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                                              OMB APPROVAL
                                   ---------------------------
                                   OMB Number:  3235-0145
                                   Expires:  December 31, 1997
                                   Estimated average burden
                                   hours per response...14.90
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

(AMENDMENT NO.   )*

Steris Corp.
- --
(Name of Issuer)

Common Stock, no par value per share
- --
(Title of Class of Securities)

859152100

(CUSIP Number)

*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 the
disclosures provided in a prior cover page.

The information required in 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).

- --
```
 1    NAME OF REPORTING PERSON
      S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON
      A I M Management Group Inc., on behalf of itself and its wholly-owned
      subsidiaries, A I M Advisors, Inc. and A I M Capital Management, Inc.
      I.D. No. 74-1881407
```
- --
```
 2    CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
                                                           (a) / /
                                                           (b) / /
```
- --
```
 3    SEC USE ONLY

```
- --
```
 4    CITIZENSHIP OR PLACE OF ORGANIZATION


      State of Delaware
```
- --
```
                              5      SOLE VOTING POWER

        NUMBER OF

         SHARES       ----------------------------------------------------
                              6      SHARED VOTING POWER
      BENEFICIALLY

        OWNED BY              1,698,300
                      ----------------------------------------------------
          EACH        7      SOLE DISPOSITIVE POWER

        REPORTING

         PERSON       ----------------------------------------------------
                              8      SHARED DISPOSITIVE POWER
          WITH

                              1,698,300
```
- --
```
 9    AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON


      1,698,300
```
- --
```
10    CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*


```
- --
```
11    PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

       5.1%

```
- --
```
12    TYPE OF REPORTING PERSON*


      HC
```
- --

```
                    *SEE INSTRUCTION BEFORE FILLING OUT!
```

SCHEDULE 13G

Item 1(a)   NAME OF ISSUER:
             Steris Corp.

Item 1(b)   ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:
             5960 Heisley Road
             Mentor, OH 44060

Item 2(a)   NAME OF PERSON FILING:
             A I M Management Group Inc.

Item 2(b)   ADDRESS OF PRINCIPAL BUSINESS OFFICE:
             11 Greenway Plaza, Suite 1919
             Houston, Texas 77046

Item 2(c)   CITIZENSHIP:
             State of Delaware

Item 2(d)   TITLE OF CLASS OF SECURITIES:
             Common Stock, no par value per share

Item 2(e)   CUSIP NUMBER:
             859152100

Item 3   TYPE OF REPORTING PERSON:
             Parent Holding Company, in accordance with
             section 240.13d-1(b)(ii)(G)

Item 4(a)   AMOUNT BENEFICIALLY OWNED AS OF DECEMBER 31, 1996:
             1,698,300 shares of common stock

Item 4(b)   PERCENT OF CLASS:
             5.1%

Item 4(c)   DEEMED VOTING POWER AND DISPOSITION POWER:
             (i)   sole power to vote or to direct the vote: N/A
             (ii) shared power to vote or to direct the vote: 1,698,300
             (iii) sole power to dispose or to direct the disposition of:
                   N/A
             (iv) shared power to dispose or to direct the disposition of:
                   1,698,300

Item 5   OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS:
             N/A

Item 6   OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON:
             N/A

Item 7   IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH
              ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING
              COMPANY:
              A I M Advisors, Inc. and A I M Capital Management, Inc.,
              Investment Advisers registered under Section 203 of the
              Investment Advisers Act

Item 8   IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP:
              N/A

Item 9   NOTICE OF DISSOLUTION OF A GROUP:
              N/A

Item 10   CERTIFICATION:
              By signing below I certify that, to the best of my 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 purposes or effect.

              SIGNATURE:
              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.

              Date: February 12, 1997   A I M Management Group Inc.

                                        /s/ CAROL F. RELIHAN

                                      Carol F. Relihan
                                      Vice President,
                                        Secretary and General Counsel

** Please call Sharon Poessel at (713) 214-1126 with questions regarding this
   filing.