ROTH STEVEN R

Form 4

November 22, 2010

Check this box

if no longer

subject to

Section 16.

Form 4 or

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

OMB APPROVAL OMB

3235-0287 Number:

January 31, Expires: 2005

Estimated average burden hours per 0.5 response...

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction

1(b).

(Print or Type Responses)

ROTH STEVEN R

Stock

Symbol RUDOLPH TECHNOLOGIES INC (Check all applicable) [RTEC] (Last) (First) (Middle) 3. Date of Earliest Transaction Director 10% Owner X_ Officer (give title Other (specify (Month/Day/Year) below) C/O RUDOLPH TECHNOLOGIES. 11/19/2010 Senior Vice President & CFO INC., ONE RUDOLPH ROAD, PO

2. Issuer Name and Ticker or Trading

BOX 1000

1. Name and Address of Reporting Person *

(Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check

Filed(Month/Day/Year) Applicable Line)

X Form filed by One Reporting Person Form filed by More than One Reporting

D

5. Relationship of Reporting Person(s) to

Issuer

FLANDERS, NJ 07836

(City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of 2. Transaction Date 2A. Deemed 3. 4. Securities Acquired 5. Amount of 6. Ownership 7. Nature of Security (Month/Day/Year) Execution Date, if Transaction(A) or Disposed of Securities Form: Direct Indirect (Instr. 3) Code Beneficially (D) or Beneficial (D) (Month/Day/Year) (Instr. 8) (Instr. 3, 4 and 5) Owned Indirect (I) Ownership Following (Instr. 4) (Instr. 4) Reported (A) Transaction(s)

7,000

(Instr. 3 and 4) Code V Amount (D) Price Common 11/19/2010 S 78,582 (1)

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

Persons who respond to the collection of **SEC 1474** information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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1. Title of	2.	3. Transaction Date	3A. Deemed	4.	5.	6. Date Exerc	cisable and	7. Title	e and	8. Price of	9. Nu
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	TransactionNumber		Expiration D	ate	Amou	nt of	Derivative	Deriv
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Under	lying	Security	Secui
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8) Derivative		e		Securi	ties	(Instr. 5)	Bene
	Derivative				Securities			(Instr.	3 and 4)		Owne
	Security				Acquired						Follo
	·				(A) or						Repo
					Disposed						Trans
					of (D)						(Instr
					(Instr. 3,						`
					4, and 5)						
					, ,						
									Amount		
						Date Exercisable	Expiration e Date		or		
								Title	Number		
						Lacicisable			of		
				Code V	(A) (D)				Shares		

Reporting Owners

Reporting Owner Name / Address

Director 10% Owner Officer Other

ROTH STEVEN R C/O RUDOLPH TECHNOLOGIES, INC. ONE RUDOLPH ROAD, PO BOX 1000 FLANDERS, NJ 07836

Senior Vice President & CFO

Signatures

/s/ Steven R. 11/22/2010 Roth

**Signature of Date
Reporting Person

Explanation of Responses:

- * 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).

Certain Forms 4 previously filed by the Reporting Person have improperly reported the total number of securities beneficially owned by the Reporting Person following the transactions reported thereon. As a result of grants of restricted stock units to the Reporting Person on

(1) 2/16/06, 2/1/07, 1/31/08, and 2/10/09 (which were reported on Form 4) the Reporting Person directly beneficially held 42,348 restricted stock units prior to the transactions reported here. Following the transactions, the Reporting Person directly beneficially holds a total of 78,582 shares and restricted stock units as reported above in Column 5.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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