

CHINA

Vehicle data recorder

A Chinese company offers technology for a vehicle data recorder. This is a digital electronic recording device which is fixed on the vehicle and can record, store, show and print the travelling speed, time, mileage and other information relating to the safe operation of the vehicle.

The use of this data recorder can effectively stop traffic violations such as fatigue driving and speeding. It can also train drivers in good driving habits. Besides, it plays an important role in analyzing and identifying road traffic accidents, in improving the traffic management quality of law enforcement and transportation managers, and in guaranteeing the safe operation of vehicles.

Its records information on features such as:

- Stopping time;
- Real-time speed;
- Brake condition;
- Headlight;
- Door; and
- Others: Recorder servers, LCD, driver identification cards, printers (matching), U-disk data acquisition devices, computers, light IC card and keyboard.

Main functions:

Whole driving recording

The HT2003-1_B vehicle recorder can record the speed, start-stop time, the driver's licence number and driver code within 360 hours.

Speeding and fatigue driving suggestion

When a driver drives continuously for 3 hours (the specific time can be set through the PC management software - under national standards the maximum is three hours), or when the speed exceeds the maximum speed originally set, there will be a voice indication to this effect.

Recording and analyzing accident data

Records the vehicle speed, brakes, lights, door status and other related data of twenty seconds before stopping at 125ms intervals, providing an objective basis for the analysis of a traffic accident involving this vehicle.

Driver identification

Each driver has a card. The driver inserts the contactless IC card to verify his/her identity before driving. Drivers can also use a special USB Flash Disk as identity recognition (also

as a data acquisition). The recorder stores every driver's travelling record in different classes so that the management becomes easier, and the responsibilities of the drivers are clearer.

Display and printing functions

All data about the state of the vehicle can be displayed on the screen and can be printed by the portable mini-printer. With the help of PC management software, the printer can automatically generate and print the various statements and graphical data that users need.

Communication adapter

The recorder has two kinds of communication adapters: RS232 and USB. The PC can set the parameter and upload the data recorded through one of them. Through USB it can recognize identity and collect data.

Areas of application

Automobile industry;
Electronic industry; and
Traffic management.

Transfer forms

Technology transfer

CHINA

Electric bicycle and fitness equipment

A Chinese company has developed an electric bicycle that uses a brushless electric motor and sealed controller. With its patented technology, it is waterproof and very useful. According to the company, its superior technology and quality has made it the main force in the electric bicycle industry for years.

Both the electric running machines and magnetic-control fitness cycles can meet different exercise requirements. Both adopt the DSP digital magnetic control advanced technology as per global standards and are programmed for low noise and intelligent automation. Both products are equipped with a MP3 dynamic bass system that interacts with the LED light, bringing a fresh feeling to fitness exercise.

Areas of application

Electrical industry;
Electronic industry; and
Fitness equipment.

Transfer forms

Technology transfer

CHINA

Optoelectronic devices

A Chinese hi-tech enterprise offers the following: an optical passive device, a fibre-optic sensor, optical fibre communication equipment, and an optical fibre management system. It is mainly engaged in the research and development, the manufacturing and marketing of the following optical fibre products: DWDM, CWDM, fibre optic coupler, special fibre optic coupler, variable optical attenuator, optical switch, fibre optic connector, fibre optic adapter, optical receiver, optical emitter, optical amplifier, optical switch, ethernet transceiver, fibre optic sensor, and the fibre optic gyroscope widely used in the navigation system, positioning and orientation system, and control system, etc. All the above-mentioned products are manufactured, tested and verified strictly in the light of ITU and Telcordia standards. In order to satisfy the different needs of a wider range of customers at home and abroad, the company is developing a series of new passive devices such as FWDM, OADM, TAP, Insulator, WDM (fused bi-conical taper), and MEMS optical switches.

Areas of application

Electronics industry; opto-electronics; and the instrumentation industry.

Transfer forms

Technology transfer for select products, commercial agreement

INDIA

Microprocessor-based controlled unit for automated multi-electro-chemical protection system

An Indian research organization has developed a device for the use of monitoring multiple units of magnetic amplifiers for servomatic controls, or for silicon control rectifiers normally employed for automated electrochemical protection. The microprocessor compares the set potential with the cell potential value and switches on/off. The current through the SCR, at a very high speed, sequentially maintains the potential.

Areas of application

Electronic industry; and Electrochemical industry.

Economic data

The capital outlay for a unit capable of producing 150 nos. of 5A/50V micro-processor control unit is about INR 1 million. Cost of production per unit is about Rs. 30,000.

Transfer forms

Technology transfer

INDIA

Trimethyl phosphite (TMP)

An Indian research institute is offering technology for the manufacture of Trimethyl phosphite (TMP)

In this indigenously developed continuous process, phosphorous trichloride and methanol are reacted in the presence of a solvent and an acid scavenger like Triethyl amine to obtain Trimethyl phosphite and hydrogen chloride. The process is much simpler and cost effective. This process has been released to two parties, and one is in commercial production with a 10 tpd capacity.

