CVD EQUIPMENT CORP
Form 10-K
March 31, 2010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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Form 10-K

(Mark One)

þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the fiscal year ended December 31, 2009

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the transition period from ____ to _____

Commission file number: 1-16525

CVD EQUIPMENT CORPORATION
(Name of Small Business Issuer in Its Charter)

New York	11-2621692
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

1860 Smithtown Avenue
Ronkonkoma, New York 11779
(Address including zip code of registrant's Principal Executive Offices)

(631) 981-7081
(Issuer's Telephone Number, Including Area Code)

Securities registered under Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, Par value $0.01	NASDAQ Capital Market

Securities registered under Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.	Yes o No þ
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.	Yes o No þ
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that	Yes þ No o

the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes o No þ

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and " smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	o	Accelerated filer	o	Non-accelerated filer	o	Smaller reporting company	þ

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No þ

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter: $9,248,873 at June 30, 2009.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 4,765,950 shares of Common Stock, $0.01 par value at March 25, 2010.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data file required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months/or for such shorter period that the registrant was required to submit and post such files. Yes o No o

DOCUMENTS INCORPORATED BY REFERENCE None.

PART I

INFORMATION CONCERNING FORWARD-LOOKING STATEMENTS

Except for historical information contained herein, this Report on Form 10-K contains forward–looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, as amended. These statements involve known and unknown risks and uncertainties that may cause our actual results or outcomes to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. These forward-looking statements were based on various factors and were derived utilizing numerous important assumptions and other important factors that could cause actual results to differ materially from those in the forward-looking statements. Important assumptions and other factors that could cause actual results to differ materially from those in the forward-looking statements, include, but are not limited to: competition in our existing and potential future product lines of business; our ability to obtain financing on acceptable terms if and when needed; uncertainty as to our future profitability, uncertainty as to the future profitability of acquired businesses or product lines, uncertainty as to any future expansion of the Company. Other factors and assumptions not identified above were also involved in the derivation of these forward-looking statements and the failure of such assumptions to be realized as well as other factors may also cause actual results to differ materially from those projected. We assume no obligation to update these forward-looking statements to reflect actual results, changes in assumptions, or changes in other factors affecting such forward-looking statements.

Item 1. Description of Business.

The use of the words “we,” “us” or “our” refers to CVD Equipment Corporation, a New York corporation incorporated on October 13, 1982, and its subsidiary, except where the context otherwise requires.

We design, develop and manufacture customized state-of-the-art equipment and process solutions used to develop and manufacture solar, nano and advanced electronic components, materials and coatings for research and industrial applications, with the focus on enabling tomorrow’s technologies™. We offer a broad range of chemical vapor deposition, gas control and other equipment that is used by our customers to research, design and manufacture semiconductors, solar cells, smart glass, carbon nanotubes, nanowires, LEDs, MEMS and industrial coatings, as well as equipment for surface mounting of components onto printed circuit boards. Through our Application Laboratory, we provide process development support and process startup assistance. Our proprietary products are generally customized to meet the particular specifications of individual customers and to accelerate the commercialization of their proprietary intellectual property. We also offer a number of standardized products that are based on the expertise and know-how we have developed in designing and manufacturing our customized products.

Based on more than 27 years of experience, we use our engineering, manufacturing and process development to transform our customers’ proprietary technology into leading-edge manufacturing solutions. This enables university, research and industrial scientists at the cutting edge of technology to develop next generation solar, nano, LEDs, semiconductors and other electronic components. We also develop and manufacture research and production equipment based on our proprietary designs. We have built a significant library of design expertise, know-how and innovative solutions to assist our customers in developing these intricate processes and to accelerate their commercialization. This library of solutions, along with our vertically integrated manufacturing facilities, allows us to provide superior design, process and manufacturing solutions to our customers on a cost effective basis.

In the fourth quarter of 2006, we began to implement a strategy to target opportunities in the research and development and production equipment market, with a focus on higher-growth applications such as solar and smart glass coatings, carbon nanotubes, nanowires, MEMS and LEDs. To expand our penetration into these growth markets, we started to introduce a line of proprietary standard products and systems. Historically, we manufactured products on a custom one-at-a-time basis to meet an individual customer’s specific research requirements. Our new

proprietary systems leverage the technological expertise that we have developed through designing these custom systems onto a standardized basic core. This core is easily adapted through a broad array of available add-on options to meet the diverse product and budgetary requirements of the research community. By manufacturing the basic core of these systems in higher volumes, we are able to reduce both the cost and delivery time for our systems. These systems, which we market and sell under the "EasyTube" product line, are sold to researchers at universities, research laboratories, and startup companies in the United States and throughout the world. In addition, we are focusing on developing and marketing proprietary solutions for high volume production equipment in the photovoltaic energy generation and passive energy saving (smart glass) markets.

Sales of our proprietary standard, custom systems and process solutions have been driven by building on the success of our installed customer base, which includes several Fortune 500 companies. Historically, revenues have grown primarily through sales to existing customers with additional capacity needs or new requirements, as well as to new customers. However, with the recent addition of proprietary solutions and our expanded focus on "accelerating the commercialization of tomorrow's technologies" we are now also developing an additional customer base. We have generally gained new customers through word of mouth, the movement of personnel from one company to another, limited print advertising and trade show attendance. We are now also gaining new customers by awareness of our company in the marketplace with results from our Application Laboratory, partnerships with startup companies, increased participation in trade shows and expanded internet advertising.

The core competencies we have developed in equipment and software design, as well as in systems manufacturing and process solutions, are used to engineer our finished products and to accelerate the commercialization path of our customer base. Our proprietary Windows-based, real-time, software application allows for rapid configuration, and provides our customers with powerful tools to understand, optimize and repeatedly control their processes. Our vertically integrated structure allows us to control the manufacturing process, from bringing raw metal and components into our manufacturing facilities to shipping out finished products. These factors significantly reduce cost, improve quality and reduce the time it takes from customer order to shipment of our products. Our recently expanded Application Laboratory allows selected customers to bring up their process tools in our Application Laboratory and to work together with our scientists and engineers to optimize process performance.

We conduct our operations through three divisions: (1) CVD, which includes our First Nano product line ("CVD/First Nano"); (2) Stainless Design Concept ("SDC"); and (3) Conceptronic, including the Research International product line ("Conceptronic/Research"). Each division operates on a day-to-day basis with its own operating manager while product development, sales and administration are managed at the corporate level.

Operating Divisions

CVD/First Nano is a supplier of state-of-the-art chemical vapor deposition systems for use in the research, development and manufacturing of semiconductors, LEDs, carbon nanotubes, nanowires, solar cells and a number of industrial applications. We utilize our expertise in the design and manufacture of chemical vapor deposition systems to work with laboratory scientists to bring state-of-the-art processes from the research laboratory into production, as well as to provide production equipment and process solutions based on our designs. CVD/First Nano also operates our Application Laboratory in a separate building where our personnel interact effectively with the scientists and engineers of our customer base.

SDC designs and manufactures ultra-high purity gas and chemical delivery control systems for state-of-the-art semiconductor fabrication processes, solar cells, LEDs, carbon nanotubes, nanowires, and a number of industrial applications. Our SDC products are sold on a stand-alone basis, as well as together with our CVD/First Nano systems. SDC operates out of a 22,000 square foot facility fitted with Class 10 and Class 100 clean room manufacturing space located in Saugerties, New York.

Conceptronic/Research designs and manufactures reflow ovens and rework stations for the printed circuit board assembly and semi-conductor packaging industries. Our equipment is designed to melt solder in a controlled process to form superior connections between components. This, in turn, creates complete electronic circuits for computers and telecommunication systems, as well as for the automotive and defense industries. To address pricing pressure in what is now a mature industry for standardized reflow ovens and the current economic downturn, we have begun to offer customized products for complex heating and drying applications.

Principal Products

Chemical Vapor Deposition - A process which passes a gaseous compound over a target material surface that is heated to such a degree that the compound decomposes and deposits a desired layer onto substrate material. The process is accomplished by combining appropriate gases in a reaction chamber, of the kind produced by the Company, at elevated temperatures (typically 300-1,800 degrees Celsius). Our Chemical Vapor Deposition systems are complete and include all necessary instrumentation, subsystems and components and include state-of-the-art process control software. We provide both standard and specifically engineered products for particular customer applications. Some of the standard systems we offer are for Silicon, Silicon-Germanium, Silicon Dioxide, Silicon Nitride, Polysilicon, Liquid Phase Epitaxial, Metalorganic Chemical Vapor Deposition, Carbon Nanotubes and Nanowires, Solar Cell research and Solar material quality control.

