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- 04260 GAS RICH IN CARBON MONOXIDE AND HYDROGEN FROM COAL OR COKE. Hidaka, T. (to Nissan Chemical Industries Co.). Japanese Patent 5785. 18 Aug 1955.
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CATALYSTS
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REDUCTION
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methods of utilization. COAL GASIFICATION; IN-
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elevated pressure; catalyst of 60% Ni, 30%
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1st stage and 90% in 2nd or 98-9% total yield.
METHANE; PRODUCTION; CARBON DIOXIDE; HYDROGEN;
REDUCTION; NICKEL; CATALYSTS; CHEMICAL PREPARATION;
KIESELGUHR; MAGNESIUM OXIDES; NICKEL OXIDES
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DEPENDENCE
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Use of coles and anthracite. SUPERHEATED STEAM; GASIFICATION; COAL GASIFICATION; ANTHRACITE; COKE
- 04328 METHANE FORMATION ON A FUSED IRON CATALYST FOR LIQUID FUEL SYNTHESIS. Wang, S.-Y.; Fang, C.-C. Jan Liao Hsueh Pao; 1: No. 2, 93-107(1956). (In English).
Decrease in CH₄ formation by impregnation of Fe catalyst with K₂O. SYNTHETIC FUELS; PRODUCTION; LIQUID PRODUCTS; CATALYSTS; IRON; METHANE; FISCHER-TROPSCH SYNTHESIS; POTASSIUM OXIDES
- 04329 MECHANISM OF METHANE SYNTHESIS ON A FLUIDIZED NICKEL CATALYST. Chernyshev, A.B.; Gudkov, S.F. A. B. Chernyshev, Izbrannye Trudy; 1956: 307-10(1956).
Possible reactions: $CO + 3H_2 \rightarrow CH_4 + H_2O$ and $CO + H_2O \rightarrow CO_2 + H_2$. FLUIDIZED CATALYSTS; METHANE; PRODUCTION; CHEMICAL REACTION KINETICS; TEMPERATURE DEPENDENCE
- 04330 HIGH-SPEED GASIFICATION OF COAL DUST FROM THE DZHERGALAN AND KOK-YANGAK BEDS. Kalyuzhnyi, V.V.; Naidich, I.M. Trudy Inst. Vod. Khoz. i Energ., Akad. Nauk Kirgiz. SSR; 1956: No. 3, 139-51(1956).
Fluidized bed method. COAL GASIFICATION; USSR; FLUIDIZED BED
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Review; equipment. REVIEWS; EQUIPMENT; COAL; CARBONIZATION; COAL GASIFICATION
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COAL; COMBUSTION; COAL GASIFICATION; EQUIPMENT; AIR; OXYGEN
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Fluidized Ni catalyst (prepared by dissolving Al from Al-Ni alloy); reaction $3CO + 5H_2 \rightarrow 2CH_4 + H_2O + CO_2$. METHANE; PRODUCTION; EQUIPMENT; FLUIDIZED CATALYSTS; CARBON MONOXIDE; REDUCTION
- 04334 GASIFICATION OF FINELY POWDERED FUELS. Drawe, R. German(FRG) Patent 937,486. 5 Jan 1956.
Heat required is obtained by burning gas with theoretical or smaller amounts of O. FUELS; POWDERS; GASIFICATION
- 04335 COMBUSTIBLE GASES BY UNDERGROUND GASIFICATION OF DEPOSITS OF COMBUSTIBLE MATERIALS. Ljungstrom, F. (to Svenska Skifferolje Aktiebolaget). German(FRG) Patent 937,842. 19 Jan 1956.
Electric heating elements introduced into shaft of boreholes; air or O forced through carbonized zone. COAL GASIFICATION; IN-SITU METHOD
- 04336 WATER GAS FROM GASIFICATION OF SOLID SUSPENSION OF FUEL. Baba, A. (to Bureau of Industrial Technics). Japanese Patent 531. 28 Jan 1956.
