

## Directory Catalogue on Readjustment of Industrial Structure

( 2005 version )

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### I. Catalogue of Encouraged Investment Industries

#### (I) Agriculture, forestry and related industries

1. Comprehensive improvement of low and medium yielding field and basic construction of stable high yielding field.
2. Construction of state-level agricultural product bases
3. Soilless cultivation of vegetables, flowers and plants
4. Development and application of high-quality, high-yield and highly-efficient and standard cultivation and breeding
5. Pest control and animal disease prevention and treatment
6. Genetic engineering and gene bank construction for agricultural crops, livestock, poultry, aquatic plants and animals and wildlife
7. Selection, breeding, protection and development of good strains of domestic animals and plants
8. Development and application of the de-poisoning technology for the seeds (seedlings).
9. Water-saving agriculture, protective cultivation, ecological agriculture, cultivation land quality construction and development of the rapid fertilization technology for newly-cultivated land
10. Development and application of the ecological plantation (breeding) technology
11. Development and application of the agricultural films non-pollution degradation technology and heavy metal degradation for farm land
12. Research and development of green and non-pollution feedstuff and additives
13. Inland large lake resource protection
14. Offshore fishing
15. Cattle breeding
16. Cattle and sheep embryo (in body) or sperm in-plant production

17. Research and development of agricultural clone technology
18. Cultivation land maintenance and management and the development of the measurement technology of land, fertility and water speed
19. Construction of the germplasm resources protection land and reserve for agriculture and forestry crops, as well as the collection, storage, appraisal, development and application of the germplasm resources.
20. Returning straw to the field and comprehensive utilization (including silage, aminated straw to raise cattle, return straw to the field and gasify and cultivation of the edible fungi)
21. Comprehensive utilization and development (marsh gas and ecological homeland) of renewable resources in the countryside
22. Leveling up polders and giving way to floods and returning cropland to lake
23. Cultivation of fungi for food and drug purpose
24. Comprehensive harnessing of grassland and forestry disasters
25. Grain for green project and natural grassland restoration
26. Development of the new diagnostic reagent and bacterin for animal diseases and low-toxin and low-residue new drug
27. Artificial plantation of the high-yield grazing
28. Plantation and production of the natural rubber
29. Development and application of the non-pollution agricultural products and the monitoring of the harmful elements in the environment of the place of origin
30. Development and application of the non-pollution treatment of the organic waste and the technology for organic fertilizer
31. Development and application of the non-pollution and green production technology for agriculture, husbandry and fishery products
32. Storage, transportation, preservation, processing and comprehensive utilization of agriculture, husbandry and fishery products
33. Protection of such natural resources as natural forest
34. Tree and grass plantation and seedling project
35. Development and application of the soil and water conservation technology
36. Ecological system restoration and rebuilding

37. Construction of natural reserves for forest, wild life, wet land, desert and grassland and ecological demonstration projects
  38. Protection forest project
  39. Stony desertification control and sand harnessing project
  40. Sand fixation, water preservation and production of new materials for soil improvement
  41. Cultivation and plantation of the salt and drought-resistance plants
  42. Fast growing and high yield forest project, industrial raw material forest project and new economic forest project
  43. Bamboo and rattan base construction and new products and technologies development
  44. Young-middled aged forest tending project
  45. Wild economic forest protection, improvement, development and utilization
  46. Protection of the rare and endangered wild animals and plant
  47. Forest gene resources protection
  48. In-depth processing of "sub-quality, small and firewood" lumber, sandland shrubs and three remnants and series products development
  49. Construction of the species breeding and cultivation base for wildlife and epidemic source and epidemic disease monitoring and early-warning system
  50. Breeding and plantation of the Chinese herbs and high-quality, high-yield, endangered animal and plant medicinal materials in short supply
  51. Artificial cultivation and development of such resources as flavor and wild flowers which is at the lower part of the forest
  52. Technological development of the wood-based compound materials
  53. Production and comprehensive utilization of the bamboo-based engineering materials and plant fibre
  54. Deep processing of forestry chemicals
  55. Development and application of such artificial weather technologies as artificial precipitation and hail-suppression
- (II) Irrigation works
1. Harnessing of big rivers and lakes and trunk and branch stream control

2. Trans-drainage area water diversion project
3. Water source project for places lacking of water sources
4. People and livestock's drinking water and water rebuilding in the countryside
5. Safety building for flood detention basin
6. Maintenance and construction of sea dike construction projects
7. Dredging of the rivers, lakes and reservoirs
8. Reinforcing for the dangerous reservoirs and dikes
9. Development and application of the dike trouble monitoring and restoration technologies
10. Waterlogging early-warning and flood control in cities
11. Estuary harnessing
12. Comprehensive utilization of irrigation works
13. Irrigation works in pasturing areas
14. Silt dam project
15. Development and manufacturing of the geosynthetics for irrigation works and new material development
16. Improvement of the large and medium-sized irrigation areas and support facilities building
17. Construction of the flood and drought control facilities
18. Efficient water distribution and transportation, water-saving and irrigation technologies and equipment manufacturing
19. Automatic monitoring of water condition and quality and development of the flood control and dispatching system
20. Manufacturing of the hydrological data collection devices and equipment

(III) Coal

1. Coalfield geology and geophysics prospecting
2. High-yield and efficient coal mine (including mine and open-air) with a yield of 1.2 million tons/year and above, coal preparation plant building
3. Mine disaster (gas, grime, mine drainage, fire and cofferdam) prevention

4. Development and production of environmentally-friendly coal for industrial and life purpose
5. Development and application of the coal water slurry technology
6. Development and application of the coal gasification and liquefaction technology
7. Coal bed gas prospecting, development and mine gas utilization
8. Development and utilization of low-heat value fuel (including coal slack) and associated coal mine resources and equipment manufacturing
9. Coal pipeline transmission
10. Development and application of the efficient washing and desulfurization technology for coal mine
11. Development and application of the water-saving coal preparation project
12. Subsidence treatment, mine water resource protection and utilization
13. Integrated building of coal power and coking coal (coke oven gas, coal tar deep processing)
14. Coal exploitation method to upgrade resource recycling rate, and technological development and application and equipment manufacturing

(IV) Power

1. Water power
2. Construction of thermal power station with generating unit capacity of 600,000 kilowatts and over
3. Heat and electricity cogeneration for centralized heat supply unit with generating unit capacity of 300,000 kilowatts and over and heat, electricity and cooling cogeneration.
4. Construction of thermal power station with large air coolinggenerating unit with generating unit capacity of 600,000 kilowatts and over in water-shortage areas
5. Wind power and the development and utilization of such renewable energie as solar energy, geothermal energy, ocean power and biomass power
6. Gas and steam combined and recycling power generation
7. Construction of clean coal power station adopting 600,000 kilowatts and over circulating fluidized bed, pressurized fluidized bed and overall coal gasification circulating power generation

8. Power generation adopting circulating fluidized bed boiler and using coal slack and inferior coal with a unit capacity of 200, 600 kilowatts.

9. AC/DC power transmission and transformation of 500 kilovolts and above

10. Power generation unit desulfurization rebuilding

11. Power grid rebuilding and construction in cities and countryside

12. Development of power relay and protection technology, safety monitoring for power grid operation

13. Intensive design and automatic technology development for large power station and transformer station of large power grid

14. Development of power grid inter-connectivity technology

15. Popularization and application of new power transmission and transformation technology

16. Development and application of technologies to cut down power wastage in transmission, transformation and distribution

17. Development and application of distributed power supply

(V) Nuclear energy

1. Geological exploration of uranium mine and uranium mine mining and metallurgy

2. Low-temperature nuclear heating reactor, fast breeder reactor, fusion reactor, advanced research reactor and high-temperature gas-cooled reactor

3. Nuclear power station construction

4. High-performance nuclear fuel manufacturing

5. Spent fuel after-treatment

6. Nuclear analysis, nuclear prospecting instruments and meters manufacturing

7. Development of isotope, accelerator and radiation technology

8. Development of advanced uranium isotope separation technology

9. Development of radiation protection technology and manufacturing of the monitoring equipment

10. Development of the nuclear facilities protection instruments and meters

**(VI) Petroleum and natural gas**

1. Petroleum and natural gas exploration and exploitation
2. Natural gas hydrate exploration and exploitation
3. Storage and transportation of the crude oil, natural gas and finished oil and construction of the pipeline transmission facilities and network
4. Comprehensive utilization of the petroleum and gas associated resources
5. Development and utilization of technology and facilities to upgrade the petroleum and gas field exploitation rate and ensure the production safety, ecological environment restoration and pollution control project
6. Reclamation and utilization of the discharged natural gas

**(VII) Iron & steel**

1. Black metal ore alternative resources exploration and key exploration technologies development
2. Construction of a new generation of large-cubage mechanized coke oven with a 6m-high and 500 mm-width coking chamber, as well as dry coke quenching, coal loading and coke pushing and dust removal device
3. Application of the technology of stamp charging coking and cokemaking process with briquetted coal
4. Application of the dry quenching, transfer oil exchanger technology
5. Oxidation ball production as chain grate machine- rotary kiln with a capacity of above 1.2 million tons/year and tape pellet firing machine
6. Iron making of above 150 000 tons/year by using direct reduction method
7. Development and application of the advanced and appropriate smelting reduction technology
8. Steel scrap processing (classification, cutting and packing, excluding steel making)
9. Development and application of the alloy steel billet, slab, round billet, abnormal billet and near-net-shape continuous cast technology
10. Development and application of modern hot rolled broad-band steel rolling mill and key part manufacturing
11. Development and application of key technologies in slab continuous rolling and key part manufacturing

12. High-intensity steel production
13. Production of steel for high-speed heavy-duty railway
14. Production of oil well pipe for petroleum exploitation, high-pressure boiler pipe for power station and steel pipe used in the long-distance transportation of oil and gas
15. Production of H-shaped steel, screw-thread steel bars of 400 Mpa and above
16. Development and application of key technologies in cold continuous casting and key part manufacturing
17. Production of cold rolled silicon steel sheet
18. Application of the controlled rolling, controlled cooling technology
19. Production of the super-power graphite electrodes with a diameter of above 550 mm
20. Production of micro-hole carbon brick used for blast furnace
21. Production of high-quality synthetic and irregular-shaped refractories
22. Development and application of the iron alloy technologies
23. Completed gas-fired heat-electricity co-generation
24. Application of the accumulative-heat burning technology
25. Application of the comprehensive automation technology

(VIII) Non-ferrous metal

1. Non-ferrous metal ore's alternation of resource exploration and key exploration technology development
2. Construction of medium-sized copper, aluminium, lead, zinc and nickel mines
3. In-depth exploration of shortage resources and mineral bed which is hard to explore
4. Development and application of the non-pollution strengthened smelting of sulfide mineral
5. Development of the efficient extracting equipment and technology
6. Production of high-precision copper plate, band, foil and pipeline materials and technological development
7. Development of the production technology of high-precision aluminium plate, band, foil and high-speed thin band casting and rolling technology and equipment



manufacturing

8. Manufacturing of the high-performance metal materials used for rail traffic
9. Development and application of the non-ferrous metal synthetic materials
10. Production of high-performance, high-precision rigid alloy, deep processing products and ceramic materials
11. Deep-processing of rare and rare earth metal and application
12. Production of tin compounds and antimony compounds (excluding antimony oxide)
13. Manufacturing of high-performance magnetic materials
14. Super-thin powder materials, electronic slurry and related products production
15. Manufacturing of the amorphous alloy ribbon
16. Manufacturing of new-type braking materials
17. Casting of high-quality magnesium alloy and development of the slab, pipeline and type materials
18. Testing of the production process of non-ferrous metals and development of the control technology
19. Development and application of baking, pre-oxidation of hot-press and gold extraction process by bacterial oxidation technologies

(IX) Chemical industry

1. Chemical raw material mineral resources exploration and chemical raw material mine construction
2. Construction of resource-saving and environmentally-friendly nitrogenous fertilizer device and localized and economic rebuilding of the raw materials
3. Production of high-quality and compound fertilizer, potash fertilizer and various compound fertilizers
4. Development and production of highly-efficient, low-toxin and safe new pesticides and intermediate
5. Construction and rebuilding inorganic chemical production device with clean production technology
6. Production of environmentally-friendly paints

7. Production of new-type of biological & chemical products, specialized fine chemicals and film materials
8. Development and production of efficient and pollution-free catalyzer
9. Production of organic silicon, organic fluorin and high-performance inorganic fluorin products
10. Production of inorganic nanometer and functional materials
11. Development and production of new dyes and intermediate
12. Construction of large aromatic hydrocarbons production device
13. Rebuilding of the refinery device to upgrade oil grade and energy-saving and consumption-reduction device
14. Large ethane building (800 000 tons/year and above in east and coastal region and 600 000 tons/year and above in west region) and existing ethane rebuilding
15. Development of large synthetic resin and new technologies and new products on synthetic resin
16. Development of caprolactam, ethylene glycol and acrylonitrile production technology and complete equipment manufacturing
17. Development of synthetic rubber, synthetic latex and thermoplastic elastomer technologies and new products manufacturing
18. Production of such chemicals as new-type of environmentally-friendly oil solution and auxiliary
19. Production of compound materials, functional macromolecular materials, engineering plastics and new plastics alloy
20. Production of basic organic chemical materials with advanced technologies
21. Production of high-grade asphalt, polymer modified asphalt and special asphalt
22. Comprehensive utilization of the low-sulfur acidic heavy crude oil
23. Development of new-type of auxiliary, new-type of adsorbent, high-performance additives and compound technology
24. Making of polyvinyl chloride of 200 000 tons/year and above by oxychlorination
25. Production of titanium dioxide powder by chlorination
26. Production of high-grade radial ply tyre and auxiliary materials and equipment
27. Methanol and ether fuel production

(X) Building materials

1. Development of new-type dry method cement production device with a daily production capacity of 4000 tons and above of clinker (above 2000 tons in west region)
2. Development and production of new-type energy-saving and environmentally-friendly wall material, heat and noise insulation materials, waterproof materials, architectural sealing materials and building coating.
3. Production of high-quality and environmentally-friendly friction and sealing materials
4. Development and production of non-alkali fibreglas kiln fibre technology and high-performance fibreglas and products of 30000 tons/year and above
5. Production of high-quality energy-saving compound window and door and hardware products
6. Technological development and manufacturing of new-type pipeline materials (pieces)
7. High-quality float glass production technology and equipment, development of energy-saving and safe flat glass deep processing technology
8. Development and production of toilet with washing water volume of no more than 6 L, water-saving urinal, squatting pan and water-saving device.
9. Development and manufacturing of fine processing mineral materials production and technical equipment meeting high-tech and environment protection industries' requirements on purity, fineness and nature modification.
10. Development of key technologies and equipment for non-pollution handling industrial waste, urban waste and silt as new-type of dry method cement and new-type of wall materials
11. Development of mechanized moulding technology of fibreglas enhanced plastic products (glass fiber reinforced plastic)
12. Development of bulk cement technology
13. Development and production of high-performance concrete using admixture
14. Development and production of the artificial sand production line and technological device of 500 000 tons/year
15. Construction of large cement grind mill of one million tons/year

16. Production of large stone materials of 200 000 cubic meters/year and super thin compound stone materials of 300 000 cubic meters/year
17. Development of the high-quality artificial crystal materials

(XI) Medicine

1. Development and production of new drugs with independent property rights
2. Development and production of key epidemic disease prevention bacteria and drugs
3. Development and production of new-type of diagnostic reagent and biological chips
4. Development and production of new-type of family-planning drugs and tools (including 3rd generation of hormone contraceptives and 3rd intra uterine device)
5. Development and production of natural drugs and oceanic drugs
6. Development and production of excipient for preparations
7. Development and production of key medical intermediates
8. Development of new technologies and new products for medicinal biological engineering
9. Development and application of new-type of medical preparations
10. Development and application of medical peptide and nucleic acid compounding, fermentation and purification technology
11. Development and application of the film technology, supercritical extracting technology, chiral technology and self-control technology
12. Development and application of the clean production technology of raw material medicines
13. New-type of medicine packing materials and technological development
14. Modernization of traditional Chinese medicine (TCM) (development of the artificial breeding of endangered animals and plants for medicine purpose; application of advanced agricultural technologies in the standard planting and breeding of TCM; development and application of the extracting, purification and quality control technology for effective components of TCM; development and application of processing control technology and equipment for modern TCM pharmaceuticals)
15. Development and production of the medicines of ethnic minorities
16. Development and manufacturing of digitalized medical imaging products and

medical information technology

17. Development and manufacturing of early-period diagnostic medical device
18. Development and manufacturing of equipment and instrument used in micro-invasive surgery and intervention treatment
19. Development and manufacturing of technical devices used in medical first-aid and rehabilitation
20. Breeding of experimental animals
21. Microorganism development and utilization

(XII) Machinery

1. Manufacturing of key parts and cutting tools of numerical controlled machine tool
2. Manufacturing of high-speed and precision numerical controlled machine tool with the joint action of three axis and above, numerical controlled system, AD server device, beeline electric machinery
3. Development and manufacturing of new-type of sensor
4. Manufacturing of sedan bearing, railway bearing, precision bearing, low-noise bearing
5. Manufacturing of mixed-flow, axial flow hydropower equipment with a rotary wheel diameter of 8.5 m and above and key auxiliary unit
6. Manufacturing of large cross-flow and pumped-storage hydropower unit and key auxiliary unit
7. Technological development of 600 000 kilowatt and above ultra supercritical and ultra supercritical thermal power unit complete equipment, equipment manufacturing and manufacturing of key auxiliary unit
8. Manufacturing of circulating fluidized bed of 300 000 kilowatt and above
9. Manufacturing of gas and steam combined circulating equipment of 400 000 kilowatt and above
10. Technological development of large, precision and special casted and forged pieces and equipment manufacturing
11. Manufacturing of super high voltage AC/DC power transmission and transformation complete equipment of 500 kilovolt and above
12. Manufacturing of clean energy power generation equipment (nuclear power, wind

power, solar energy and tide etc.)

13. Manufacturing of the ammonia synthesis complete equipment of 300 000 tons/year and above
14. Development and application of ethene complete equipment of 600 000tons/year
15. Development and manufacturing of DCS control system and intelligent site instruments and meters
16. Development and manufacturing of precision instrument
17. Manufacturing of new-type of hydraulic pressure, air driven and sealed parts, components and device
18. Development of automatic welding equipment and equipment manufacturing
19. Design and manufacturing of large, precision mould and auto mould
20. Development of controllable atmosphere and vacuum thermal treatment technology and equipment manufacturing
21. Design and manufacturing of safe production and environmentally friendly testing instruments
22. Manufacturing of urban waste treatment equipment
23. Manufacturing of complete equipment for fly ash storage, transportation and utilization
24. Manufacturing of junk electric appliance, plastic and junk rubber reclamation and utilization equipment
25. Manufacturing of equipment for seawater desalting and seawater direct use
26. Development and manufacturing of industrial robot and its complete system
27. Manufacturing of equipment for comprehensive mining of 5 million tons/year and above, loading and large coal mine washing machinery equipment
28. Manufacturing of large strip mine complete equipment of 20 million tons/year and above
29. Manufacturing of large petroleum and gas transportation equipment
30. Manufacturing of automatic, high-speed and multi-color printing equipment
31. Manufacturing of equipment for the efficient seeding, fertilizing, irrigating and drug administration and uch agricultural tools for protective cultivation
32. Development and manufacturing of seed processing complete equipment of 5

tons/hour and above

33. Manufacturing of complete equipment for the automatic breeding of fowl and livestock
34. Manufacturing of agricultural equipment
35. Manufacturing of equipment for the deep processing of agriculture, forestry, fishery and husbandry products and comprehensive resources utilization
36. Manufacturing of key equipment for the comprehensive straw utilization
37. Manufacturing of agricultural harvest machinery as cotton, rice, wheat, rice, bean, potato and feedstuff.
38. Development and manufacturing of equipment for forest tree planting and artificial vegetation industrialized production
39. Development and manufacturing of large project construction machinery and key parts and components
40. Development and manufacturing of electricity-controlled internal combustion machine and key parts and components
41. Development of coldness and heat accumulation technology and equipment manufacturing
42. Design and manufacturing of complete set of large energy reclamation device
43. Design and manufacturing of complete set of deep-well drilling machine of 7000 m and above
44. Manufacturing of high-performance silt-clearance equipment
45. Manufacturing of medical waste centralized treatment equipment
46. Development of the automatic meteorological station system and equipment manufacturing
47. Manufacturing of equipment for special climate monitoring and analysis
48. Development of seismic stations, seismic network and movable earthquake observation technical system and instrument and equipment manufacturing
49. Research and development of new technologies and equipment for earthquake disaster monitoring and harnessing technology
50. Manufacturing of poisonous gas purification equipment
51. Related technologies and equipment on food quality and safety testing and inspection

52. Manufacturing of equipment for scrapped auto dismantling and smashing treatment

(XIII) Auto

1. Design and development of auto, motorcycle and their engines and key parts
2. Manufacturing of such key auto parts and components as automatic transmission box, transmission box for heavy-duty cars and advanced and appropriate auto and engine with independent property rights
3. Manufacturing of light autos and environmentally-friendly new materials
4. Precision forging, multiple workplace moulding and forging of key auto parts
5. Development and manufacturing of the testing system for auto and motorcycle type test and maintenance
6. Research, development and manufacturing of new-energy autos as those using compressed natural gas, hydrogen fuel, compound fuel, liquified petroleum gas and methanol and ether as well as mixed power autos, electric-driven auto, fuel battery auto and their key parts
7. Advanced small-displacement economic passenger vehicle, container transportation vehicle and multiple-axis special vehicle
8. Development and manufacturing of diesel engine used for sedans
9. Development and manufacturing of low-chassis bus in cities

(XIV) Vessel

1. Design and manufacturing of high-tech, high-performance and special vessel and vessel of 100 000 tonnage and above
2. Manufacturing of passenger vehicle, ro/ro passenger vessel, ro/ro cargo vessel, passenger vessel, train ferry of above 10000 tonage
3. Manufacturing of liquefied petroleum gas and liquefied natural gas boat of 5000 cubic meters and above
4. Manufacturing of container boats of 3000 TEU and above
5. Manufacturing of the power system for boat, power station and special auxiliary machine
6. Design and manufacturing of such oceanic engineering equipment as large oceanic



shipping boat and maritime drilling boat, drilling platform and floating oil storage liner

7. Manufacturing of such boat equipment as vessel control and automation, communication and navigating, instruments and meters.

(XV) Aviation and aerospace

1. Manufacturing of civil planes and their spare parts
2. Development and manufacturing of aeroplane engines
3. Development and manufacturing of airborne equipment
4. Development and manufacturing of helicopter, rotor system and driven system
5. Development and manufacturing of new-type of materials for aviation and aerospace
6. Manufacturing of gas turbine for aviation and aerospace
7. Manufacturing of satellite, carrier rocket and parts and components
8. Application of aviation and aerospace technologies and development and production of software and hardware products and terminal products
9. Development and manufacturing of aircraft ground simulated drilling system
10. Development and manufacturing of aircraft ground maintenance, servicing and testing equipment
11. Satellite system building and equipment manufacturing

(XVI) Light industry

1. Forest-paper integrated wood slurry, paper and cardboard production
2. Development and manufacturing of complete set of slurry and paper-making machinery by using high tech
3. Design, processing and manufacturing of non-metal mould
4. Development of biological degradable plastics and series products
5. Development and production of plastic water-saving facilities and multi-tier film for agriculture purpose
6. Development of high-tech ceramics (including industrial ceramics) and equipment

7. Development and application of ceramics clean production technology
8. Development and manufacturing of optical, machinery and electronic integrated sewing machinery and special industrial sartorius
9. Development of technologies on natural flavor and compound flavor and product manufacturing
10. Research, development and production of new-type and ecological packing materials (easy-to-degrade, easy-to-reclaim and reusable)
11. Development and manufacturing of new-type of plastic heat-preservation board, large-calibre plastic pipeline materials (with a pipe diameter of above 1.5 m), super-low noise plastic drainage pipe, penetration-proof geo membrane and plastics for medical purpose
12. Development and application of high-tech, digital printing technology and HD plate making system
13. High-tech green battery product manufacturing (mercury-free alkaline Zn/MnO<sub>2</sub> batteries, MH/Ni battery, Lithium Ion Battery, high-capacity, sealed, maintenance-free lead acid battery, fuel cell, zinc-air battery, solar battery)
14. Manufacturing of articles specially for ethnic minorities
15. Development and application of raw materials for natural food additives and production technologies
16. Development and application of ECF and TCF chemical slurry bleaching technology

(XVII) Textile

1. High-grade textile production, dyeing and rear-processing
2. Production of high-grade fibre surface materials by adopting hi-fi processing technology
3. Production of differentiated and functional chemical fibre and high-tech fibre
4. Production of fibre and non-fibre polyester ( polytrimethylene terephthalate, polyethylene terephthalate )
5. Processing of special natural fibre meeting the requirements on ecology, comprehensive resources utilization and environmental protection (including other animal fibre other than wool, ramie fibre, bamboo fibre, mulberry silk, color cotton)
6. Production of special textile for industries adopting high-tech

7. Manufacturing of new-type high-tech textile machinery and key parts and components
8. Production of high-grade carpet, drawnwork and embroidery products
9. High-grade garment production adopting computer integrated manufacturing system
10. New fibre production adopting renewable resources (polylatic acid fiber, solvent extraction produces cellulose fibre green fiber, animal and plant protein fibre)
11. Manufacturing of testing and inspection instrument for textile and spinning machine enterprises

(XVIII) Building material

1. Development of energy and space saving buildings & green buildings
2. Development of high-storied building and spatial structure technology
3. Development and manufacturing of low-noise building construction machinery tools
4. Manufacturing of high-performance external encircling structural materials and parts for residence
5. Development of new-type of architectural structure system
6. Building shock-absorption structure and product R&D and promotion
7. Development of water, energy, space and material-saving technology for buildings
8. Production of intelligent building products and equipment and study of integration technology
9. Centralized heating in residence and public buildings and application of heat computational technology
10. Development of commodity concrete, commodity mortar and construction technology

(XIX) Urban infrastructure and real estate

1. Production of basic spatial information data in cities and key technology development
2. Public traffic construction in cities

3. Urban road and intelligent traffic system building
4. Technological development for urban traffic control system and equipment manufacturing
5. Underground pipeline construction in cities and towns
6. Water supply and drainage network project, water supply source and purified water works in cities and towns
7. Gas project in cities and towns
8. Centralized heat supply and rebuilding in cities and towns
9. Rainfall collection and utilization in cities
10. Manufacturing of energy-saving and low-pollution heating equipment
11. Afforestation and ecological community building in cities and towns
12. Vertical parking lot building in cities
13. Research, development and promotion of advanced and applicable complete set technology and product for building
14. Gas automobile gas-filling station project
15. Development of informatization technology for urban construction
16. Development of key technologies for urban ecological system
17. Development, construction and vehicle manufacturing for inter-city express, urban rail traffic
18. Development and application of water-saving technology in cities
19. Development of intelligent lighting, green lighting products and system
20. Construction of residence demonstration project

(XX) Railway

1. New railway route construction
2. Acceleration and capacity expansion for existing routes
3. Development and construction of special passenger transportation line and high-speed railway system
4. Development of synchronical locomotive manipulation, electropneumatic brake, heavy-duty freight with an axial weight of 25 tons and above

5. Development of railway passenger and freight transportation safety guarantee system and equipment
6. Manufacturing of equipment for formation station automation and loading and unloading operation mechanization
7. Development of railway transportation information system
8. Development and construction of railway container transportation system
9. Development and manufacturing of AC driven locomotive, motor coach train, and locomotive salvage equipment
10. Manufacturing of AC driven core parts (including IGCT, IGBT)
11. Development of railway contact net with a per hour speed of 200 km and above, switch and engine power supply technology and equipment manufacturing
12. Development of factor compensation technology for engine power-supply power of electrified railway
13. Development of railway circuit testing, locomotive vehicle monitoring and equipment manufacturing
14. Development and manufacturing of large road-maintenance machinery, multi-purpose road-maintenance machinery, track testing equipment and special purpose equipment
15. Development of dispatching and commanding automation technology
16. Mending of concrete structure and development of technologies and materials to upgrade durability
17. Development and application of high-speed magnetic suspending traffic system and materials
18. Toilet for railway trains and ground reception and treatment of the waste

(XXI) Highway

1. Construction of the trunk of the state way, highway for West Development and high-speed highway network of the state
2. Development and construction of intelligent highway transportation system
3. Development and construction of rapid highway passenger and cargo transportation system
4. Development and construction of highway management information system

5. Development and production of new materials for high way projects
6. Design and manufacturing of highway projects and new maintenance machinery equipment
7. Highway container and compartment transportation
8. Super big bridge construction and maintenance technology development
9. Super big tunnel construction and maintenance technology development
10. Development and construction of passenger and cargo transportation network in the countryside.
11. Highway construction in the countryside

(XXII) Water transportation

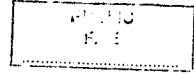
1. Construction of deep-water berth (10000 tonnage for coastal areas and 1000 tonnage for freshwater)
2. Construction of deep-water sea route and trunk sea routes in freshwater and buildings open to traffic
3. Automatic loading/unloading in large ports
4. Development of electronic data exchange system for ocean shipping
5. Development of maritime safety guarantee system and salvage equipment
6. Freshwater shipping and vessel standardization
7. Manufacturing of special engineering machinery equipment for port, deep-water sea routes and navigational hinge
8. Multi-modal co-transportation of container and maritime container transportation
9. Maritime high-speed passenger transportation
10. Vessel transportation of crude oil, finished oil and natural gas
11. Vessel oil spill monitoring and construction and development of emergent lifting system
12. Maritime multi-modal co-transportation and bulk transportation by water way
13. Construction of the information system for water transportation industry
14. International oil tanker transportation

(XXII) Air transportation

1. Airport construction
2. Public air transportation
3. General aviation
4. Air traffic control and communication and navigational system construction
5. Aircraft maintenance
6. Aviation computer management and network system development and construction
7. Aviation POL facilities construction
8. Development and manufacturing of special aviation vehicles, stack equipment, storage equipment, cargo holder, high-performance airport safety inspection equipment, high-performance airport fire-fighting equipment
9. Construction of maritime air supervision, patrolling and salvage facilities

(XXIV) Information industry

1. Construction of optical synchronical transmission system of 2.5GB/S and above
2. Manufacturing and construction of digital micro-wave synchronical transmission system of 155 MB/S and above
3. Manufacturing and construction of satellite communication system and earth station equipment
4. Construction of such communication support network as network administration monitoring, No. 7 signal, clock synchronization and billing
5. Manufacturing and construction of digital communication network equipment
6. Manufacturing and construction of such new business network as intelligent network
7. Manufacturing and construction of broadband network equipment
8. Construction of digital beehive mobile communication network
9. IP business network construction
10. Postal saving network construction
11. Postal comprehensive business network construction
12. Automatic mail handling



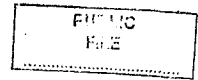
13. Construction of satellite digital TV/broadcasting system
14. Construction of value-added telecom business platform
15. Manufacturing of 32 wave and above optical-fibre wave division multiplex transmission system
16. Manufacturing of digital synchronical series optical-fibre communication system of 10GB/S and above
17. Manufacturing of new technological equipment of support communication network
18. Manufacturing of stratospheric communication system equipment
19. Manufacturing of such network equipment as digital mobile communication (including GSM-R), access network system, digital trunking communication system and router and gateway
20. Manufacturing of large and medium-sized computer and high-performance computer, work station and server
21. Design and manufacturing of large integrated circuit with a line width of 1.2 mm and below
22. Manufacturing of large integrated circuit
23. Manufacturing of new-type of electronic parts (electronic parts in pieces, frequency electronic parts, hybrid integrated circuit, power electronics device, Optoelectronic devices, sensing parts and sensor, new-type of machinery and electronic parts, high-density printed circuit board and flexible circuit board)
24. Manufacturing of special electronic materials
25. Software development and production
26. Development and production with CAD, CAT, CAM, CAE system
27. Manufacturing of electronic equipment, instrument and tools and moulds
28. Manufacturing of large-capacity optical and disk driver and their parts and storage card for digital products
29. Development and manufacturing of new-type display device, color kinescope of medium and high resolution and glass envelop
30. Manufacturing of new-type single-mode fibre and fibre pre-made stick
31. Manufacturing of digital audio/video broadcasting system
32. Manufacturing of high-intensity digital laser disk player



33. Production of read-only disk and recordable disk
34. Manufacturing of digital camcorder, digital video recorder, digital TV product
35. Manufacturing of ordinary paper facsimile
36. Manufacturing of information security products and network supervision equipment
37. Manufacturing of digital multi-functional telephone
38. Manufacturing of monocrystalline silicon, multicrystalline silicon and wafer
39. Manufacturing of Doppler radar technology and equipment
40. Manufacturing of auto electronic products
41. Manufacturing of medical electronic products
42. Manufacturing of financial electronic equipment and system construction
43. Development of wireless LAN (WI-FI short-distance wireless communication technology) and equipment manufacturing
44. Development of e-business and e-government system
45. Satellite navigating system development and equipment manufacturing

(XXV) Other service industry

1. Construction of e-business and modern logistics service system as well as chain supermarket, convenient store and specialized store
2. Construction of modern storage facilities for grain, cotton, sugar, edible oil, fertilizer and petroleum
3. Construction of modern agricultural products circulation facilities and integration of agriculture, trade and industry
4. Construction of idle equipment, junk goods and junk motor vehicle transaction market
5. Building of socialized service system for small and medium-sized enterprises
6. Building of socialized service system for agriculture and forestry
7. Leasing service
8. Socialized logistics service
9. Community service network construction in cities

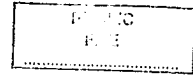


10. Real estate brokery service and property management service
11. Socialized endowment service
12. Construction of the service facilities for the disabled
13. Construction of facilities for basic medical, family planning, prevention and health care services
14. Bloodstation construction
15. Remote medical services
16. Construction and industrial operation of culture and art, press and publication, radio, TV and film, popular culture, popular science and sports facilities
17. Relic protection and facilities construction
18. Infant education, compulsory education, high school education, higher education, occupational and technical education and special education
19. Construction of remote educational system
20. Construction of activity site for the minor and children's social welfare facilities
21. Construction of infrastructure for tourism and tourism information service system development
22. Development and construction of industrial tourism, agricultural tourism, forest tourism, ecological tourism and comprehensive development of other tourism resources
23. Credit card and its network service
24. Tourism commodities and souvenir development
25. Employment and pioneering consulting, tutorship, brokerage and training services
26. Construction of state-level engineering (technological) research center, state certified enterprise technology center, key lab, high-tech pioneering and service center, new product development and design center, science study mid-test base and experimental base
27. High-tech services as science popularization, technology popularization, high-tech exchange, technological consulting, intellectual property rights and weather, environmental protection, mapping and measurement, earthquake, ocean and technical supervision
28. Such consulting services as economy, planning, engineering, management, accountant, auditing, law and environmental protection'

29. Co-construction and sharing of such science study conditions as science instrument, experimental animals, chemical reagent and literature information
30. Commodity quality certification and quality test
31. Development and application of anti-counterfeit technology
32. Credit investigation and rating service system construction
33. Cartoon making

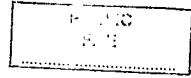
(XXVI) Environmental protection and comprehensive resources utilization

1. Mine ecological environment restoration
2. Ocean development and ocean environment protection
3. Biological diversification protection
4. Development and utilization of light salt water, inferior water and sea water and seawater desalting
5. Development and utilization of ozone consumption substitute
6. Construction of medical waste disposal center
7. Construction of hazardous waste disposal center
8. Construction of regional junk auto disposal center
9. Monitoring of outflow's radiation on the environment
10. Environmental monitoring and development of new-type of environmental protection technology
11. Development and manufacturing of the safe disposal technologies and equipment for radwate and other hazardous waste
12. Development and application of moving pollution sources (trains, vessels and autos) prevention technology
13. Urban traffic noise and vibration control and material production
14. Development of electromagnetic radiation control technology for power grid and information system
15. Development and application of technologies to cut down and control dioxin discharge
16. Development and application of the substitute of lasting organic pollutants



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17. Development and application of technologies to dispose lasting organic pollutants
18. Comprehensive utilization and harnessing of three wastes
19. Development and production of biological bacteria and additives for harnessing of three wastes
20. Development and application of Hg reclamation technology for Hg-containing waste and complete equipment manufacturing
21. Development of technologies for water reuse and equipment manufacturing
22. Highly-efficient and low-energy-consumption waste water treatment and newable technology development and equipment manufacturing
23. Comprehensive utilization of waste and other solid waste in cities and towns
24. Production of anti-penetration film for waste burying
25. Development and production of new-type of water treatment medicament
26. Dust-removal, desulfurization and denitrification for coal gas and smog and device development and complete equipment manufacturing
27. Technologies for the wall to absorb noise and material development
28. Development and application of AC frequency-change, speed-regulation and energy-saving technology
29. Development and application of fuel-saving technology for motor vehicle, internal combustion engine
30. Development and production of new-type of energy-saving and environmental protection appliance and key parts and components
31. Production of water and energy-saving products
32. Monitoring instrument development and production with water
33. Development of new-type of energy-saving lighting products and technologies and auxiliary materials and equipment
34. Development and application of energy and water saving, environmentally-friendly technologies and equipment manufacturing
35. New-type dry method cement production with 2000 tons/day yield and power generation with the remaining heat
36. Reclamation of blast furnace, rotary furnace and coke furnace gas and comprehensive utilization



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37. Energy-saving and environmentally friendly rebuilding for petroleum, petrochemical and chemical industries which has high energy consumption and serious pollution
38. Efficient and energy-saving mining and dressing technology, equipment development and complete equipment manufacturing
39. Comprehensive utilization of multi-element mineral resources
40. Development of low-grade and complicated mine and comprehensive utilization
41. Comprehensive utilization of such resources as gangue and residue
42. Industrialization of the reclamation of renewable resources

## II. Catalogue of Restricted Investment Industries

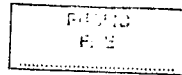
### (I) Agriculture and forestry industries

1. Excessive pasture on natural grassland
2. High or medium-density fiberboard project with the single line of less than 50,000 m<sup>3</sup> per year
3. Wooden flakeboard project with the single line of less than 30,000 m<sup>3</sup> per year
4. Rosin production project of less than 1000 tons per year

### (II) Coal

1. The coal mine projects with single well less than the scale as follows: 300,000 tons per year for Shanxi, Shaanxi and Inner Mongolia; 150,000 tons per year for Xinjiang, Gansu, Ningxia, Qinghai, Beijing, Hebei, Northeast China and East China; 90,000 tons per year for the west and central south area; and 30,000 tons per year for extreme thin coal bed
2. Coal mine project with non-machinery exploitation
3. Coal mine project in which the coaling recycle rate fails to reach national requirements
4. Coal mine project without the approval of national or provincial coal industry administration on mining regions

### (III) Power industry



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1. Conventional coal-burning thermal power units with a generating unit capacity of 300,000 kilowatts below except for small-scale electric networks in Tibet, Xinjiang and Hainan
2. Power units with coal consumption of over 300 gram coal equivalent/ kilowatts and the power units with cooling generating units of coal consumption of over 305 gram coal equivalent/ kilowatts except for small-scale electric networks in Tibet, Xinjiang and Hainan

(IV) Petroleum, petrochemical and chemical industries

1. DMT polyester device of 100,000 tons per year below
2. Polypropylene device of 70,000 tons per year below (continuous process and batch process)
3. Acrylonitrile device of 100,000 tons per year below.
4. ABS resin device of 100,000 tons per year below (except for styrene continuous process)
5. Ethylene device of 600,000 tons per year below
6. Normal and reduced pressure oil-refining device of 8,000,000 tons per year below
7. catalytic cracking device of 500,00 tons per year below, continuous reforming device of 400,000 tons per year below, hydro-cracking device of 800,000 tons per year below and delayed coking device of 800,000 tons per year below
8. Polyethylene device of 200,000 tons per year
9. Polyvinyl chloride device by oxychlorination process of ethane of 200,000 tons per year below and polyvinyl chloride device by calcium carbide process of 120,000 tons per year below.
10. Cinnamene device of 200,000 tons per year below (except for ethylbenzene by dry gas)
11. Polystyrene device of 100,000 tons per year below.
12. PTA device of 225,000 tons per year below
13. Ethylene oxide or glycol device of 200,000 tons per year below
14. CPL device of 100,000 tons per year below
15. Ethane-acetate device of 200,000 tons per year below and acetate by oxo synthesis of 100,000 tons per year below

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16. Ammonia-soda device of 1,000,000 tons per year below
17. Soda device of 300,000 tons per year below
18. Sulphuric acid production device of 200,000 tons per year below and Pyrite acid production device of 100,000 tons per year below
19. Nitric acid device by normal pressure process and synthesis process
20. Fertilizer production project with petroleum as raw materials (except for high-sulfur petroleum coke)
21. Titanium dioxide powder production line by vitriol process (except for waste acid and ferrite for composite usage, which are in accordance with international quality standards and required discharge)
22. Lead chrome yellow production line of 1000 tons per year below
23. Ferric oxide red paint device of no more than 5000 tons per year
24. calcium carbide furnace project of below 25000 kilovolt ampere (capacity is smaller than 45000 tons) and above 25000 kilovolt ampere which can't meet the access requirements in environmental protection and energy consumption
25. Electrolyzed oxidation of manganese production base of below 5000 tons/year
26. Soda device of below 150 000 tons/year
27. Potassium hydroxide device of below 20000 tons/year
28. Production device with a single line of below 20000 tons/year or have calcium roasting chromium compounds
29. Mercuric chloride catalyst project
30. Hydrofluoric acid production device with a single unit of below 10000 tons/year (except those for self-use or electronic high-purity hydrofluoric acid)
31. Single set of reaction vessel of less than 6000 tons/year, F22 production device with a rear-treatment of below 30000 tons/year (except those for deep processing as the raw materials)
32. Organic silicon production device of below 20000 tons/year
33. Methane chlorides production project of below 80000 tons/year (excluding methyl chloride production project)
34. Methane chlorides product project of below 80000 tons/year and has no corresponding treatment facilities for the byproduct of carbon tetrachloride
35. Diagonal tyre project

36. Cycle tyre project (tyre of handcart)
37. Poisonous pesticide (methamidophos, parathion, methylparathion, monocrotophos, Omethoate, isocarbophos, isofenphos-methyl, Phorate, phosfolan methyl, phosfolan ethyl, terbufos, methidathion, Methyl Bromide, methom, aldicarb, Carbofuran, zinc phosphide, Diphacin, Warfarin, Counmatetralyl, Bromadiolone, Brodifacoum) production project
38. Dicofol production project with DDT as the raw materials
39. Sodium pentachlorophenol production project with Hexachlorobenzen as the raw materials
40. Lindane production project
41. Diosgenin production device of below 300 tons/year (except those for comprehensive utilization)

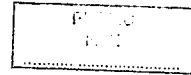
(V) Information industry

1. Laser video player production line (VCD series products)
2. Simulated CRT B/W and color TV project

(VI) Iron and steel

1. Coke furnace projects having not equipped with coke dry quenching, coal loading and coke pushing and dust removal devices at the same time in iron& steel enterprises and water lacking regions
2. Sinter machine project of less than 180 sq. m
3. Iron making blast furnace projects with a valid capacity of below 1000 cubic meters or above 1000 cubic meters but such devices as coal powder blowing device, dust removal device, residual pressure power generation device, energy consumption, new water consumption haven't reached the standard
4. Steel making rotary furnace projects with a metric capacity of below 120 tons meters or above 120 tons but such devices as gas reclamation, dust removal device, residual pressure power generation device, energy consumption, new water consumption haven't reached the standard
5. Steel making rotary furnace projects with a metric capacity of below 70 tons meters or above 70 tons but such devices as gas reclamation, dust removal device, residual pressure power generation device, energy consumption, new water consumption



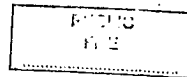


haven't reached the standard

6. Hot-rolled steel sheet projects of below 800 mm
7. Hot-dip galvanizing sheet project of below 250 000 tons/year
8. Color coated strip steel project of 100000 tons/year
9. Steel alloy mine hot oven project of below 25000 kilovolt ampere and 25000 kilovolt ampere and above but the requirements on environmental protection and energy consumption have not met (small hydropower stations in mid and west China and key poverty-stricken regions having mineral resources advantages, single hot oven capacity  $\geq$  12500 kilovolt ampere)
10. Chromium containing refractory production line
11. Ordinary power and high-power graphite electrode production line
12. Super-high power graphite electrode production line with a diameter of 550 mm and a capacity of below 20000 tons/year
13. Carbon block of below 50000 tons/year and carbon graphite production line of below 40000 tons/year
14. One-segment fixed coal-gas generator project (excluding powdered coal gas gasifying furnace)

(VII) Non-ferrous metals

1. Tungsten, molybdenum, tin, antimony and rare earth mine exploitation, metallurgical projects and antimony oxide and lead and tin welding material production projects (except rebuilding projects)
2. Crude copper smelting project with a single unit size of 100000 tons/year
3. Electrolytic aluminum project (except self-baked cell production capacity replacement project and environmental protection reconstruction project)
4. Lead smelting project with a single unit size of 50000 tons/year
5. Zinc smelting project with a single unit size of 100000 tons/year
6. Magnesium smelting project (except the comprehensive utilization project)
7. Secondary aluminium reverberatory furnace project of below 4 tons
8. Reverberatory furnace project directly burning coals in renewable non-ferrous metal production



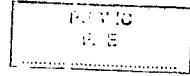
9. Wet method fluoride salt in the production of aluminum
10. Project of independent carbonaceous materials used in the production of aluminium of below 100000 tons/year
11. Ion-type rare earth mine bath leaching project
12. Secondary lead of below 10000 tons/year

(VIII) Gold

1. Independent cyanidation project with a daily gold mine treatment capacity of below 50 tons
2. Independent gold mineral processing project with a daily ore treatment capacity of below 100 tons and have no auxiliary mining system
3. Fire-method smelting project with a daily gold mine treatment capacity of below 50 tons
4. Independent pile dreg field (except for Qinghai-Tibet Plateau) with an ore treatment capacity of below 50000 tons/year
5. Project with a daily rocky gold ore processing capacity of below 50 tons
6. Gold dust exploitation project with a daily gold dust treatment capacity of below 200000 cubic meters/year
7. Project of exploiting gold in forest area, agricultural field and rivercourse

(IX) Building material

1. Non-float or ordinary float flat glass production line with a daily smelting volume of less than 500 tons
2. Building ceramics brick production line with a capacity of below one million sq. m/year
3. Tunnel kiln sanitary ceramics production line of below 500 000 pieces/year
4. Upright kiln cement machine, dry-method hollow kiln, lepol kiln, and wet method kiln; newly establishment of new-type dry-method cement production line with a daily production capacity of below 1500 tons
5. Paper-surface gypsum board production line of 20 million sq. m/year
6. Paper-based asphalt felt production line, modified asphalt waterproof coil



production line of below 5 million cubic meters/year, asphalt compound tyre flexible and waterproof coil production line, polythene polypropylene compound waterproof coil production line with a polythene film thickness of below 0.5 mm

7. Mid-alkali mirror ball production line, platinum crucible ball glass fibre production line

8. Solid clay brick production project

9. Plaster (hollow) block production line of below 150 000 sq. m/year, concrete mini hollow brick production line with a single-unit yearly production capacity of below 25000 cubic meters and concrete paving brick production line with a single-unit yearly production capacity of below 150 000 sq. m, artificial light aggregate production line of below 50000 cubic meters/year

10. Gas-filled concrete production line of below 100000 cubic meters/year

11. Coal slack, shale fired brick solid brick production line of below 30 million standard bricks/year

12. Mineral wool production line of below 5000 tons/year

(X) Medicine

1. Vitamin C project

2. Penicillin raw material project

3. One-off injector and blood infusion set

4. Butyl rubber plug project for medical purpose

5. Processing capacity expansion project without new drug and new technology application (except hard capsule requiring liquid filling)

6. Processing capacity expansion project with endangered and lacking animals and plants as the raw materials

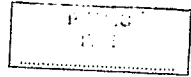
7. Medical article production project using CFCs as Aerosol propellant

8. Mercury glass thermometer project

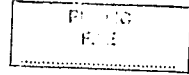
9. Mercury blood-pressure meter project

10. Mercury dental material project

(XI) Machinery



1. Manufacturing project of rock drilling vehicle with less than two arms
2. Rock-loading machine (except vertical-claw rock-loading machine) manufacturing project
3. Manufacturing project of small mining car of below 3 cubic meters
4. Manufacturing project of winch with a diameter of below 2.5 m
5. Manufacturing project of mine lifter with a diameter of below 3.5 m
6. Sieving machine manufacturing project of below 40 sq. m
7. Manufacturing project of cyclone with a diameter of below 700 mm
8. Manufacturing project of coal winning machine of below 800 kilowatt
9. Manufacturing project of mining grab with a bucket capacity of 3.5 cubic-meters
10. Manufacturing project of mixing, concentration and filter equipment
11. Agricultural transportation vehicle project (tricar and low-speed lorry)
12. Single-cylinder diesel manufacturing project (except advanced 2nd generation of single-cylinder machine)
13. Manufacturing project of tractor of below 50 horsepower
14. Manufacturing project of normal burning-coal power generation equipment of below 300 000 kilowatt
15. Electric cable and cable wire manufacturing project (except special cable and super high voltage cable of above 500 kilovolt)
16. Manufacturing project of ordinary metal cutting machine tool (except numerical-controlled machine tool)
17. Manufacturing project of ordinary electric spark processing machine tool and linear cutting processing machinery tool (except numerical-controlled machine tool)
18. Manufacturing project of ordinary machinery pressure machine of below 6300 kilo N
19. Manufacturing of ordinary clip plate machine, bending machine
20. Ordinary high-speed steel aiguille, milling cutter, saw, dorners and plate tooth
21. Brown jade, green silicon carbide, black carbon silicon agglomerate block and milling material manufacturing project
22. Manufacturing project of grinding wheel with a diameter of below 400 mm



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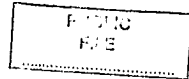
23. Manufacturing project of artificial diamond cutting saw with a diameter of below 400 mm
24. Manufacturing project of ordinary micro ball-shaped bearing
25. Manufacturing project of resin insulation dry transformer of 10-35 kilovolt
26. Manufacturing project of 220 kilovolt and high, medium and low-pressure switch cabinet
27. Manufacturing project of ordinary welding bar
28. Manufacturing project of ordinary ammeter
29. Manufacturing project of ordinary low-grade standard fastening piece of below 8.8 grade
30. Manufacturing project of dynamic compressor of below 100 cubic meters
31. Ordinary transportation dry container project
32. Manufacturing project of screw compressor of below 20 cubic meters
33. Manufacturing project of single-class split pump of below 56 inch
34. Manufacturing project of medium and low-pressure carbon steel valve of 10 Mpa and below

(XII) Vessel

1. Large-scaled civil ship-building facilities projects which are not among the list of the long-term plan of national ship-building industry (refer to those dock, shipway and accessory ship-building facilities which can build ship with 0.1 million tons load tonnage or above and the width of the dock and the shipway is equal to or wider than 42 m)
2. Diesel engine manufacturing projects for ships which are not among the list of the long-term plan of the national ship-building industry

(XIII) Light industry

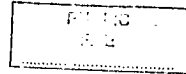
1. Deepfreeze, freeze cooler, refrigerating & freezing equipments (refrigerator, freezer) projects which can not meet the national standard of "The maximum allowable values of the energy consumption and Energy efficiency grades for household refrigerators"
2. Washer projects which can not meet the national standard of "The maximum allowable values of the energy consumption and Energy efficiency grades for electric



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washers"

3. Air conditioner projects which can not meet the national standard of "The maximum allowable values of energy efficiency and its grades for room air conditioners"
4. Production projects of low quality paper and cardboard
5. Production line of PVC common artificial leather
6. Production line of super-thin (thinner than 0.015 mm) plastic bag
7. Tanning project with annual tanning capacity below 0.1 million pieces (accounted by standardized cowhide piece)
8. Production line of incandescent lamp with single-coil filament with productive speed slower than 1500 pieces per hour
9. Production line of common medium speed industrial flat seamer series
10. Production line of common medium speed industrial cup seaming machine series
11. Project of electronic price computing scale (the accuracy is lower than 1/3000 of the maximum metage, metage $\leq$ 15 kg)
12. Project of electronic truck scale (the accuracy is lower than 1/3000 of the maximum metage, metage $\leq$ 300 tons)
13. Project of electronic static railroad track scale (the accuracy is lower than 1/3000 of the maximum metage, metage $\leq$ 150 tons)
14. Project of electronic dynamic railroad track scale (the accuracy is lower than 1/500 of the maximum metage, metage $\leq$ 150 tons)
15. Project of belt scale (the accuracy is lower than 5/1000 of the maximum metage)
16. Project of hanging scale (the accuracy is lower than 1/1000 of the maximum metage, metage $\leq$ 50 tons)
17. Project of spring dial scale (the accuracy is lower than 1/400 of the maximum metage, metage $\leq$ 8 kg)
18. Project of two-piece aluminium easy open can
19. Production line of glass refill of common vacuum flask
20. Production line of glass bottles with annual productive capacity below 20000 tons
21. Project of synthetic fatty alcohol (including oxo alcohol, AEO, excluding lipin hydrogenation alcohol)



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22. Production line of sodium tripolyphosphate with annual productive capacity below 30000 tons
23. Project of paste-type Zn-Mno<sub>2</sub> cell
24. Project of Ni-Cd cell
25. Project of common open lead/acid storage battery
26. Project of toothpaste with annual productive capacity below 2000 tons
27. Project of crude sugar production
28. Project of sea salt with annual productive capacity below 1 million tons in the north of China; project of newly-built salt field in the south of China; project of mine salt with annual productive capacity below 0.6 million tons; project of lake salt with annual productive capacity below 0.2 million tons
29. Production line of distilled spirit
30. Production line of alcohol (exclusive ethanol for fuel)
31. Production line of monosodium glutamate with traditional process and technology
32. Production line of chemosynthetic sweetening agents, such as glucide

(XIV) Textile

1. 74 dyeing and finishing production line

(XV) Tobacco

1. Project of cigarette processing (exclusive reconstructing project)

(XVI) Fire fighting

1. Project of automatic fire alarm equipment
2. Project of fire extinguisher
3. Project of baking soda powder extinguishing agent
4. Project of fire door
5. Project of fire hose
6. Project of fire hydrant (indoor and outdoor)

7. Project of common fire-fighting vehicle (tank type, special use type)

(XVII) Others

1. Project of urban main road with the width of the red line (including virescence zone) exceeding the following standards: small city and key town: 40 m; medium-sized city: 55m; large city: 70 m (a special explanation should be available in the urban general plan as for the superlarge city with population over 2 million when the red line of its main road exceeds 70 m)
2. Project of urban amusement and gathering square with the land area exceeding the follow standard: small city and key town: 1 hectare; medium-sized city: 2 hectare; large city: 3 hectare; superlarge city with population over 2 million: 5 hectare
3. Real estate project of villa
4. Project of golf course
5. Project of race track

**III. Catalogue of Eliminated Investment Industries**

*Note: The year in the bracket after the clause is the eliminated period. If the eliminated period is 2006, it means the elimination shall take place by the end of 2006, and the rest shall be based on this principle; the items with elimination plan shall be eliminated as planned; the items without eliminated period or eliminated plan specified refer to those that have been explicitly eliminated or will be eliminated immediately according to the industrial policy of the country.*

**I. Backward processing equipment**

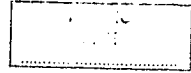
**(I) Agriculture and forestry**

1. Wet-process fiber board production technology (2006)
2. Indigenous method rosin production technology (2006)

**(II) Coal**

1. Coalmines that have been constructed without following the well field scope and well type as defined by the deposit area as approved.
2. Coalmines without mining license, safety production license, business license, qualification certificate for Coalmine Director or Coal production license.





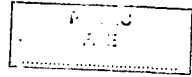
3. Various small coal mines within the scope of state-owned coal mine area (the scope confirmed as per state-owned coal mine registration)
4. Mine (apart from rather thin coal bed) with the type of pit of single pit lower than 30000t/year
5. High-sulfur (sulfur content more than 3%) coal production pits that have no measures to remove sulfur or users meeting the requirements for discharge
6. High-ash coal (cash content more than 40%) mines that can not be used on the spot
7. 6AM, φM-2.5 and PA-3 type coal flotation machines
8. PB2, PB3 and PB4 type explosion insulated high pressure switch applied in coalmine
9. PG-27 vacuum filter
10. X-1 box filter compressor
11. ZYZ and ZY3 hydraulic support
12. Wooden support

(III) Power

1. Regular coal-fired feed-water power unit with the capacity of single unit being 100000kW or below in the coverage scope of major grid upon the expiration of service life of the unit.
2. Regular small coal-fired power unit with the capacity with the capacity of single unit being 50000kW or below
3. Oil-fired boiler focusing on power generation and power unit (50000kW or below)

(IV) Petroleum, natural gas and chemical industry

1. Petroleum and gas field without mining license and failing to conform to the general development and planning of the country's petroleum and gas resources
2. Refined oil production equipment failing to meet the national standard in safety and environmental protection
3. Small oil refining production equipment with the production capacity of gasoline, kerosene and diesel reaching 1 million ton/year or below (2005).
4. Sulphuric acid production equipment based-on pyrite roasting with capacity of



below 40000t/year (2005)

5. Diagonal tyre production line with annual production capacity of 500000 tyres or below, or the tyre production line with natural cotton cord fabrics as framework

6. Dry compounding ingredients--carbon black production line with capacity of 10000t/year or below

7. Yellow phosphorous production line with capacity of 1000t/year or below

8. Roasting chromium compounds with calcium (with the capacity of single line being below 10000t/year (2006)

9. Oil refining by indigenous methods

10. Mercury alkali production

11. Below 5000 kV (below 10000t/year) calcium carbide stove and open type calcium carbide stove

12. Calcium carbide stove that fails to meet the requirements for discharge

13. Iron powder reduction process

14. Ammonium and sodium process used to produce sodium cyanide and cyanide fusing mixtures process

15. Sodium process paraquat production process at high- and -medium-temperature

16. Pesticide product manual packing (filling) technology

17. Graphite anode membrane process alkali production

18. KDON-6000/6600 cold storage flow separation equipment

19. Resin production process used for directly heated paint

20. CFCs production equipment (eliminated according to the general planning of the international convention the country shall fulfill)

21. The major production process for CTC (eliminated according to the general planning of the international convention the country shall fulfill)

22. The production process of all the products with CTC as processing aid (eliminated according to the general planning of the international convention the country shall fulfill)

23. Fluorine polymer production process with CFC-113 as processing aid (eliminated according to the general planning of the international convention the country shall fulfill)

24. 1,1,1-trichloroethane (methyl chloroform) production equipment used to rinse (eliminated according to the general planning of the international convention the country shall fulfill).
25. Methyl bromine production equipment (eliminated according to the general planning of the international convention the country shall fulfill)
26. Saponin (including hydrolysate) production equipment with capacity of below 100t/year (2007)
27. Saponin production process by hydrochloric acid simplified method and saponin production equipment that fails to meet the requirements for pollutant discharge
28. Paint production process including DDT (eliminated according to the general planning of the international convention the country shall fulfill).
29. Non-closed dicofol production process with DDT as raw material (eliminated according to the general planning of the international convention the country shall fulfill)

(V) Steel

1. Coking by indigenous method (including improved coke oven)
2. Coke oven in the coking room not higher than 4.3m (apart from tamping coke oven in the coking room 3.2m high or above) (in 2007; 2009 in western regions)
3. Sintering process
4. Sintering ore
5. Below 30 m2 sintering machine (2005)
6. 100m3 and below blast furnace
7. 100 ~ 200 m3 (including 200m3) blast furnace (excluding ferroalloy blast furnace) (2007)
8. 200 ~ 300 m3 (including 300m3) blast furnace (excluding the blast furnaces in specialized cast iron pipe plants) (2007)
9. Industrial frequency and medium frequency induction ovens used to produce "Ditiao" steel, steel ingot or continuous casting
10. Converters (excluding ferroalloy converters) with capacity of 15t and below
11. Electric ovens (excluding mechanically cast electric ovens) with capacity of 10t and below

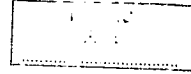
12. Steel-making on molten pig iron
13. Converters (excluding ferroalloy converters) with capacity of 15-20t (2005)
14. Converters (excluding ferroalloy converters) with capacity of 20t (2006)
15. Electric ovens (excluding high alloy steel and mechanically cast electric ovens) with capacity of 10-20t (2005)
16. Electric ovens (excluding high alloy steel and mechanically cast electric ovens) with capacity of 20t (2006)
17. Double due wire rolling mill
18. Open-train wire rolling mill
19. Small-section open-train rolling mill
20. Tight rolling thin sheet mill
21. Steel blooming mill and medium rolling mill used to open hearth-blooming
22. Hot rolled narrow strip steel mill
23. Three-roll Lauth rolling mill
24. Hot rolled seamless pipe mills with diameter below 76mm
25. Three-roll wire rolling mill (excluding the production of special steel) (2005)
26. Metallurgical furnace failing to meet the requirements for environmental protection (2005)
27. Manual bituminizing device, kiln manually operated and mixed burning with ore material and solid material under natural ventilation condition, and coal-fired reverse flame kiln that fails to meet the requirements for smoke and dust purification (2005).
28. Ore smelting arch electric furnace of 3200kVA or below, semi-closed DC electric reduction furnace below 3000kVA, refining electric furnace (apart from electric furnace made from such special materials as Si-Ca alloy, electric furnace manganese metal, Si-Al alloy, Si-Ca-Ba alloy, Tu-Fe, and Va-Fe)
29. Ferroalloy ore smelting arch electric furnace below 5000kVA (2005)
30. Steam heating mixing, reverse flame baking furnace, AC graphitizing furnace, graphitizing furnace below 3340kVA and its parallel connected units, and graphitizing furnace with maximum output current below 50000A (2005)

(VI) Non-ferrous metals

1. Without approval from the authority of the State Council or mining license, mine exploitation and preparation projects focusing on specific ores such as Tu, Sn, Sb and ion-type rare earth, which are exploited under the protective policy of the country.
2. Tu, Sn, Sb and ion-type rare earth smelting projects and TU processing (including hard alloy) projects established without approval from the authority of the State Council.
3. Zn refining or producing Zinc oxide products with backward means, bake with Muffle, manger furnace, traverse pot, and small perpendicular pot etc, and collect dust with simplified condensation facilities.
4. Hg refining with such backward means as iron pot, clay kitchen range, distillation can, crucible furnace, and simplified condensation dust collection facilities.
5. Arsenic trioxide refining or producing metal arsenic products with pit furnace or crucible furnace and simplified condensation dust collection facilities.
6. Aluminum self-baking electrobath
7. Closed blast furnace copper smelting process and facilities with hearth area of 1.5m<sup>2</sup> or below
8. Closed blast furnace copper smelting process and facilities with hearth area of 1.5-10m<sup>2</sup> (2006)
9. Closed blast furnace copper smelting process and facilities with hearth area of 10m<sup>2</sup> or above (2007)
10. Electric furnace and reverberator copper smelting process and facilities (2006)
11. Dry purification with acid-making system by using smelting gas and hot concentrated acid washing technology
12. Dual type non-ferrous metal rolling mill (2006)
13. Antimony refining with such backward means as pit furnace, crucible furnace and hess furnace
14. Lead refining technology and facilities with such backward means as sintering pot, sintering pan, and simplified blast furnace
15. Recycled aluminum alloy and recycled lead melting technology with crucible furnace (2005)

(VII) Gold

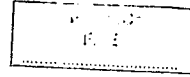
1. Gold-extracting from gold-mercury compound process



2. Tank retting, small heap leaching, small-scaled melting
3. Mining and processing project without gold mining certificate and mining license approved by the administrative department of the State Council

(VIII) Building material

1. Production line of vertical drawing plate glass with six sets or below
2. Production line of plate glass common colburn process and Checher Method colburn production line with daily melting capacity below 100 tons
3. Production line of cement mechanized vertical kiln with kiln diameter of 2.2 m or below
4. Production line of cement plastic weaving sacks without complex film
5. Production lines of building ceramic tiles of medium & low quality with annual production capacity of 0.7 million m<sup>2</sup> or below as well as ceramic sanitary wares of low quality with annual production capacity of 0.2 million articles
6. Production line of paper-surfaced gypsum board with annual production capacity of 4 million m<sup>2</sup> or below
7. Production line of modified asphalt coiled materials with annual production capacity of 2 million m<sup>2</sup> or below (2006)
8. Cement dry hollow kiln with diameter of 2.5 m or below (exclusive special cement)
9. Cement grinding equipments with diameter below 1.83 m
10. Cement kiln (egg-shape) and common vertical kiln
11. To build sanitary ceramic kiln, reverse flame kiln, kiln with many holes, coal open flame tunnel kiln, muffle tunnel kiln, saggar sanitary ceramics tunnel kiln
12. Friction press for building ceramic tile
13. Lime soil vertical kiln
14. Wiring drawing production process and equipments for clay crucible glass fibre
15. Soil kilns including annular kiln with bricks and tiles less than 18, vertical kiln, annular kiln without roof, horse-foot shape kiln
16. Common tile press of 400 type or below
17. Common tile press of 450 type (2006)
18. SJ1580-3000 single-shaft or double-shaft mixer



19. SQP400500-700500 double-roller crusher
20. Common cutting machine of 1000 type
21. Discal tile press with capacity below 100 tons
22. Production line of man-made wallboard
23. Easy and mobile block shaping machine, attached type vibrating shaping platform (2005)
24. Concrete stabilized brick shaping machine with single shift production capacity of 10000 m3 or below, concrete stabilized paving brick shaping machine with single shift of below 0.1 million m2
25. Gypsum block (hollow) production process by means of manual placing and non-mechanical shaping
26. Production line of paper-based asphalt felt with annual production capacity below 1 million rolls
27. Production process equipment of quartz glass by means of vacuum process and one-step gas refining process
28. To produce artificial diamond by small-scaled hexa-orientation press with productive capacity of 6x600 tons
29. Production line of artificial cutting and auto-claved maintaining and aerated concrete
30. Non-mechanical and non-metal mining without mining license or is inconsistent with requirement of environmental protection and safe production

(IX) Medicine

1. Manual capsule filling process
2. Medicine packaging process by means of waxed cork stopper
3. Ampoule drawing, filling & sealing machine which is inconsistent with the requirement of GMP
4. Tower-type steam heavy distilling apparatus
5. Sirocco dry box without cleaning equipment
6. Production apparatus for raw material medicine which can not meet the requirement of national standards on labor protection and "three wastes treatment (waste water, gas and residues)" (2006)

(X) Machinery

1. Heat treatment lead bath furnace
2. Heat treatment BaCl<sub>2</sub> salt bath furnace (high-temperature BaCl<sub>2</sub> salt bath furnace, being retained temporarily)
3. TQ60, TQ80 tower-type crane
4. QT16, QT20, QT25 easy and derrick tower-type crane
5. KJ1600/1220 single bucket elevator
6. Common palm corundum refining furnace below 3000 KV.A
7. Carborundum furnace below 3000 KV.A
8. Obligatory drive type easy elevator
9. Cut tobacco expansion production line with CFCs as bulking agent (will fall into disuse according to the general plan carried out by China required by International Treaty)

(XI) Light industry

1. Production apparatus of vacuum salt, lake salt and North sea salt with annual productive capacity of 50000 tons or below
2. Solar salt making production equipments by making use of mine brine, water of oil-gas field
3. South sea salt production equipments with annual production capacity of 10000 tons or below
4. Tanning production equipment with annual processing capacity of 30000 pieces (with cowhide as standard) or below
5. Printing ink production equipments with annual productive capacity below 300 tons (exclusive those of high-tech and non-pollution)
6. Soda drink production line with productive capacity of less than 100 bottles per minute (the volume of the bottle is 250 ml or below)
7. Chemical pulping production line with annual productive capacity of 17000 tons or below
8. Straw pulp production equipment with annual productive capacity below 34000

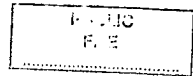


tons (2007)

9. Polyurethane foaming plastic products with CFCs with vesicant, foaming plastic production process extracting from polythene and polystyrene (will fall into disuse according to the general plan carried out by China required by International Treaty)
10. Production line of refrigerator, ice locker, automobile air-condition, and cold storage and refrigeration for industry and commerce with CFCs as vesicant or refrigerant (will fall into disuse according to the general plan carried out by China required by the International Treaty)
11. Production process with CTC as cleaning agent (will fall into disuse according to the general plan carried out by China required by the International Treaty)
12. Production process with CFC-113 as cleaning agent (will fall into disuse according to the general plan of the International Treaty carried out by China)
13. Production process with TCA as cleaning agent (will fall into disuse according to the general plan carried out by China required by the International Treaty)
14. Bicycle salt bath welding furnace
15. Stannum welding process in the industry of printing iron tin
16. Match splint lining and removing production process
17. Match splint arranging, lining and removing machine
18. Impact nail making machine
19. Knocking type wire loom

(XII) Textile

1. Spinning frame produced before 1949
2. All spinning frame with 1 word
3. A512, A513 series of spinning frame produced in 1979 or before
4. B581, B582 worsted spinning frame
5. BC581, BC582 slub spinning frame
6. B591 wool spinning frame
7. Various national-made wool spinning frame with use limit exceeding 20 years
8. B601, B610A twisting machine

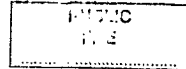


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9. Leather embosser with length shorter than 1000 mm (exclusive long staple seed processing)
10. Sawtooth embosser with saw blade thickness below 80
11. Cotton baling press with pressure tonnage below 200 tons
12. I332SD spooler
13. BC272, BC272B sectional comb
14. B701A wool hank reel
15. B311C, B311C ( CZ ), B311C ( DJ ) combing machine
16. 1511M-105 loom
17. K251, K251A silk loom
18. Z114 small jacquard
19. GE186 jacquard terry-looping machine
20. Z261 artificial fur machine
21. LMH551 flat screen printing machine
22. LMH 551 rotary screen printing machine
23. LMH303, 303B, 304, 304B-160 hot melt dyeing machine
24. LMH731-160 hot flue clip stenter
25. LMH722M-180, LMH722D-180 short loop drying and heat setting range
26. ZD647, ZD721 automatic reeling machine
27. D101A automatic reeling machine
28. ZD681 vertical reeling machine
29. DJ561 thin silk spinning frame

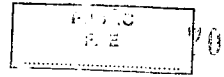
(XIII) Printing

1. All hot type process
2. All lead print process
3. ZD201, ZD 301 series of individual typesetting machine
4. TH1 automatic line caster

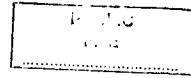


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5. ZT102 series of line caster
6. ZDK101 matrix engraving machine
7. ZDK101 matrix knife grinder
8. AZP502 half-auto Chinese manual hot-metal typesetting machine
9. ZSY101 half-auto Chinese hot-metal typesetting machine
10. TZP101 foreign language slot hot-metal typesetting machine
11. ZZP101 Chinese auto hot-metal typesetting machine
12. QY401,2QY404 series of electric lead print proof press
13. QYSH401,2QY401,DY401 manual lead print proof press
14. YX01,YX02,YX03 series of matrix moulding press
15. HX01,HX02,HX03,HX04 series of matrix dryer
16. PZB401 flat leading autoplate
17. JB01 flat leading plate casting machine
18. YZB02, YZB03, YZB04, YZB05, YZB06, YZB07 series of leading autoplate
19. RQ02,RQ03,RQ04 series of lead pump lead melting furnace
20. BB01 shaving machine
21. YGB02, YGB03, YGB04, YGB05 curved stereotype scraping machine
22. YTB01 stereotype machine
23. YJB02 stereotype sawing machine
24. YXB04, YXB05, YXB302 series of stereotype plate repairing machine
25. P401, P402 series of quarto platen press
26. P801, P802, P803, P804 octavo platen press
27. PE802 double hinge printing machine
28. TE102, TE105, TE108 series of sheet-fed two-revolution press
29. TY201 bisect single-color one-revolution press
30. TY401 quarto single-color one-revolution press
31. TY4201 quarto double-color one-revolution press
32. TT201, TZ201, DT201 bisect hand-fed stop-cylinder press



33. TT202 bisect auto stop-cylinder press
34. TZ202 bisect half-auto stop-cylinder press
35. TZ401,TZS401,DT40 quarto half-auto stop-cylinder press
36. TT402,TT403,TT405,DT402 quarto auto stop-cylinder press
37. TR801 series of vertical press
38. LP1101,LP1103 series of plate sheet-fed single-side rotary press
39. LP1201 plate sheet-fed double-side rotary press
40. LP4201 plate quarto double-color rotary press
41. LSB201 ( 880×1230mm ) and LS201,LS204 ( 787×1092mm )series of reel- rotary press for books and periodicals
42. LB203,LB205,LB403 reel- rotary press for newspapers
43. LB2405,LB4405 reel- rotary press with double layers and two sets
44. LBS201 reel-rotary press for both books and newspapers
45. K.M.T auto hot-metal typesetting machine
46. PH-5 typesetter for Chinese characters
47. Cronapress proofing plate making machine (DIA PRESS cleaning machine)
48. National-produced plate making camera before 1985
49. Manual phototypesetting produced before 1985
50. Centrifugal coater
51. J1101 series of sheet-fed single-color offset (with printing speed of 4000 pieces or below per hour)
52. J2101,PZ1920 series of bisect single-color offset(with printing speed of 4000 pieces or below per hour)
53. PZ1615 quarto single-color offset (with printing speed of 4000 pieces or below per hour)
54. YPS1920 series of double-side single-color offset (with printing speed of 4000 pieces or below per hour)
55. W1101 sheet-fed auto gravure press
56. AJ401 web single-side four-color gravure press
57. DJ01 paper-cover adhesive binding gathering machine



58. PRD-01, PRD-02 paper-cover adhesive binding gathering machine
59. DBT-01 paper-cover gathering machine for binding, packaging and ironing with string
60. Solvent type wipe-on coating laminating machine
61. QZ101, QZ201, QZ301, QZ401 slitter
62. MD103A knife grinder

(XIV) Fire fighting

1. Production process of electric component by manual socket welding for fire detectors

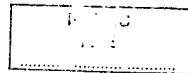
(XV) Others

1. Electroplating process with cyanogens (electroplating gold, silver, copper based alloy and backing process with copperizing ( $\text{NaCN}:\text{Cu}=0.6-0.8:1$ , it is retained temporarily)
2. Zn sediment process with cyanogens

III. Backward products

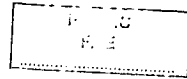
(I) Petroleum, natural gas and chemical product

1. PCBs (pesticide)
2. Nitrofen (pesticide)
3. Chlordimeform (pesticide)
4. Chlordane (pesticide)
5. Heptachlor (pesticide)
6. Tetramine
7. Monofluoroacetamide
8. Sodium fluoroacetate
9. Dibromochloropropane
10. Sulfotep (Suhua 203)



