Kirloskar Virendra A Form 4 January 20, 2012

FORM 4

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

OMB Number: Expires:

Check this box if no longer subject to Section 16. Form 4 or

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)

1. Name and Address of Reporting Person * Kirloskar Virendra A

2. Issuer Name and Ticker or Trading Symbol

5. Relationship of Reporting Person(s) to Issuer

OMB APPROVAL

Estimated average

burden hours per

response...

3235-0287

January 31,

2005

0.5

(Last) (First) (Middle)

(Street)

KLA TENCOR CORP [KLAC]

3. Date of Earliest Transaction

(Month/Day/Year)

01/18/2012

Director 10% Owner Other (specify _X__ Officer (give title

(Check all applicable)

SVP & Chief Accounting Officer

C/O KLA-TENCOR CORPORATION, ONE **TECHNOLOGY DRIVE**

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

MILPITAS, CA 95035

Stock Units

d

below)

(City)	(State)	Zip) Table	e I - Non-D	erivative S	Securi	ties Acqu	ired, Disposed of	, or Beneficiall	y Owned
1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securit on(A) or Dis (Instr. 3, 4)	sposed	of (D)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
Common Stock	01/18/2012		$S_{(1)}^{(1)}$	13,166	D D	\$ 50	297	D	
Common Stock	01/19/2012		M	760	A	\$ 40.66	1,057	D	
Common Stock	01/19/2012		S(1)	760	D	\$ 50.66	297	D	
Common Stock - Restricted							27,650 (3)	D	

(2)

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

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Dolotionship

Date

SEC 1474 (9-02)

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

1. Title of	2.	3. Transaction Date		4.	5. Number	6. Date Exerc		7. Title and A	
Derivative Security (Instr. 3)	Conversion or Exercise Price of Derivative Security	(Month/Day/Year)	Execution Date, if any (Month/Day/Year)	Transaction Code (Instr. 8)	Derivative Securities Acquired (A) or Disposed of (D)	Expiration Date (Month/Day/Year)		Underlying Securities (Instr. 3 and 4)	
				Code V	(Instr. 3, 4, and 5) (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Non-Qualified Stock Option (Right to Buy)	\$ 40.66	01/19/2012		M	760	<u>(4)</u>	08/02/2014	Common Stock	760

Reporting Owners

Reporting Owner Name / Address	Ketauonsnips						
	Director	10% Owner	Officer	Other			
Kirloskar Virendra A C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035			SVP & Chief Accounting Officer				

Signatures

Brian M. Martin as Attorney-in-Fact for Virendra A.
Kirloskar

01/20/2012

**Signature of 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).
- (1) This transaction was effected pursuant to a Rule 10b5-1 trading plan adopted by the Reporting Person on March 7, 2011.
- (2) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.

Reporting Owners 2

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- Does not include performance-based RSUs, if any, held by the Reporting Person for which an assessment has not yet been made
- (3) regarding the achievement of the applicable performance goals. Any such holdings will be reported on Form 4 within two business days of the date such assessment is made.
- Represents a stock option granted on August 2, 2004, granting the Reporting Person the right to purchase up to 1,200 shares of
- (4) KLA-Tencor common stock. 240 of the shares subject to this stock option vested on the October 27, 2004, and 1/48 of the remaining 960 shares subject to this stock option vested on November 27, 2005 and each monthly anniversary thereafter until October 27, 2008.

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.