Nonbituminous coal. COAL GASIFICATION; SUSPENSIONS; PRODUCTION; WATER GAS
- 04337 COST OF OXYGEN IN UNDERGROUND GASIFICATION OF COAL. Dziunilowski, K. Przegląd Gorniczy; 12: 71-2(Feb 1956).
COAL GASIFICATION; IN-SITU METHOD; OXYGEN; COST; EFFICIENCY; CHEMICAL REACTIONS
- 04338 FUEL GAS. Totzek, F. (to Heinrich Koppers GmbH). German(FRG) Patent 938,868. 9 Feb 1956.
Gas of high calorific value made from solid powdered or finely grained fuels by making starting materials react with air or O, steam, and CO₂. FUEL GAS; COMBUSTION HEAT; COAL GASIFICATION; BROWN COAL; COKE; AIR; OXYGEN; STEAM; CARBON DIOXIDE; FLUIDIZED BED; PRODUCTION; GASIFICATION
- 04339 SYNTHESIS GAS. Steinschlaeger, M. British Patent 744,857. 15 Feb 1956.
Solid, liquid, or gaseous fuel burned with insufficient O; CO₂ and dust removed and remaining gases liquefied and fractionated to give CH₄, synthesis gas, and N. SYNTHESIS GAS; COAL GASIFICATION; AROMATICS; PRODUCTION; METHANE; SULFUR COMPOUNDS; REMOVAL; CARBON DIOXIDE
- 04340 WATER GAS. Goebel, M.; Kronacher, H. (to Dr. C. Otto and Co. GmbH). German(FRG) Patent 939,525. 23 Feb 1956.
Production in gas producer with fixed fuel column and grate with mechanical slag remover. WATER GAS; PRODUCTION; STEAM; EQUIPMENT
- 04341 CARBON MONOXIDE FROM COKE AND OXYGEN. Cunningham, F.C.; Berger, J.H.; Rinckhoff, J.B. (to Chemical Construction Corp.). US Patent 2,737,448. 6 Mar 1956.
Powdered coke gasified at about 1075° in mixture of O and CO₂; steam produced in waste-heat boilers. COKE; GASIFICATION; CARBON MONOXIDE; OXYGEN; PRODUCTION; HIGH TEMPERATURE; POWDERS
- 04342 WATER GAS. Schmalfeld, P.; Danulat, F. (to Metallgesellschaft). German(FRG) Patent 940,008. 8 Mar 1956.
Production from powdered fuels; steam used as gasifying agent. WATER GAS; PRODUCTION; EQUIPMENT; STEAM
- 04343 SYNTHESIS GAS. Perry, L.C.; Hickman, G.A. Hirsch, A.E. (to E. I. du Pont de Nemours and Co.). US Patent 2,738,263. 13 Mar 1956.
Mixture of CO and H produced in partial oxidation of carbonaceous material with steam and O. SYNTHESIS GAS; STEAM; OXYGEN; CARBONACEOUS MATERIALS; CARBON MONOXIDE; HYDROGEN; PRODUCTION; GASIFICATION
- 04344 GASIFICATION OF COAL IN A SHAFT FURNACE AND SIMULTANEOUS RECOVERY OF IRON FROM ORES. Koppenberg, H.; Wenzel, W. German(FRG) Patent 940,228. 15 Mar 1956.
Equipment and process. COAL GASIFICATION;

- EQUIPMENT
- 04345 SLAG-FORMING-TYPE GASIFICATION OF PULVERIZED COAL. Taniyama, T. (to Sumitomo Chemical Industries Co.). Japanese Patent 1885. 16 Mar 1956.
COAL GASIFICATION;EFFICIENCY;POWDERS
- 04346 HYDROGENATION OF CARBON MONOXIDE WITH SIMULTANEOUS PRODUCTION OF FUEL GAS. (to Ruhrchemie and Lurgi Gesellschaft fuer Waermetechnik mbH). British Patent 747,180. 28 Mar 1956.