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11. Dimecron
12. Gliftor, silatrane
13. 107 dope
14. Modified starch dope
15. Modified fiber dope
16. Water dopes for indoor fitment and decoration with content of VOC exceeding 200g/l or the content of dissociating formaldehyde exceeding 0.1g/l (including those for building and wooden furniture)
17. Dopes for indoor fitment and decoration with dissoluble metal lead content exceeding 90mg/kg, or cadmium content exceeding 75mg/kg, or chrome content exceeding 60mg/kg, hydrargyrum content exceeding 60mg/kg (including those for building and wooden furniture)
18. Solvent type wooden furniture dope for indoor fitment and decoration with content of VOC exceeding 700g/l or the content of dissociating isocyanate exceeding 0.7%
19. Vinyl alcohol water glass interior wall dope (106 interior wall dope)
20. Multicolored interior wall dope (O/W dope with nitrocellulose as main resin, xylene as main solvent)
21. Latex of chloroethylene and PVDC as exterior wall dope
22. Tar polyurethane waterproof dope
23. Water type tar polyurethane waterproof dope
24. Vinyl alcohol and its acetals as interior and exterior wall dope
25. Vinyl acetate latex (including EVA latex) as exterior wall dope
26. PVC water-proof and joint material for building
27. Benzidine and benzidine azo dye
28. Bicycle tyre with soft edge structure
29. DDT (will fall into disuse according to the general plan carried out by China required by the International Treaty)
30. Hexachlorobenzene (will fall into disuse according to the general plan carried out by China required by the International Treaty)
31. Dechlorane mirex (will fall into disuse according to the general plan carried out



by China required by the International Treaty)

(II) Railway

1. C50 open wagon
2. P50 covered wagon
3. N60 flat wagon
4. G50 light oil tank
5. Diesel locomotive of Dongfeng 1,2,3

(III) Steel

1. "Ditiao" steel produced in line frequency furnace and intermediate frequency furnace, steel ingot or continuous casting billet in line frequency furnace and intermediate frequency furnace as well as steel products with them as raw materials
2. Hot-rolled silicon steel sheet
3. 25A hollow shaped steel window material
4. I-grade thread extension steel reinforcing bar products (2005)

(IV) Non-ferrous metal

1. Copper rod (black)

(V) Building material

1. Hollow lath of GRC made of non-alkali resistant glass fiber or non or low alkali cement
2. Pottery pot drawing glass fiber reinforcing plastic products
3. 25A hollow steel window
4. S-2 concrete sleeper
5. Closestool with more than 9 liter water for washing once
6. Hornblende asbestos (blue asbestos)
7. Common double-layer glass plastic door and window as well as single-chamber

plastic door and window

8. Polypropylene compound water-proof roll material, polycot glass fibre gridding compound tyre and PVC water-proof roll material (S type) by adopting second heating compound shaping process

(VI) Medicine industry

1. Lead and stannum ointment tube

2. Ampoule for powder and injection preparation packaging

3. Medicinal natural rubber caps (injection: penicillin (sodium salt, sylvine), basic transfusion fall into disuse immediately, the other injection with large volume will be eliminated till the end of 2005)

4. Straight-neck ampoule

(VII) Machinery

1. T100, T100A bulldozer

2. ZP-II, ZP-III dry-type concrete injector

3. WP-3 digger

4. Pneumatic rock grab with grabbing capacity below 0.35 m<sup>3</sup>

5. Wire rope impact drill for mine

6. By-40 petroleum drill

7. Water gas producer with diameter of 1.98m

8. CER sylphon series

9. Thermocouple (graduation number LL-2, LB-3, EU-2, EA-2, CK-)

10. Resistance thermometer sensor (graduation number BA, BA2, G)

11. DDZ-I process electric control system -computing unit

12. GGP-01A belt weigher

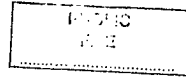
13. BLR-31 load cell

14. WFT-081 radiation sensor

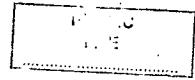
15. WDH-1E, WDH-2E photoelectric thermometer



16. BC series differential gauge with single bellow
17. LCH-511, YCH-211, LCH-311, YCH-311, LCH-211, YCH-511 round measuring differential gauge
18. EWC-01A long map electric potentiometer
19. PYS digital thermometer
20. XQWA bar self-poise indicator
21. ZL3 X-Y recorder
22. DBU-521, DBU-521C liquid transmitter
23. JO2, JO3 series small sized asynchronous motor
24. JDO2, JDO3 series three-phase asynchronous motor with various speeds and capability of polarity changing
25. YB series flame-proof three-phase asynchronous motor (Machine No. 63-355mm, with voltage of 660 V or below)
26. DZ10 series plastic shell breaker
27. DW10 series frame breaker
28. CJ8 series AC contactor
29. QC10, QC12, QC8 series starter
30. JR0, JR9, JR14, JR15, JR16-A, B, C, D series thermal relay
31. Series of rotary DC arc welder driven by motor
32. GGW series intermediate coreless induction furnace
33. B and BA centrifugal pump of type of single - stage & single way suction and cantilever series
34. Anti-corrosive pump of type of single-stage & single way suction
35. GC low voltage boiler feed pump
36. JD long axial pump for deep well
37. KDON-3200/3200 cold over full low pressure process separation equipment
38. KDON-1500/1500 cold over (tube-type) full low pressure process separation equipment
39. KDON-1500/1500 tube-plate type full low pressure process separation equipment
40. 3W-0.9/7 air compressor (annual valve)



41. C620,CA630 common lathe
42. X920 keyseating milling machine
43. B665,B665A,B665-I shaping machine
44. D6165 EDM shaping machine
45. D6185 EDM shaping machine
46. D5540 electropulse lathe
47. J53-400 twin disc friction pressing machine
48. J53-630 twin disc friction pressing machine
49. J53-1000 twin disc friction pressing machine
50. Q11-1.6x1600 plate-cutting machine
51. Q51 automobile crane
52. TD62 fixed belt conveyor
53. Trolley motor for underwell mine use
54. A571 single-beam crane
55. 4146 diesel engine
56. High speed circuit breaker: DS3-10, DS3-30, DS3-50  
( 1000,3000,5000A,DS10-10,DS10-20, DS10-30 ( 1000,2000,3000A )
57. BX1-135,BX2-500 AC arc welder
58. AX1-500,AP-1000 DC arc welding electric generator
59. SX series box type electric resistance furnace
60. Single-phase watthour meter: DD1, DD5, DD5-2, DD5-6, DD9, DD10, DD12, DD14, DD15, DD17, DD20, DD28
61. SL7-30/10 ~ SL7-1600/10,S7-30/10 ~ S7-1600/10 distribution transformer
62. Knife switch: HD6, HD3-100, HD3-200, HD3-400, HD3-600, HD3-1000, HD3-1500
63. Boiler feed pump: DG270-140,DG500-140,DG375-185
64. Thermal power drain valve: S15H-16, S19-16, S19-16C, S49H-16, S49-16C, S19H-40, S49H-40, S19H-64, S49H-64
65. Vertical furnace with fixed water pipe with capacity of 0.4-0.7 tons/ hour  
(exclusive furnace with fixed double-layer furnace)



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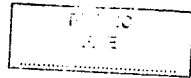
66. Reciprocating air compressor for drive use: 1-10/8, 1-10/7
67. High-pressure centrifugal ventilator: 8-18 series, 9-27 series
68. X52, X62W 320x150 knee and column milling machine
69. J31-250 mechanical press
70. TD60, TD72 fixed belt conveyor
71. Agricultural vehicle with single-cylinder diesel engine as drive equipment without installing oil limiter (refer to production and sale)
72. E135 two-stroke medium-speed diesel engine (including the three types with 2, 4, 6 cylinders respectively)
73. TY1100 single-cylinder vertical water-cooled, direct injection diesel engine
74. 165 single-cylinder horizontal evaporated water-cooled, prechamber diesel engine
75. Vehicles undertaken illegal retrofitting or reaching end-life

(VIII) Light industry

1. Hydrargyrum cell (mercuric oxide primary cell & batteries, silver oxide cell)
2. Disposable foamed plastic dishware
3. Direct venting gas water heating
4. Potassium dichromate match
5. Spiral swivel lifting (cast iron) water mouth
6. Aniline printing ink for granure
7. Upper-transmitted vertical-drop closetool-water tank fittings with water inlet lower than the surface of overflow port
8. Cast iron break valve

(IX) Textile

1. H112, H112A wool
2. B751 wool balling machine
3. 1332 series spooler



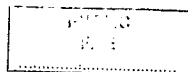
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**(X) Fire fighting**

1. Fire extinguishing agent-Bromochloro difluoromethane (Abbreviated 1211 fire extinguisher) (2005)
2. Fire extinguishing agent of bromotrifluoromethane (Abbr.1301 fire extinguisher) (2010)
3. Plain type 1211 fire extinguisher
4. Portable 1211 fire extinguisher (2005)
5. Wheeled 1211 fire extinguisher (2005)
6. Portable chemical foam fire extinguisher
7. Portable soda-acid fire extinguisher

**(XI) Others**

1. 59, 69, 72, TF-3 gas mask



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# 中华人民共和国国家发展和改革委员会令

第 40 号

《产业结构调整指导目录(2005 年本)》已经国务院批准, 现予以发布, 自发布之日起施行。

# 马凯

国家发展和改革委员会主任:

二〇〇五年十二月二日

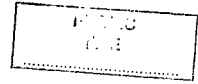
## 产业结构调整指导目录(2005 年本)

### 第一类 鼓励类

#### 一、农林业

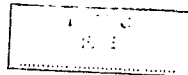
1. 粮食中低产田综合治理与稳产高产基本农田建设
2. 国家级农产品基地建设
3. 蔬菜、花卉无土栽培
4. 优质、高产、高效标准化栽培和养殖技术开发及应用
5. 重大病虫害及动物疾病防治
6. 农作物、家畜、家禽及水生动植物、野生动植物遗传工程及基因库建设
7. 动植物优良品种选育、繁育、保种和开发
8. 种(苗)脱毒技术开发及应用

- 9.旱作节水农业、保护性耕作、生态农业建设、耕地质量建设以及新开耕地快速培肥技术开发
- 10.生态种(养)技术开发与应用
- 11.农用薄膜无污染降解技术及农田土壤重金属降解技术开发及应用
- 12.绿色无公害饲料及添加剂研究开发
- 13.内陆流域性大湖资源增殖保护工程
- 14.远洋渔业
- 15.奶牛养殖
- 16.牛羊胚胎(体内)及精液工厂化生产
- 17.农业克隆技术研发
- 18.耕地保养管理与土、肥、水速测技术开发
- 19.农、林作物种质资源保护地、保护区建设以及种质资源收集、保存、鉴定、开发和应用
- 20.农作物秸秆还田与综合利用(包括青贮饲料、秸秆氨化养牛、还田、气化、培育食用菌等)
- 21.农村可再生资源综合利用开发工程(沼气工程、生态家园等)
- 22.平垸行洪退田还潮恢复工程
- 23.食(药)用菌菌种培育
- 24.草原、森林灾害综合治理工程
- 25.利用非耕地的退耕(牧)还林(草)及天然草原植被恢复工程
- 26.动物疫病的新诊断试剂、疫苗及低毒低残留新药开发
- 27.高产牧草人工种植



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- 28.天然橡胶种植生产
- 29.无公害农产品及其产地环境的有害元素监测技术开发及应用
- 30.有机废弃物无害化处理及有机肥料产业化技术开发及应用
- 31.农牧渔产品的无公害、绿色生产技术开发及应用
- 32.农林牧渔产品储运、保鲜、加工及综合利用
- 33.天然林等自然资源保护工程
- 34.植树种草工程及林木种苗工程
- 35.水土保持综合技术开发及应用
- 36.生态系统恢复与重建工程
- 37.森林、野生动植物、湿地、荒漠、草原等类型自然保护区建设及生态示范工程
- 38.防护林工程
- 39.石漠化防治及防沙治沙工程
- 40.固沙、保水、改土新材料生产
- 41.抗盐与耐旱植物的培植
- 42.速生丰产林工程、工业原料林工程及名特优新经济林建设
- 43.竹藤基地建设及竹藤新产品生产技术开发
- 44.中幼林抚育工程
- 45.野生经济林树种保护、改良及开发利用
- 46.珍稀濒危野生动植物保护工程
- 47.林业基因资源保护工程
- 48.次小薪材、沙生灌木和三剩物的深度加工及系列产品开发
- 49.野生动植物种源繁育、培植基地及疫源疫病监测预警体系建设



50.地道中药材和优质、丰产、濒危或紧缺动植物药材的种(养)殖

51.香料、野生花卉等林下资源的人工培育及开发

52.木基复合材料的技术开发

53.竹质工程材料、植物纤维工程材料生产及综合利用

54.林产化学品深加工

55.人工增雨防雹等人工影响天气技术开发和应用

## 二、水利

1.大江、大河、大湖治理及干支流控制性工程

2.跨流域调水工程

3.水资源短缺地区水源工程

4.农村人畜饮水及改水工程

5.蓄滞洪区安全建设

6.海堤防维护及建设

7.江河湖库清淤疏浚工程

8.病险水库和堤防除险加固工程

9.堤坝隐患监测与修复技术开发应用

10.城市积涝预警和防洪工程

11.出海口门整治工程

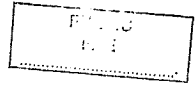
12.综合利用水利枢纽工程

13.牧区水利工程

14.淤地坝工程

15.水利工程用土工合成材料及新型材料开发制造





- 16.大中型灌区改造及配套设施建设
- 17.防洪抗旱应急设施建设
- 18.高效输配水、节水灌溉技术及设备制造
- 19.水情水质自动监测及防洪调度自动化系统开发
- 20.水文数据采集仪器及设备制造

### 三、煤炭

- 1.煤田地质及地球物理勘探
- 2.120万吨/年及以上的高产高效煤矿(含矿井、露天)、高效选煤厂建设
- 3.矿井灾害(瓦斯、煤尘、矿井水、火、围岩等)防治
- 4.工业及生活用环保型煤开发及生产
- 5.水煤浆技术开发及应用
- 6.煤炭气化、液化技术开发及应用
- 7.煤层气勘探、开发和矿井瓦斯利用
- 8.低热值燃料(含煤矸石)及煤矿伴生资源开发利用及设备制造
- 9.管道输煤
- 10.煤炭高效洗选脱硫技术开发及应用
- 11.节水型选煤工程技术开发及应用
- 12.地面沉陷区治理、矿井水资源保护及利用
- 13.煤电、煤焦化(焦炉煤气、煤焦油深加工)一体化建设
- 14.提高资源回收率的采煤方法、工艺开发应用及装备制造

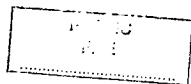
### 四、电力

- 1.水力发电

- 2.单机 60 万千瓦及以上超临界、超超临界机组电站建设
- 3.采用 30 万千瓦及以上集中供热机组的热电联产，以及热、电、冷多联产
- 4.缺水地区单机 60 万千瓦及以上大型空冷机组电站建设
- 5.风力发电及太阳能、地热能、海洋能、生物质能等可再生能源开发利用
- 6.燃气蒸汽联合循环发电
- 7.30 万千瓦及以上循环流化床、增压流化床、整体煤气化联合循环发电等洁净煤发电
- 8.单机 20 万千瓦及以上采用流化床锅炉并利用煤矸石或劣质煤发电
- 9.500 千伏及以上交、直流输变电
- 10.投运发电机组脱硫改造
- 11.城乡电网改造及建设
- 12.继电保护技术、电网运行安全监控信息技术开发
- 13.大型电站及大电网变电站集约化设计和自动化技术开发
- 14.跨区电网互联工程技术开发
- 15.输变电新技术推广应用
- 16.降低输、变、配电损耗技术开发及应用
- 17.分散供电技术开发及应用

