

Klaver Paul Edward  
Form SC 13G/A  
April 24, 2012

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

**SCHEDULE 13G**

**Under the Securities Exchange Act of 1934  
(Amendment No. 1)\***

Senesco Technologies, Inc.

(Name of Issuer)

Common Stock, \$0.01 par value per share and Preferred Stock, \$0.01 par value per share

(Title of Class of Securities)

817208408

(CUSIP Number)

April 1, 2012

(Date of Event which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 817208408 13G Page 2 of 6 Pages

NAMES OF REPORTING PERSONS

1. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Paul Edward Klaver

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

2. (see instructions)

(a)

(b)  X

3. SEC USE ONLY

CITIZENSHIP OR PLACE OF ORGANIZATION

4.

Canada

SOLE VOTING  
POWER

5.

8,585,370 (1)

SHARED  
VOTING POWER

6.

3,206,300 (2)

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING  
PERSON WITH

SOLE  
DISPOSITIVE  
POWER

7.

8,585,370 (1)

SHARED  
DISPOSITIVE  
POWER

8.

3,206,300 (2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9. 11,791,670 (3)

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
(see instructions)  
PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

11. 12.5% (4)

TYPE OF REPORTING PERSON (see instructions)

12.

IN

(1) These shares include (i) 5,191,170 shares of Common Stock owned directly by Mr. Klaver, (ii) 625,000 shares of Common Stock issuable pursuant to warrants which are exercisable within 60 days from April 1, 2012, (iii) 769,200 shares of Common Stock which are issuable upon the conversion of Preferred Stock which are convertible within 60 days from April 1, 2012 and (iv) 2,000,000 shares of Common Stock owned directly by Evantod, Ltd., a corporation in which Mr. Klaver is the majority owner and has voting power.

(2) These shares are owned directly by Joyce Klaver, Mr. Klaver's spouse and such shares are reported on the presumption that Mr. Klaver may share voting and/or investment power due to their shared household and family. Mr. Klaver disclaims beneficial ownership of the shares owned by his spouse.

(3) These shares consist of the sum of all shares referenced in footnotes (1) and (2) above.

(4) The percentage is calculated based on 92,953,655 shares of Common Stock outstanding as of April 1, 2012 and the convertible shares in footnote (1) above that are exercisable within 60 days of April 1, 2012.

CUSIP No. 817208408 13G Page 3 of 6 Pages

**Item 1.**

(a) Name of Issuer  
Senesco Technologies, Inc.

(b) Address of Issuer's Principal Executive Offices  
721 Route 202-206, Suite 130, Bridgewater, New Jersey 08807

**Item 2.**

(a) Name of Person Filing  
Paul Edward Klaver

- (b) Address of the Principal Office or, if none, residence  
134 Columbia Street West, Unit 18, Waterloo, Ontario N2L 3K8 Canada
- (c) Citizenship  
Canada
- (d) Title of Class of Securities  
Common Stock, par value \$0.01 per share and Preferred Stock, par value \$0.01 per share
- (e) CUSIP Number  
817208408

**Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e) An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f) An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g) A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
- (h) A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) Group, in accordance with §240.13d-1(b)(1)(ii)(J).

**Item 4. Ownership.**

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned:

11,791,670 shares of Common Stock, which include (i) 5,191,170 shares of Common Stock (ii) 625,000 shares of Common Stock issuable pursuant to warrants which are exercisable within 60 days from April 1, 2012, (iii) 769,200 shares of Common Stock which are issuable upon the conversion of Preferred Stock which are convertible within 60 days from April 1, 2012, (iv) 3,206,300 shares of Common Stock owned directly by Mr. Klaver's spouse and (v) 2,000,000 shares of Common Stock owned directly by Eventod, Ltd., a corporation in which Mr. Klaver is the majority owner and has voting power. Such amount excludes 3,798,077 shares underlying warrants which become exercisable more than 60 days after April 1, 2012. Mr. Klaver disclaims beneficial ownership of the shares owned by his spouse and such shares are reported on the presumption that Mr. Klaver may share voting and/or investment power due to their shared household and family relationship.

(b) Percent of class: 12.5%

(c) Number of shares as to which the person has:

- (i) Sole power to vote or to direct the vote: 8,585,370
- (ii) Shared power to vote or to direct the vote: 3,206,300
- (iii) Sole power to dispose or to direct the disposition of: 8,585,370
- (iv) Shared power to dispose or to direct the disposition of: 3,206,300

*Instruction.* For computations regarding securities which represent a right to acquire an underlying security *see* §240.13d-3(d)(1).

**Item 5. Ownership of Five Percent or Less of a Class.**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following .

*Instruction.* Dissolution of a group requires a response to this item.

**Item 6. Ownership of More than Five Percent on Behalf of Another Person.**

Not applicable.

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.**

Not applicable.

**Item 8. Identification and Classification of Members of the Group.**

Not applicable.

CUSIP No. 817208408 13G Page 5 of 6 Pages

**Item 9. Notice of Dissolution of Group.**

Not applicable.

**Item 10. Certification.**

(a) The following certification shall be included if the statement is filed pursuant to §240.13d-1(b):

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

(b) The following certification shall be included if the statement is filed pursuant to §240.13d-1(c):

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

CUSIP No. 817208408 13G Page 6 of 6 Pages

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

04/24/2012

Date

By: /s/ Paul Edward Klaver  
Paul Edward Klaver, Individually