Solid fuel (e.g. coal) gasified under pressure of 20-30 atm with O and steam; S compounds removed by washing with CH₃OH or C₂H₅OH. CARBON MONOXIDE;REDUCTION;FUEL GAS;COAL GASIFICATION;OXYGEN;STEAM;METHANOL;ETHANOL; WASHING;REMOVAL;SULFUR COMPOUNDS;FISCHER-TROPSCH SYNTHESIS
- 04347 GASIFICATION OF SOLID FUELS. (to Union Rheinische Braunkohlen Kraftstoff). British Patent 747,061. 28 Mar 1956.
Part of recycled coke formed in low-temperature carbonization is gasified to give producer gas. COKE;GASIFICATION;SOLIDS;PRODUCER GAS;PRODUCTION;COMBUSTION HEAT
- 04348 PRESSURE GASIFICATION OF SOLID FUELS. (to Metallgesellschaft). British Patent 747,549. 4 Apr 1956.
Calorific value of gases produced by pressure gasification of solid fuels with O or O-enriched air and steam is increased by catalytic cracking of tar produced. GASIFICATION;SOLIDS;FOSSIL FUELS;COMBUSTION HEAT;OXYGEN;STEAM;COAL TAR;CRACKING;CATALYSIS; COAL GAS
- 04349 GASIFICATION OF FINE-GRAINED FUELS. Pistorius, O.; Flesch, W. (to Demag). German(FRG) Patent 941,146. 5 Apr 1956.
Use of alternate hot air blast and steam gasification; fuel bed fluidized by means of inert gases. GASIFICATION;CARBONACEOUS MATERIALS;AIR;STEAM;FLUIDIZED BED
- 04350 BRITISH TRIALS IN UNDERGROUND GASIFICATION. Anon. Gas World; 143: No. 3738, 786-9(7 Apr 1956).
BTU values of different gases produced. COAL GASIFICATION;IN-SITU METHOD;UNITED KINGDOM; PRODUCTION;COAL GAS;PRODUCER GAS;WATER GAS;LOW BTU GAS;INTERMEDIATE BTU GAS;EFFICIENCY
- 04351 GASIFICATION OF CARBONACEOUS SOLIDS. Russell, F.R. (to Esso Research and Engineering Co.). US Patent 2,741,549. 10 Apr 1956.
CARBONACEOUS MATERIALS;SOLIDS;GASIFICATION; FLUIDIZED BED;COAL;CARBONIZATION;REACTION HEAT
- 04352 REALIZED DREAM AT THE PLANT OF UNDERGROUND GASIFICATION OF COAL. Matveyev, P. Izvestiya; (10 Apr 1956).
COAL GASIFICATION;IN-SITU METHOD
- 04353 PROCESS AND APPARATUS USING RESONANT SOUND WAVE AND SONIC FLAME FOR THE PRODUCTION OF CARBON MONOXIDE, SYNTHESIS GASES, AND SYNTHETIC HYDROCARBONS. Bodine, A.G., Jr. US Patent 2,745,861. 15 May 1956.
Powdered coal gasified in sonic resonant burner at high rate. EQUIPMENT;CARBON MONOXIDE; HYDROCARBONS;PRODUCTION;SYNTHESIS GAS;COAL GASIFICATION.
- 04354 METHANE PRODUCTION FROM SOLID FUELS AND STEAM. Kayser, H.G.; Baron, G. (to Metallgesellschaft). German(FRG) Patent 1,063,590. 16 May 1956.
CH₄ produced by coal and steam at 20 atm and 300-550°. METHANE;PRODUCTION;STEAM;SOLIDS;COAL
- GASIFICATION;MEDIUM PRESSURE;HIGH TEMPERATURE
- 04355 UNDERGROUND GASIFICATION OF COAL. Pan'kovskiy, V.I. Prom. Ekon. Gazeta; (17 Jun 1956).
Describes the operation of six stations in USSR. COAL GASIFICATION;IN-SITU METHOD;USSR; ELECTRIC CURRENTS;SYNTHESIS GAS;EFFICIENCY; COMBUSTION
- 04356 GASIFICATION OF FUELS. Donath, E.E. (to Koppers Co., Inc.). US Patent 2,751,287. 19 Jun 1956.
Use of less O and steam to produce more synthetic gases and a solid residue that can be used as fuel; high volatile bituminous coal produced gas of: CO 46.1, H 44.0, CO₂ 8.6, CH₄ 0.6, N 0.5, and H₂S 0.2%. DUSTS;CARBONACEOUS MATERIALS;GASIFICATION;BITUMINOUS COAL;COAL GASIFICATION
- 04357 GASIFICATION OF FINE-GRAINED FUELS. Markert, F.; Flesch, W.; Funk, W. (to Badische Anilin- and Soda-Fabrik). German(FRG) Patent 944,812. 21 Jun 1956.
Equipment and process description. GASIFICATION;CARBONACEOUS MATERIALS; FLUIDIZATION;EQUIPMENT
- 04358 GASIFICATION OF COAL DUST. Koizumi, S. Japanese Patent 4939. 23 Jun 1956.
Production of producer gas. COAL GASIFICATION;PRODUCER GAS;PRODUCTION
- 04359 NICKEL CARBONYL IN HYDROGENATION, DESULFURIZATION, AND GASIFICATION OF CARBONACEOUS MATERIALS. Mayland, B.J. (to Phillips Petroleum Co.). US Patent 2,756,194. 24 Jul 1956.
Ni carbonyl is dissolved in fuel. HYDROGENATION;DESULFURIZATION;CARBONYLS;NICKEL COMPOUNDS;GASIFICATION;CARBONACEOUS MATERIALS; CATALYSTS;POWDERS;COAL
- 04360 UNDERGROUND GASIFICATION OF COAL. Terui, A. Nenryo Kyokai-shi; 35: 478-82(Aug 1956).
COAL GASIFICATION;IN-SITU METHOD;REVIEWS
- 04361 UNDERGROUND GASIFICATION OF COAL. Ivanov, V.V. Zvezda Vostoka; 24: No. 8, 88(Aug 1956).
COAL GASIFICATION;IN-SITU METHOD
- 04362 EFFECT OF WATER ON UNDERGROUND GASIFICATION OF COALS. Silin-Bekchurin, A.I.; Bogoroditskiy, K.F. Dokl. Akad. Nauk SSSR; 109: No. 4, 832-3(1 Aug 1956).
Optimum quantity of water produces maximum calorific value in the gas. COAL GASIFICATION; IN-SITU METHOD;WATER;QUANTITY RATIO
- 04363 SECOND TEST ON UNDERGROUND GASIFICATION AT DJERADA. Naudet, R. Paris, France; Centre d'Etudes et Recherches des Charbonnages de France, Note Tech 6/56 (Sep 1956). 32p.
In anthracite seams. COAL GASIFICATION;IN-SITU METHOD;ANTHRACITE;MOROCCO;ECONOMICS; EFFICIENCY;COST
- 04364 UNDERGROUND GASIFICATION OF COAL. Gerdetz, L.F. US Patent 2,761,663. 4 Sep 1956.
COAL GASIFICATION;IN-SITU METHOD;PRODUCTION; LOW BTU GAS;CHEMICAL REACTION KINETICS;STEAM
- 04365 UNDERGROUND GASIFICATION OF COAL. Montagnon, P.E.; Minister of Fuel and Power (Great Britain). British Patent 756,582. 5 Sep 1956.
COAL GASIFICATION;IN-SITU METHOD;ELECTRIC CURRENTS
- 04366 NEED TO GIVE GREATER ATTENTION TO