## 五、核能

- 1.铀矿地质勘查和铀矿采冶
- 2.低温核供热堆、快中子增殖堆、聚变堆、先进研究堆、高温气冷堆
- 3.核电站建设
- 4.高性能核燃料元件制造



#### 5.乏燃料后处理

#### 6.核分析、核探测仪器仪表制造

#### 7.同位素、加速器及辐照应用技术开发

#### 8.先进的轴同位素分离技术开发

#### 9.辐射防护技术开发与监测设备制造

#### 10.核设施实体保护仪器仪表开发

### 六、石油、天然气

#### 1.石油、天然气勘探及开采

#### 2.天然气水合物勘探开发

#### 3.原油、天然气、成品油的储运和管道输送设施及网络建设

#### 4.油气伴生资源综合利用

#### 5.提高油气田采收率、生产安全保障技术和设施、生态环境恢复与污染防治工程技术开发和应用

#### 6.放空天然气回收利用

### 七、钢铁

#### 1.黑色金属矿山接替资源勘探及关键勘探技术开发

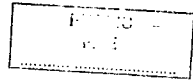
#### 2.炭化室高度6米以上、宽500毫米以上配干熄焦、装煤、推焦除尘装置的新一代大容积机械化焦炉建设

#### 3.煤捣固炼焦、配型煤炼焦工艺技术应用

#### 4.干法熄焦、导热油换热技术应用

#### 5.120万吨/年以上大型链篦机回转窑和带式球团焙烧机等氧化球团生产

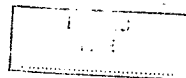
#### 6.15万吨/年及以上直接还原法炼铁



- 7.先进适用的熔融还原技术开发及应用
- 8.废钢加工处理(分类、剪切和打包,不含炼钢)
- 9.合金钢大方坯、大型板坯、圆坯、异型坯及近终型连铸技术开发及应用
- 10.现代化热轧宽带钢轧机关键技术开发应用及关键部件制造
- 11.薄板坯连铸连轧关键技术开发应用及关键部件制造
- 12.高强度钢生产
- 13.高速重载铁路用钢生产
- 14.石油开采用油井管、电站用高压锅炉管及油、气等长距离输送用钢管生产
- 15.H型钢、400MPa及以上螺纹钢筋生产
- 16.冷连轧宽带钢关键技术开发应用及关键部件制造
- 17.冷轧硅钢片生产
- 18.控制轧制、控制冷却工艺技术应用
- 19.直径550毫米以上超高功率石墨电极生产
- 20.大型高炉用微孔、超微孔炭砖生产
- 21.优质合成、不定形耐火材料生产
- 22.铁合金新工艺、新技术开发应用
- 23.全燃煤气热电联产
- 24.蓄热式燃烧技术应用
- 25.冶金综合自动化技术应用

#### 八、有色金属

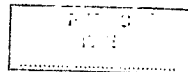
- 1.有色金属矿山接替资源勘探及关键勘探技术开发
- 2.铜、铝、铅、锌、镍大中型矿山建设



3. 紧缺资源的深部及难采矿床开采
4. 硫化矿物无污染强化熔炼工艺开发及应用
5. 高效萃取设备和工艺技术开发
6. 高精铜板、带、箔、管材生产及技术开发
7. 高精铝板、带、箔及高速薄带铸轧生产技术开发与设备制造
8. 轨道交通用高性能金属材料制造
9. 有色金属复合材料技术开发及应用
10. 高性能、高精度硬质合金及深加工产品和陶瓷材料生产
11. 稀有、稀土金属深加工及其应用
12. 锡化合物、锑化合物（不含氧化锑）生产
13. 高性能磁性材料制造
14. 超细粉体材料、电子浆料及其制品生产
15. 非晶合金薄带制造
16. 新型刹车材料制造
17. 高品质镁合金铸造及板、管、型材加工技术开发
18. 有色金属生产过程检测和控制技术开发
19. 焙烧、热压预氧化和细菌氧化提金工艺技术开发及应用

## 九、化工

1. 化工原料矿产资源勘探及大中型化工原料矿山建设
2. 资源节约和环保型氮肥装置建设以及原料本地化、经济化改造
3. 优质磷复肥、钾肥及各种专用复合肥生产
4. 高效、低毒、安全新品种农药及中间体开发生产



- 5.用清洁生产技术和改造无机化工生产装置
- 6.环保型涂料生产
- 7.新型生物化工产品、专用精细化学品和膜材料生产
- 8.新型高效、无污染催化剂开发及生产
- 9.有机硅、有机氟及高性能无机氟化工产品生产
- 10.无机纳米及功能性材料生产
- 11.新型染料及其中间体开发及生产
- 12.大型芳烃生产装置建设
- 13.提高油品质量的炼油及节能降耗装置改造
- 14.大型乙烯建设(东部及沿海80万吨/年及以上、西部60万吨/年及以上)及现有乙烯改扩建
- 15.大型合成树脂及合成树脂新工艺、新产品开发
- 16.大型己内酰胺、乙二醇、丙烯腈的生产技术开发和成套设备制造
- 17.大型合成橡胶、合成胶乳和热塑性弹性体先进工艺开发、新产品制造
- 18.新型环保型油剂、助剂等纺织专用化学品生产
- 19.复合材料、功能性高分子材料、工程塑料及低成本化、新型塑料合金生产
- 20.采用先进工艺技术的大型基本有机化工原料生产
- 21.高等级道路沥青、聚合物改性沥青和特种沥青生产
- 22.低硫含酸重质原油综合利用
- 23.合成树脂加工用新型助剂、新型吸附剂、高性能添加剂和复配技术开发
- 24.20万吨/年及以上氧氯化法制聚氯乙烯
- 25.氯化法钛白粉生产

26.高等级子午线轮胎及配套专用材料、设备生产

27.醇醚燃料生产

#### 十、建材

1.日产 4000 吨及以上 (西部地区日产 2000 吨及以上) 熟料新型干法水泥生产及装备和配套材料开发

2.新型节能环保墙体材料、绝热隔音材料、防水材料 and 建筑密封材料、建筑涂料开发生产

3.优质环保型摩擦与密封材料生产

4.3 万吨/年及以上无碱玻璃纤维池窑拉丝技术和高性能玻璃纤维及制品技术开发与生产

5.优质节能复合门窗及五金配件生产

6.新型管材 (含管件) 技术开发制造

7.优质浮法玻璃生产技术、装备和节能、安全平板玻璃深加工技术开发

8.一次冲洗用水量 6 升及以下的坐便器、节水型小便、蹲便器及节水控制设备开发生产

9.高新技术和环保产业需求的高纯、超细、改性等精细加工矿物材料生产及其技术装备开发制造

10.新型干法水泥和新型墙体材料等建材产品生产中消纳工业废弃物、城市垃圾和污泥的无害化与资源化关键技术及装备开发

11.玻璃纤维增强塑料制品 (玻璃钢) 机械化成型技术开发

12.散装水泥装备技术开发

13.高性能混凝土用外加剂技术开发与生产



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14.50万吨/年及以上人工砂生产线及其技术装备开发生产

15.100万吨/年及以上大型水泥粉磨站建设

16.20万立方米/年及以上大型石材荒料、30万平方米/年以上超薄复合石材生产

17.高品质人工晶体材料生产技术开发

## 十一、医药

1.具有自主知识产权的新药开发与生产

2.重大传染病防治疫苗和药物开发与生产

3.新型诊断试剂及生物芯片技术开发与生产

4.新型计划生育药物及器具开发与生产(含第三代孕激素的避孕药,第三代宫内节育器等)

5.天然药物、海洋药物开发与生产

6.制剂新辅料开发与生产

7.关键医药中间体开发与生产

8.医药生物工程新技术、新产品开发

9.新型药物制剂技术开发与应用

10.大规模药用多肽和核酸合成、发酵生产、纯化技术开发和应用

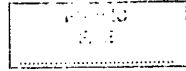
11.药物生产中的膜技术、超临界萃取技术、手性技术及自控技术等开发和应用

12.原料药清洁生产工艺开发与应用

13.新型药用包装材料及其技术开发

14.中药现代化(濒危稀缺药用动植物人工繁育技术开发;先进农业技术在中药材规范化种植、养殖中的应用;中药有效成份的提取、纯化、质量控制新技术开发和应



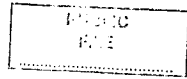


用；中药现代剂型的工艺技术、生产过程控制技术和装备的开发与应用；中药饮片  
创新技术开发和产业化)

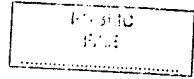
15. 少数民族医药开发生产
16. 数字化医学影像产品及医疗信息技术开发与制造
17. 早期诊断医疗仪器设备开发制造
18. 微创外科和介入治疗装备及器械开发制造
19. 医疗急救及康复工程技术装置开发生产
20. 实验动物养殖
21. 微生物开发利用

## 十二、机械

1. 数控机床关键零部件及刀具制造
2. 三轴以上联动的高速、精密数控机床，数控系统及交流伺服装置、直线电机制造
3. 新型传感器开发及制造
4. 轿车轴承、铁路轴承、精密轴承、低噪音轴承制造
5. 转轮直径 8.5 米及以上混流、轴流式水电设备及其关键配套辅机制造
6. 大型贯流及抽水蓄能水电机组及其关键配套辅机制造
7. 60 万千瓦及以上超临界及超超临界火电机组成套设备技术开发、设备制造及其关键配套辅机制造
8. 30 万千瓦及以上循环流化床锅炉制造
9. 40 万千瓦级以上燃气、蒸汽联合循环设备制造
10. 大型、精密、专用铸锻件技术开发及设备制造
11. 500 千伏及以上超高压交、直流输变电成套设备制造



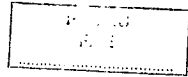
- 12.清洁能源发电设备制造(核电、风力发电、太阳能、潮汐等)
- 13.30万吨/年及以上合成氨成套设备制造
- 14.60万吨/年及以上乙烯成套设备制造技术开发及应用
- 15.集散型(DCS)控制系统及智能化现场仪表开发及制造
- 16.精密仪器开发及制造
- 17.新型液压、气动、密封元器件及装置制造
- 18.自动化焊接设备技术开发及设备制造
- 19.大型、精密模具及汽车模具设计与制造
- 20.可控气氛及大型真空热处理技术开发及设备制造
- 21.安全生产及环保检测仪器设计制造
- 22.城市垃圾处理设备制造
- 23.粉煤灰储运、利用成套设备制造
- 24.废旧电器、塑料、废旧橡胶回收利用设备制造
- 25.海水淡化和海水直接利用设备制造
- 26.工业机器人及其成套系统开发制造
- 27.500万吨/年及以上矿井综合采掘、装运成套设备及大型煤矿洗选机械设备制造
- 28.2000万吨级/年及以上大型露天矿成套设备制造
- 29.大型油气集输设备制造
- 30.自动化高速多色成套印刷设备制造
- 31.种、肥、水、药高效施用和保护性耕作等农机具制造
- 32.5吨/时以上种子加工成套设备开发制造
- 33.禽、畜类自动化养殖成套设备制造



- 34. 设施农业设备制造
- 35. 农、林、渔、畜产品深加工及资源综合利用设备制造
- 36. 秸秆综合利用关键设备制造
- 37. 农业(棉花、水稻、小麦、玉米、豆类、薯类、草饲料等)收获机械制造
- 38. 营林及人工植被工业化生产设备制造技术开发
- 39. 大型工程施工机械及关键零部件开发及制造
- 40. 电控内燃机及关键零部件技术开发与制造
- 41. 蓄冷(热)技术开发及设备制造
- 42. 大型能量回收装置成套设备设计制造
- 43. 7000米及以上深井钻机成套设备设计制造
- 44. 高性能清淤设备制造
- 45. 医疗废物集中处理设备制造
- 46. 自动气象站系统技术开发及设备制造
- 47. 特种气象观测及分析设备制造
- 48. 地震台站、台网和流动地震观测技术系统开发及仪器设备制造
- 49. 地质灾害监测治理新技术及设备研发
- 50. 有害气体净化设备制造
- 51. 食品质量安全检验检测相关技术及设备
- 52. 报废汽车拆解、破碎处理设备制造

### 十三、汽车

- 1. 汽车、摩托车整车及发动机、关键零部件系统设计开发



2.自动变速箱、重型汽车变速箱等汽车关键零部件及具有自主知识产权(品牌)的先进、适用汽车、发动机制造

3.汽车轻量化及环保型新材料制造

4.汽车重要部件的精密锻压、多工位压力成型及铸造

5.汽车、摩托车型式试验及维修用检测系统开发制造

6.压缩天然气、氢燃料、合成燃料、液化石油气、醇醚类燃料汽车和混合动力汽车、电动汽车、燃料电池汽车等新能源汽车整车及关键零部件开发及制造

7.先进的小排量经济型乘用车、集装箱运输车、多轴大型专用车辆

8.先进的轿车用柴油发动机开发制造

9.城市用低底盘公共汽车开发制造

#### 十四、船舶

1.高技术、高性能、特种船舶和10万吨级及以上大型船舶设计及制造

2.万吨级及以上客船、客滚船、滚装船、客箱船、火车渡船制造

3.5000立方米及以上液化石油气(LPG)、液化天然气(LNG)船制造

4.3000标准箱(TEU)及以上集装箱船制造

5.船用动力系统、电站、特辅机制造

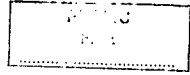
6.大型远洋渔船及海上钻井船、钻采平台、海上浮式生产储油轮等海洋工程装备制造制造

7.船舶控制与自动化、通讯导航、仪器仪表等船用设备制造

#### 十五、航空航天

1.飞机及零部件开发制造

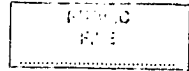
2.航空发动机开发制造



- 3.机载设备系统开发制造
- 4.直升机总体、旋翼系统、传动系统开发制造
- 5.航空航天用新型材料开发及生产
- 6.航空航天用燃气轮机制造
- 7.卫星、运载火箭及零部件制造
- 8.航空、航天技术应用及系统软硬件产品、终端产品开发生产
- 9.航空器地面模拟训练系统开发制造
- 10.航空器地面维修、维护、检测设备开发制造
- 11.卫星地面系统建设及设备制造

#### 十六、轻工

- 1.符合经济规模的林纸一体化木浆、纸和纸板生产
- 2.高新技术制浆造纸机械成套设备开发制造
- 3.非金属制品模具设计、加工、制造
- 4.生物可降解塑料及其系列产品开发
- 5.农用塑料节水器材和农用多层薄膜开发、生产
- 6.高技术陶瓷(含工业陶瓷)产品及装备技术开发
- 7.陶瓷清洁生产技术开发及应用
- 8.光、机、电子一体缝制机械及特种工业缝纫机开发制造
- 9.天然香料、合成香料新技术开发和产品制造
- 10.新型、生态型(易降解、易回收、可复用)包装材料研发、生产
- 11.新型塑料保温板、大口径塑料管材(直径0.5米以上)、超低噪音排水塑料管、防渗土工膜、医用塑料等新型塑料产品开发、制造