Our Chemical Vapor Deposition systems are available in a variety of models that can be used in laboratory research and production. All models are offered with total system automation, a microprocessor control system by which the user can measure, predict and regulate gas flow, temperature, pressure and chemical reaction rates, thus controlling the process in order to enhance the quality of the materials produced. Our standard microprocessor control system is extremely versatile and capable of supporting the complete product line and most custom system requirements. These Chemical Vapor Deposition systems are typically priced between $80,000 and $1,000,000.

Atmospheric Pressure Chemical Vapor Deposition Systems (“APCVD”). We currently have two patents pending for a proprietary smart glass coating system family which are being marketed under the trademark “CVDgCoat™” and are being developed for On-Line use with a float glass system, and Off-Line use to manufacture Low-E glass for energy efficient windows and transparent conductive oxide coatings (“TCO”) for solar cell manufacturing. System pricing including CVDgCoat™ technology can exceed $10,000,000.

Rapid Thermal Processing ("RTP") - Used to heat semiconductor materials to elevated temperatures of 1,000 degrees Celsius at rapid rates of up to 200 degrees Celsius per second. Our RTP systems are offered for implant activation, oxidation, silicide formation and many other processes. We offer systems that can operate both at atmospheric or reduced pressures. Our RTP systems are priced up to $600,000.

Annealing and Diffusion Furnaces - Used for diffusion, oxidation, implant anneal, solder reflow, solar cell manufacturing and other processes. The systems are normally operated at atmospheric and/or reduced pressure with gaseous atmospheres related to the process. An optional feature of the system allows for the heating element to be moved away from the process chamber allowing the wafers to rapidly cool or be heated in a controlled environment. Our cascade temperature control system enables more precise control of the wafers. The systems are equipped with an automatic process controller, permitting automatic process sequencing and monitoring with safety alarm provisions. Our annealing and diffusion furnace systems are priced up to $900,000.

Ultra-high Purity Gas and Liquid Control Systems - Our standard and custom designed gas and liquid control systems, which encompass, gas cylinder storage cabinets, custom gas and chemical delivery systems, gas and liquid valve manifold boxes and gas isolation boxes, provide safe storage and handling of pressurized gases and chemicals. Our system design allows for automatic or manual control from both a local and remote location. A customer order often includes multiple systems and can total up to $1,000,000.

Quartz ware - We provide standard and custom fabricated quartz ware used in our equipment and other customer tools. We also provide repair and replacement of existing quartz ware.

Convection Furnaces – We provide proprietary reflow ovens used by the printed circuit board assembly and semiconductor packaging industries.

Reflow Furnaces and Rework Stations – We provide standard and custom systems for the printed circuit board and surface mount technology industries. Our equipment is designed to melt solder in a controlled process to form superior connections between components, creating complete electronic circuits for computers and telecommunication systems, as well as for the automotive and defense industries.

Markets and Marketing

Due to the highly technical nature of our products, we believe it is essential to contact customers directly through our sales personnel and through a network of domestic and international independent sale representatives and distributors specializing in the type of equipment we sell. Our primary marketing activities include direct sales contacts, participation in trade shows and our internet websites. We are focusing our efforts on being in the top listings on many search engines in order to increase the number of "hits" to our websites.

Customers

We are continuing to work on expanding our product offerings. Many of these products are used in research and in production applications. We sell our products primarily to semiconductor manufacturers, institutions involved in semiconductor and electronic component research (such as universities, government and industrial laboratories) and to electronic assembly manufacturers. We have both an international and domestic installed customer base of approximately 200 customers to whom we have sold systems within the last three years.

For the twelve months ended December 31, 2009 approximately 14% of our revenues were generated from foreign exports compared to 23% for the twelve months ended December 31, 2008. Revenue to a single customer in any one year can exceed 10.0% of our total sales; however, we are not dependent on any single customer. In fiscal year 2009, one customer represented 9.2%, another customer represented 8.8% and each of two customers represented 5.3% and 5.2% of our annual revenues. In fiscal year 2008, one customer represented 7.3% and each of two customers represented 5.7% and 5.0% of our annual revenues.

Warranties

We warrant our equipment for a period of twelve to twenty four months after shipment, depending on the product, and pass along any warranties from original manufacturers of components used in our products. We provide for our own equipment servicing with in-house field service personnel. Warranty costs, including those incurred in fiscal years 2009 and 2008, have been historically insignificant and expensed as incurred.

Competition