FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| Check this box if no longer subject to |
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| Section 16. Form 4 or Form 5 |
| obligations may continue. See |
| Instruction 1(b). |

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL

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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person* STALDER RUEDI | | | | | | 2. Issuer Name and Ticker or Trading Symbol SENESCO TECHNOLOGIES INC [SNT] | | | | | | | | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) | | | | | |
|--|---|--|---|----------|-----------|--|---|----------------|--|----------|-----------------|---|-----------------------------------|----------------------------|---|--|---|--|--|--|
| | | | | | | | | | | | | | 1 | X | Directo | r | | 10% Ow | ner | |
| (Last) (First) (Middle) 303 GEORGE STREET SUITE 420 | | | | | 12/ | 3. Date of Earliest Transaction (Month/Day/Year) 12/16/2004 | | | | | | | | | below) | (give title | | Other (s below) | | |
| (Street) NEW BRUNSWICK NJ | | 08901 | | 4. 11 | f Ame | ndment, [| Oate o | f Original Fil | led (| Month/Da | ıy/Year) | | i. Indi ine) X | Form fi | led by One | Repo | (Check App rting Persor One Repor | . | | |
| (City) | (S | itate) | (Zip) | | | | | | | | | | | | | | | | | |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | | | | | |
| 1. Title of Security (Instr. 3) 2. Transar Date (Month/Date | | | | | | ear) l | A. Deemed Execution Date, f any Month/Day/Year | | Transaction Disposed Code (Instr. 5) | | | ties Acquired (A) o d Of (D) (Instr. 3, 4 a | | and Securitie Beneficia | | es For ally (D) Following (I) (I | | Direct of Indirect str. 4) | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | | | | Code V | | Amount | (A) or (D) | Pric | е | Transacti (Instr. 3 a | ion(s) | | | Instr. 4) | |
| Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | | | | | | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution E if any (Month/Day | Date, Ti | Code (Ins | | | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | | S | . Price of Perivative Pecurity Pecurity Pecurity | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | у | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | |
| | | | | c | ode | v | (A) | | Date Exercisable | Ex Da | piration ate | Title | Amou or Numb of Share | er | | | | | | |
| Common Stock | \$3.45 | 12/16/2004 | | | A | | 30,000 | | 12/16/2004 | 12 | /16/2014 | Common Stock | 30,00 | 00 | \$0 | 455,823 | 3 | D | | |

Explanation of Responses:

1. Such options were granted to Mr. Stalder pursuant to the Company's 1998 Stock Incentive Plan, as amended, with one-half of such options vesting on the date of grant and one-half of such options vesting on December 16, 2006.

Ruedi Stalde

12/20/2004

** Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.