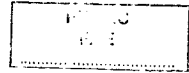
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12. 高新、数字印刷技术及高清晰度制版系统开发及应用
13. 高技术绿色电池产品制造 ( 无汞碱锰电池、氢镍电池、锂离子电池、大容量密封型免维护铅酸蓄电池、燃料电池、锌空气电池、太阳能电池 )
14. 少数民族特需用品制造
15. 天然食品添加剂原料及生产技术开发应用
16. 无元素氯 ( ECF ) 和全无氯 ( TCF ) 化学纸浆漂白工艺开发及应用

#### 十七、纺织

1. 高档纺织品生产、印染和后整理加工
2. 采用化纤高仿真加工技术生产高档化纤面料
3. 各种差别化、功能化化学纤维、高技术纤维生产
4. 纤维及非纤维用新型聚酯(聚对苯二甲酸丙二醇酯、聚萘二酸乙二醇酯、聚对苯二甲酸丁二醇酯等)生产
5. 符合生态、资源综合利用与环保要求的特种天然纤维 ( 包括除羊毛以外的其他动物纤维、麻纤维、竹纤维、桑蚕丝、彩色棉花等 ) 产品加工
6. 采用高新技术的产业用特种纺织品生产
7. 新型高技术纺织机械及关键零部件制造
8. 高档地毯、抽纱、刺绣产品生产
9. 采用计算机集成制造系统的高档服装生产
10. 利用可再生资源的新型纤维 ( 聚乳酸纤维、溶剂法纤维素纤维、动植物蛋白纤维等 ) 生产
11. 纺织、纺机企业生产所需检测、试验仪器开发制造

#### 十八、建筑



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- 1.节能省地型建筑暨绿色建筑的开发
- 2.高层建筑与空间结构技术开发
- 3.低噪声建筑施工机具开发与制造
- 4.住宅高性能外围护结构材料与部件制造
- 5.新型建筑结构系统开发
- 6.建筑隔震减震结构体系及产品研发与推广
- 7.建筑节能、节能、节地及节材关键技术开发
- 8.智能建筑产品与设备的生产制造与集成技术研究
- 9.居住及公共建筑集中采暖按热量计量技术应用
- 10.商品混凝土、商品砂浆及其施工技术开发

#### 十九、城市基础设施及房地产

- 1.城市基础空间信息数据生产及关键技术开发
- 2.城市公共交通建设
- 3.城市道路及智能交通体系建设
- 4.城市交通管制系统技术开发及设备制造
- 5.城镇地下管道共同沟建设
- 6.城镇给排水管网工程、供水水源及净水厂工程
- 7.城镇燃气工程
- 8.城镇集中供热建设和改造工程
- 9.城市雨水收集利用工程
- 10.节能、低污染取暖设备制造
- 11.城镇园林绿化及生态小区建设

- 12.城市立体停车场建设
- 13.先进适用的建筑成套技术、产品和住宅部品研发和推广
- 14.燃气汽车加气站工程
- 15.城市建设管理信息化技术开发
- 16.城市生态系统关键技术开发
- 17.城际快速、城市轨道交通(经国家批准)系统开发、建设及车辆制造
- 18.城市节水技术开发与应用
- 19.城市照明智能化、绿色照明产品及系统技术开发
- 20.国家住宅示范工程建设

## 二十、铁路

- 1.铁路新线建设
- 2.既有线路提速及扩能
- 3.客运专线、高速铁路系统技术开发及建设
- 4.机车同步操纵、列车电空制动(ECP)、25吨及以上轴重货运重载技术开发
- 5.铁路行车及客运、货运安全保障系统技术与装备开发
- 6.编组站自动化、装卸作业机械化设备制造
- 7.铁路运输信息系统开发
- 8.铁路集装箱运输系统开发与建设
- 9.交流传动机车、动车组、高原机车、机车车辆救援设备制造及技术开发
- 10.交流传动核心元器件制造(含IGCT、IGBT元器件)
- 11.时速200公里及以上铁路接触网、道岔、牵引供电技术开发与设备制造
- 12.电气化铁路牵引供电功率因数补偿技术开发





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13. 铁路线路检测、机车车辆监测技术开发与设备制造
14. 大型养路机械、多用途养路机械、轨道检测设备、工务专用设备开发制造
15. 行车调度指挥自动化技术开发
16. 混凝土结构物修补和提高耐久性技术、材料开发
17. 高速磁悬浮交通系统技术及材料开发与应用
18. 铁路旅客列车集便器及污物地面接收、处理工程

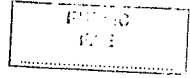
## 二十一、公路

1. 国道主干线、西部开发公路干线、国家高速公路网项目建设
2. 公路智能运输系统开发与建设
3. 公路快速客货运输系统开发与建设
4. 公路管理信息系统开发与建设
5. 公路工程新材料开发及生产
6. 公路工程及养护新型机械设备设计制造
7. 公路集装箱和厢式运输
8. 特大跨径桥梁修筑和养护技术开发

9. 长大隧道修筑和维护技术开发
10. 农村客货运输网络开发与建设
11. 农村公路建设

## 二十二、水运

1. 深水泊位（沿海万吨级、内河千吨级）建设
2. 出海深水航道及内河干线航道建设、通航建筑物建设
3. 大型港口装卸自动化工程



- 4.海运电子数据交换系统开发
- 5.水上安全保障系统和救助打捞装备建设与开发
- 6.内河航运及船型标准化
- 7.港口、深水航道及航电枢纽建设所需特种工程机械设备设计制造
- 8.集装箱多式联运及水上集装箱运输
- 9.水上高速客运
- 10.原油、成品油、天然气船舶运输
- 11.船舶溢油监测及应急消除系统建设开发
- 12.水上滚装多式联运及水路大宗散货运输
- 13.水运行业信息系统建设
- 14.国际邮轮运输

### 二十三、航空运输

- 1.机场建设
  - 2.公共航空运输
  - 3.通用航空
- 
- 4.空中交通管制和通讯导航系统建设
  - 5.航空器维修
  - 6.航空计算机管理及其网络系统开发与建设
  - 7.航空油料设施建设
  - 8.航空特种车辆、货场设备、仓储设备、货物集装器、高性能机场安检设备、高性能机场消防设备开发与制造
  - 9.海上空中监督巡逻和搜救设施建设

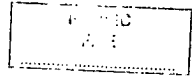
#### 二十四、信息产业

1. 2.5GB/S 及以上光同步传输系统建设
  2. 155MB/S 及以上数字微波同步传输设备制造及系统建设
  3. 卫星通信系统、地球站设备制造及建设
  4. 网管监控、七号信令、时钟同步、计费等通信支撑网建设
  5. 数据通信网设备制造及建设
  6. 智能网等新业务网设备制造及建设
  7. 宽带网络设备制造及建设
  8. 数字蜂窝移动通信网建设
  9. IP 业务网建设
  10. 邮政储蓄网建设
  11. 邮政综合业务网建设
  12. 邮件处理自动化工程
  13. 卫星数字电视广播系统建设
  14. 增值电信业务平台建设
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15. 32 波及以上光纤波分复用传输系统设备制造
  16. 10GB/S 及以上数字同步系列光纤通信系统设备制造
  17. 支撑通讯网的新技术设备制造
  18. 同温层通信系统设备制造
  19. 数字移动通信 ( 含 GSM-R )、接入网系统、数字集群通信系统及路由器、网关等网络设备制造
  20. 大中型电子计算机及高性能微机、工作站、服务器设备制造

- 21. 线宽 1.2 微米以下大规模集成电路设计、制造
- 22. 大规模集成电路装备制造
- 23. 新型电子元器件 ( 片式元器件、频率元器件、混合集成电路、电力电子元器件、光电子元器件、敏感元器件及传感器、新型机电元件、高密度印刷电路板和柔性电路板等 ) 制造
- 24. 电子专用材料制造
- 25. 软件开发生产
- 26. 计算机辅助设计 ( CAD )、辅助测试 ( CAT )、辅助制造 ( CAM )、辅助工程 ( CAE ) 系统开发生产
- 27. 电子专用设备、仪器、工模具制造
- 28. 大容量光、磁盘驱动器及其部件和数字产品用存储卡制造
- 29. 新型显示器件、中高分辨率彩色显像管/显示屏及玻壳制造及技术开发
- 30. 新型 ( 非色散 ) 单模光纤及光纤预制棒制造
- 31. 数字音视频广播系统设备制造
- 32. 高密度数字激光视盘播放机盘片制造

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- 33. 只读光盘和可记录光盘复制生产
- 34. 数字摄录机、数字录放机、数字电视产品制造
- 35. 普通纸传真机制造
- 36. 信息安全产品、网络监察专用设备开发制造
- 37. 数字多功能电话机制造
- 38. 6 英寸及以上单晶硅、多晶硅及晶片制造
- 39. 多普勒雷达技术及设备制造



40.汽车电子产品制造

41.医疗电子产品制造

42.金融电子设备制造及系统建设

43.无线局域网( Wi-Fi 短距离无线通信技术等) 技术开发、设备制造

44.电子商务和电子政务系统开发

45.卫星导航系统技术开发及设备制造

## 二十五、其他服务业

1.电子商务、现代物流服务体系建设及以连锁经营形式发展的中小超市、便利店、专业店等新型零售业态

2.粮食、棉花、食糖、食用油、化肥、石油等重要商品的现代化仓储等物流设施建设

3.现代化的农产品市场流通设施及农产品贸工农一体化设施建设

4.闲置设备、旧货、旧机动车调剂交易市场建设

5.中小企业社会化服务体系建设

6.农、林业社会化服务体系建设

7.租赁服务

8.后勤社会化服务

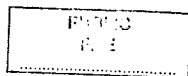
9.城市社区服务网点建设

10.房地产中介服务、物业管理服务

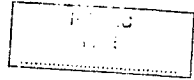
11.社会化养老服务

12.残疾人服务设施建设

13.基本医疗、计划生育、预防保健服务设施建设

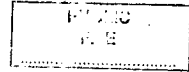


14. 血站建设
15. 远程医疗服务
16. 文化艺术、新闻出版、广播影视、大众文化、科普、体育设施建设和产业化运营
17. 文物保护及设施建设
18. 幼儿教育、义务教育、高中教育、高等教育、职业技术教育及特殊教育
19. 远程教育系统建设
20. 未成年人活动场所及儿童社会福利设施建设
21. 旅游基础设施建设及旅游信息服务系统开发
22. 工业旅游、农业旅游、森林旅游、生态旅游及其它旅游资源综合开发项目建设
23. 信用卡及其网络服务
24. 旅游商品、纪念品开发
25. 就业创业咨询、辅导、中介及培训服务
26. 国家级工程(技术)研究中心、国家认定的企业技术中心、重点实验室、高新技术创业服务中心、新产品开发设计中心、科研中试基地、实验基地建设
27. 科学普及、技术推广、科技交流、技术咨询、知识产权及气象、环保、测绘、地震、海洋、技术监督等科技服务
28. 经济、规划、工程、管理、会计、审计、法律、环保等咨询服务
29. 科学仪器、实验动物、化学试剂、文献信息等科研支撑条件共建共享服务
30. 商品质量认证和质量检测
31. 防伪技术开发和运用
32. 资信调查与评级服务体系建设
33. 动漫制作



二十六、环境保护与资源节约综合利用

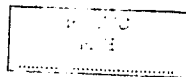
1. 矿山生态环境恢复工程
2. 海洋开发及海洋环境保护
3. 生物多样性保护工程
4. 微咸水、劣质水、海水的开发利用及海水淡化工程
5. 消耗臭氧层物质替代品开发与利用
6. 医疗废物处置中心建设
7. 危险废弃物处理中心建设
8. 区域性废旧汽车处理中心建设
9. 流出物辐射环境监测技术工程
10. 环境监测体系工程和新型环保技术开发应用
11. 放射性废物及其它危险废物安全处置技术及设备开发、制造
12. 流动污染源（火车、船舶、汽车等）防治技术开发及应用
13. 城市交通噪声与振动控制及材料生产
14. 电网、信息系统电磁辐射控制技术开发
15. 削减和控制二氧化硫排放的技术开发与应用
16. 持久性有机污染物类产品的替代品开发与应用
17. 废弃持久性有机污染物类产品处置技术开发与应用
18. “三废”综合利用及治理工程
19. “三废”处理用生物菌种和添加剂开发及生产
20. 含汞废物的汞回收处理技术开发应用及成套设备制造
21. 重复用水技术开发及设备制造与使用



22. 高效、低能耗污水处理与再生技术开发及设备制造
  23. 城镇垃圾及其他固体废物减量化、资源化、无害化处理和综合利用工程
  24. 废物填埋防渗膜生产
  25. 新型水处理药剂开发及生产
  26. 煤气、烟气除尘、脱硫、脱硝技术及装置开发、成套设备制造
  27. 墙体吸收噪声技术与材料开发
  28. 交流变频调速节能技术开发及应用
  29. 机动车、内燃机车节油技术开发及应用
  30. 新型节能环保家用电器和关键零部件生产及技术开发
  31. 节水、节能产品生产
  32. 用水监测仪器开发、生产
  33. 新型节能照明产品、生产技术开发和配套的材料、设备技术开发
  34. 节能、节水、环保及资源综合利用等技术开发、应用及设备制造
  35. 日产 2000 吨及以上熟料新型干法水泥生产余热发电
  36. 高炉、转炉、焦炉煤气回收及综合利用
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37. 高能耗、污染重的石油、石化、化工行业节能、环保改造
  38. 高效、节能采矿、选矿技术(药剂)及设备开发、成套设备制造
  39. 多元共生矿产资源综合利用
  40. 低品位、复杂、难处理矿开发及综合利用
  41. 尾矿、废渣等资源综合利用
  42. 再生资源回收利用产业化

## 第二类 限制类





## 一、农林业

- 1.天然草场超载放牧
- 2.单线 5 万立方米/年以下的高中密度纤维板项目
- 3.单线 3 万立方米/年以下的木质刨花板项目
- 4.1000 吨/年以下的松香生产项目

## 二、煤炭

- 1.单井井型低于以下规模的煤矿项目:山西、陕西、内蒙古 30 万吨/年;新疆、甘肃、宁夏、青海、北京、河北、东北及华东地区 15 万吨/年;西南和中南地区 9 万吨/年;开采极薄煤层 3 万吨/年
- 2.采用非机械化开采工艺的煤矿项目
- 3.设计的煤炭资源回收率达不到国家规定要求的煤矿项目
- 4.未经国家或省(区、市)煤炭行业管理部门批准矿区总体规划的煤矿项目

## 三、电力

- 1.除西藏、新疆、海南等小电网外,单机容量在 30 万千瓦及以下的常规燃煤火电机  
组

2.除西藏、新疆、海南等小电网外,发电煤耗高于 300 克标准煤/千瓦时的发电机组,  
空冷机组发电煤耗高于 305 克标准煤/千瓦时的发电机组

## 四、石油、天然气和化工

- 1.10 万吨/年以下及 DMT 法聚酯装置
- 2.7 万吨/年以下聚丙烯装置(连续法及间歇法)
- 3.10 万吨/年以下丙烯腈装置
- 4.10 万吨/年以下 ABS 树脂装置(本体连续法除外)