Areas of applications

Chemical industry. A key intermediate in the manufacture of phosphatic pesticides like Monocrotophos, DDVP, etc. It is also used as a stabilizer for PVC neoprene and raw material in the production of fire resistant and fire retardant materials. It is used as a plasticizer in nylons and poly oxy phenylene. It is used as a catalyst in polymerization reaction and as a reagent in organic synthesis.

Transfer forms

Basic/Detail designs for commercial plant, commissioning assistance, performance guarantees in RM consumption, quality of product and capacity of the plant.

ITALY

Incineration plants for industrial wastes - solids, muds, liquids and gases

An Italian company offers plants to incinerate industrial solids, muds, liquids and gases or a combination of these. According to the company, this is its niche in the market, be-

cause to depure smokes from rotary or static kilns incinerating industrial wastes containing chlorine or other very pollutant elements is not easy. Usually, in these plants the heat is recovered to produce steam or hot oil.

The company has experience in the following plant capacities:

Solids or Muds = 500/1500 kg/h

Liquids = 200/1000 kg/h

Gases = 5,000/100,000 mc/h

Also, the company has experience in other plants to recover solvents or organics from several industrial processes. It has also provided plants to an Italy-based company producing activated carbon from almond shells to depure the pyrolysis gases coming from the pyrolysis oven, in order to make them suitable to feed the engines for an almond-shells based activated carbon production and electricity generation project.

Areas of application

Chemical industry; Machinery industry; Environment; and Industrial waste treatment.

Transfer forms

Turnkey plant; and Equipment supply.

SINGAPORE

Hardware solution to capture and optimize both digital and analog echocardiogram

A Singapore-based company has developed a hardware solution that captures and optimizes both a digital and analog echocardiogram.

It is claimed to be the world's first hardware solution that captures and optimizes both digital and analog echocardiograms

at record breaking ratios. Powered by ABO, echo-cardiograms are compressed 30-45 times, while traditional compression technologies are capable of only 7-10 times compression. More importantly, ABO optimizes such images in a lossless quality (no information is lost).

According to the company, with this system, doctors will be able to store and retrieve these images anywhere within their existing Local Area Network (LAN). They will no longer be required to store their archives in VHS tapes. This greatly increases their productivity and turnaround time as they will be able to access these images instantly on their workstations.

Also, significant materials cost savings will be derived from this switch to a full digital system.

Areas of application

Electronic industry; Computer industry; Medical diagnosis; and Telemedicine.

Advantages

Benefits to clinicians:

- Complete digital echocardiogram solution, making VHS archival obsolete;
- Breakthrough compression ratios of 30-45 times vs current standards of 7-10 times;
- Lossless quality (Audited by Ernst & Young, Australia);
- Significant cost savings, compared to current setup (US\$ 2.33 million);
- Faster retrieval of images due to high compression;
- Increased productivity of clinicians;
- Allows unlimited recording rather than the existing 10s loops; and
- Enables collaboration between doctors even beyond the local area network.

Transfer forms

Technology transfer; and Supply of the particular hardware solution.

Indian nanotechnology industry

Nanotechnology is expected to revolutionize industry and the lifestyle of people during this decade, just as computers did in the earlier decades. Nanotechnology refers to the production and application of devices and systems at the nanometer (nm) scale. The global demand for nanoscale materials, tools, and devices is expected to increase from an estimated US\$ 7.5 billion in 2003 to US\$ 28.7 billion in 2008 - an average annual growth of 30.6%. Indian nanotechnology is estimated to be US\$100 million and to grow at over 35% per year. The Government of India is planning for large investments in R&D through several initiatives, and private companies will exploit the technology for commercial benefits.

This report on Indian nanotechnology provides an insight into the industry, global trends and the Indian scenario. The Indian industry is analysed, taking into account the developments on the government front and in private corporations. The government support initiatives are classified under technology initiatives and nanotech research, where as corporate involvement is discussed around the associations and consortia formed. The technology is

categorized as nanomaterials, nanotools and nanodevices. The major players in the industry are profiled. The infrastructure facilities for R&D and educational purposes are listed. The growth drivers, issues and challenges and critical success factors are also analysed for the industry to facilitate investments. The regulatory environment pertaining to its application in various industries is discussed. The major past and upcoming events are also covered.

The report will be useful to industry. Benefits range from education and awareness to formulation of business, and competitive and alliance strategies. The report has been prepared from numerous sources - Publication of IPO documents, industry interactions, press releases by different players, websites, and proprietary and subscribed databases.

For more information, contact:

Research and Markets, Guinness Centre, Taylors Lane, Dublin 8, Ireland

Fax: (+353-1) 481 1716; E-mail: help@researchandmarkets.com

Web: <http://www.researchandmarkets.com>