Production of **iron oxide** red pigment CA2960447 2015-09-04 LANXESS DEUTSCHLAND* 2016-03-10 2016-03-10

The present invention relates to an improved method for preparing **iron oxide** red **pigments** in a Penniman **process** with nitrate (also called nitrate **process** or direct red **process**).







9. **Process** for producing granular hematite particles EP1293480 2001-10-19 TODA KOGYO* 2003-03-19 2003-03-19

A **process** for producing granular hematite particles which **process** comprises i) passing an oxygen-containing gas through an aqueous ferrous nitrate solution in the presence of **iron** materials and hematite seed crstals at a temperature of from 80 to 90 DEG C, thereby obtaining reddish brown precipitates containing granular **haematite** particles; ii) subjecting the reddish brown precipitates to filtration, washing with water and then drying; and iii) heat-treating the reddish brown precipitate in air at a temperature of from 450 to 900 DEG C. In accordance with the **process** of the present invention, the granular **haematite** particles exhibit a high purity, a small equilibrium water content and a reduced oil absorption and can be produced using inexpensive **iron** raw materials without the use of a specific device such as an autoclave.

10. In a thick layer coatable paint and **process** of its preparation EP0971007 1999-06-23 GROS HANS PETER 2000-01-12 2000-01-12

Water-based anti-corrosion paint with a high solids volume content contains hollow, polymer-based particles or beads with a particle size of less than 1000 microns combined with micaceous extenders such as **haematite** and silicate mica, together with other fillers, **pigments** and additives in an aqueous dispersion of polymer binder. Water-dilutable, high-solids, anti-corrosion paint in the form of an aqueous dispersion, containing color pigment(s), various filler(s) or extender(s) (calcium carbonate, aluminium magnesium silicate and/or potassium-aluminum-magnesium silicate), (micro) hollow particles or hollow beads, etc. (HPP) with a particle size of less than 1000 microns consisting of low-density polymer- or resin-based material(s) and having the effect of increasing the solids volume of the paint in relation to its solids weight and thus reducing its density, plus plasticizers, dispersants, anti-settling agents, stabilizers, foam suppressants, corrosion inhibitors, thixotropic agents, thickeners and/or preservatives, with or without organic solvent(s) and combined with a polymer- or resin-based binder. This paint contains (in addition to or partly replacing at least one of the above components or instead of an extender component) the hollow particles (HPP) alone or together with particles of inorganic, mineral-based low-density material (LDIM). These are in the form of an intimate mixture with mica-like extender(s) selected from micaceous **iron** ore (scaly **haematite**) and silicate mica. In the wet state, ready for application, the paint has a density of 0.80-1.50 g/cm<3>. An Independent claim is also included for a **process** for the production of this paint by mixing the components (aqueous binder dispersion, **pigments**, micaceous and other extenders, expanded LDIM and other additives) in a stirred mixer without causing chemical reaction or undesirable foaming and then adding the HPP in water-moistened form.

11. Two-phase platelet-shaped pigment FI882608 1987-06-02 BASF* 1988-06-02 1988-06-02

Abstract in publication language, translation not available
Ein plättchenförmiges Zweiphasenpigment besteht aus einem Kern mit Hema titstruktur der Zusammensetzung Alx Fe2-x O3 , worin x einen Wert von 0,02 bis 0,5 hat und einer äusseren Schicht mit Spi nellstruktur mit der Zusammensetzung Aly Fe3-y O4+z , worin y Werte von 0,03 bis 0,75 und z Werte von 0 bis 0,5 hat.
Die Pigmente können durch eine hydrothermale Behandlung von plättchen förmigen Alx Fe2-x O3 -Pigmenten (mit x-Werten von 0,02 bis 0,5) in Gegenwart eines in der wässrigen Phase gelösten Reduktionsmittels hergestellt werden.

$Al_xFe_{2-x}O_3$ $Al_yFe_{3-y}O_{4+z}$

$Al_xFe_{2-x}O_3$ $Al_yFe_{3-y}O_{4+z}$