

DOCUMENT TYPE SC 13G/A
TEXT

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 13G
Under the Securities Exchange Act of 1934

Amendment # 6

Name of Issuer: KLA-TENCOR CORP

Title of Class
of Securities: Common Stock

CUSIP Number: 482480100

1) NAME OF I.R.S. IDENTIFICATION NO. OF REPORTING PERSON

The Prudential Insurance Company of America 22-1211670

2.) MEMBER OF A GROUP: (a) N/A

(b) N/A

3) SEC USE ONLY:

4) PLACE OF ORGANIZATION: A mutual insurance company organized
under the laws of the State of New Jersey

NUMBER OF SHARES BENEFICIALLY OWNED BY REPORTING PERSON WITH:

5) Sole Voting Power: Not Applicable

6) Shared Voting Power: Not Applicable

7) Sole Dispositive Power: Not Applicable

8) Shared Dispositive Power: Not Applicable

9) AGGREGATE AMOUNT BENEFICIALLY OWNED:
Not Applicable

10) AGGREGATE AMOUNT IN ROW (9) EXCLUDES SHARES: Not Applicable

11) PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9):
Not Applicable

12) TYPE OF REPORTING PERSON: IC, IA

ITEM 1(a). NAME OF ISSUER:

KLA-TENCOR CORP

ITEM 1(b). ADDRESS OF ISSUER'S EXECUTIVE OFFICES:

KLA-TENCOR CORP 160 Rio Robles San Jose, CA 95134

ITEM 2(a). NAME OF PERSON FILING:

The Prudential Insurance Company of America

ITEM 2(b). ADDRESS OF PRINCIPAL BUSINESS OFFICE:

751 Broad Street
Newark, New Jersey 07102-3777

ITEM 2(c). CITIZENSHIP:

A mutual insurance company organized under the laws of the State of New Jersey

ITEM 2(d). TITLE OF CLASS OF SECURITIES:

Common Stock

ITEM 2(e). CUSIP NUMBER:

482480100

ITEM 3. The Person filing this statement is an Insurance Company as defined in Section 3(a) (19) of the Securities Exchange Act of 1934, and an Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940.

ITEM 4. OWNERSHIP:

(a) Number of Shares
Beneficially Owned: Not Applicable

(b) Percent of Class:

Number
(c) Powers Of Shares

Sole power to vote or Not Applicable
to direct the vote

Shared power to vote or Not Applicable
to direct the vote

Sole power to dispose or Not Applicable
to direct disposition

Shared power to dispose Not Applicable
or to direct disposition

ITEM 5. OWNERSHIP OF 5% OR LESS OF A CLASS:

Prudential has ceased to be the owner of more than 5% of the outstanding Common Stock of this issuer.

ITEM 6. OWNERSHIP OF MORE THAN 5% ON BEHALF OF ANOTHER PERSON:

Not Applicable

ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE ULTIMATE PARENT COMPANY:

Not Applicable

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP:

Not Applicable

ITEM 9. NOTICE OF DISSOLUTION OF GROUP:

Not Applicable

ITEM 10. CERTIFICATION:

By signing below, the Prudential Insurance Company of America certifies that, to the best of its knowledge and belief, the

securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect.

The filing of this statement should not be construed as an admission that Prudential is, for purposes of Sections 13 or 16 of the Securities Exchange Act of 1934, the beneficial owner of such shares.

SIGNATURE

After reasonable inquiry and to the best of its knowledge and belief, The Prudential Insurance Company of America certifies that the information set forth in this statement is true, complete and correct.

THE PRUDENTIAL INSURANCE COMPANY OF AMERICA

By: Ellen McGlynn Koke
Vice President

Date: 01/23/2001
As of: 12/31/2000

Exhibit A

ITEM 6. OWNERSHIP: