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FORM 11-K

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2003

Commission File Number: 1-5318

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

THE KENNAMETAL THRIFT PLAN

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

Kennametal Inc.  
1600 Technology Way  
P.O. Box 231  
Latrobe, Pennsylvania 15650

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THE KENNAMETAL THRIFT PLAN  
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Note: Other schedules required by Section 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA have been omitted because they are not applicable.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Participants and Administrator of  
The Kennametal Thrift Plan

In our opinion, the accompanying statements of net assets available for benefits and the related statements of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of The Kennametal Thrift Plan (the "Plan") at December 31, 2003 and 2002, and the changes in net assets available for benefits for the years ended December 31, 2003 and 2002, in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of assets (held at end of year) is presented for the purpose of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ PricewaterhouseCoopers LLP

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PricewaterhouseCoopers LLP

Pittsburgh, Pennsylvania  
June 25, 2004

THE KENNAMETAL THRIFT PLAN  
 STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS  
 DECEMBER 31, 2003 AND 2002

	December 31, 2003 ----	December 31, 2002 ----
ASSETS		
Receiveables:		
Participant contributions	\$      64,449	\$      557,093
Employer contributions	46,049	--
	-----	-----
Total receiveables	110,498	557,093
	-----	-----
Investments	239,520,223	204,541,982
	-----	-----
NET ASSETS AVAILABLE FOR BENEFITS	\$ 239,630,721 =====	\$ 205,099,075 =====

The accompanying notes are an integral part of these statements.

THE KENNAMETAL THRIFT PLAN  
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
YEARS ENDED DECEMBER 31, 2003 AND 2002

	2003	2002
	----	----
ADDITIONS TO NET ASSETS ATTRIBUTED TO:		
Participant contributions	\$ 12,997,708	\$ 13,228,348
Employer contributions, net of forfeitures	4,368,233	20,617
Dividends and interest	4,822,269	5,852,426
Transfers from other Kennametal Plans	441,405	750,953
Net appreciation of investments	31,165,899	--
	-----	-----
Total additions	53,795,514	19,852,344
	-----	-----
DEDUCTIONS FROM NET ASSETS ATTRIBUTED TO:		
Benefits paid to retirees	(16,437,596)	(15,345,973)
Loan distributions	(355,748)	(281,175)
Employee withdrawals	(2,461,124)	(2,301,712)
Administrative fees	(9,400)	(7,800)
Net depreciation of investments	--	(35,371,112)
	-----	-----
Total deductions	(19,263,868)	(53,307,772)
	-----	-----
NET INCREASE (DECREASE)	34,531,646	(33,455,428)
NET ASSETS AVAILABLE FOR BENEFITS:		
Beginning of year	205,099,075	238,554,503
	-----	-----
End of year	\$ 239,630,721	\$ 205,099,075
	=====	=====

The accompanying notes are an integral part of these statements.

THE KENNAMETAL THRIFT PLAN  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2003 AND 2002

1. DESCRIPTION OF PLAN

The following general description of The Kennametal Thrift Plan, as amended (the Plan), is provided for general information purposes only. Participants should refer to the plan document for complete information.

The Plan is a defined contribution employee benefit plan, established to encourage investment and savings for certain salaried and hourly employees of Kennametal Inc. and certain subsidiaries (the Company) and to provide a method to supplement their retirement income benefits. The Plan provides these employees the opportunity to defer a portion of their annual compensation for federal income tax purposes in accordance with Section 401(k) of the Internal Revenue Code, as amended (the Code). The Plan is subject to certain provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA). Kennametal Inc. is the Plan sponsor.

ADMINISTRATION OF THE PLAN - Putnam Fiduciary Trust Company serves as the Trustee of the Plan. Putnam Investments functions as the recordkeeper for the Plan.

ELIGIBILITY - All employees become eligible to participate in the Plan on the first day of the first payroll period subsequent to their employment date. Under present federal income tax law, employer contributions and all earnings of the Plan do not constitute taxable income to the participants until withdrawn from the Plan by the participants.

VESTING - Employee contributions are fully vested. Employer matching contributions cliff vest after the third anniversary of the participant's employment date. At December 31, 2003 and 2002, forfeited nonvested accounts totaled \$61,256 and \$213,582, respectively. These amounts will be used to reduce future employer contributions. Also, in 2003 and 2002, employer contributions were reduced by \$214,491 and \$95,872, respectively, from forfeited nonvested accounts.

PARTICIPANT ACCOUNTS - A separate account is maintained for each participant in the Plan, reflecting contributions, investments, investment gains and losses, distributions, loans, withdrawals and transfers.

CONTRIBUTIONS - Effective April 1, 2003, the Plan allows participants to elect a contribution rate (either before-tax, after-tax, or a combination of both) of 2% to 20% of the employee's wages, which include base salary, overtime, shift differential pay and incentive compensation. Prior to April 1, 2003, participants could elect a contribution rate of 2% to 12% of their wages. The participants can elect to have their contributions invested in the different investment funds available under the Plan. Employer contributions equal 50% of the participant contribution up to a maximum of 3% of the employee's wages. Employer contributions are made concurrently with participant contributions and solely in Kennametal Inc. common stock. These employer contributions can be transferred to other investment options at any time at the participant's election. Effective January 1, 2002, employer contributions were temporarily suspended for all employees. These contributions were reinstated January 1, 2003.

In connection with certain changes to Company-sponsored defined benefit plans, certain employees are no longer eligible to participate in those plans. These employees are eligible to participate in

the Plan and receive a fixed contribution equal to 3% of the employee's compensation and an additional variable contribution from 0% up to 3% depending on the Company's performance. These changes are effective January 1, 2004.

**DISTRIBUTIONS** - Distributions to participants due to disability, retirement, or death are payable in either a lump sum, periodic payments for a period not to exceed ten (10) years, or through the purchase of an annuity at the participant's election.

**PARTICIPANT LOANS** - A participant may borrow up to the lesser of \$50,000 or 50% of his or her vested account balance, with a minimum loan amount of \$1,000. Loans are repayable through payroll deductions over a period not to exceed five years, except if the proceeds are used to acquire a participant's principal residence. Certain participant loans that were outstanding at the time of acquisition of a company by Kennametal Inc. may have different terms. The interest rate is determined by the plan administrator based on existing market conditions and is fixed over the life of the loan. Interest rates on participant loans ranged from 5.0% to 10.5% at December 31, 2003 and 5.3% to 10.5% at December 31, 2002. Participant loans outstanding at December 31, 2003 have maturity dates ranging from 2004 to 2028.

**INVESTMENTS** - The following investment options were available to participants at December 31, 2003:

**Stable Value Fund** - Investments of this fixed income fund consist of traditional investment contracts issued by insurance companies, banks and other financial institutions (or corporations), synthetic investment contracts and short-term investments.

**Putnam Voyager Fund** - This fund seeks aggressive capital appreciation by investing in a combination of stocks of small companies expected to grow over time as well as in stocks of larger, more established corporations.

**The Putnam Fund for Growth & Income** - This fund seeks growth and income by investing in attractively priced stocks of companies that offer long-term growth potential while also providing income.

**Putnam International Growth Fund** - This fund seeks capital appreciation by investing in a diversified portfolio composed mainly of stocks of companies located outside the United States.

**Kennametal Inc. Common Stock Fund** - This fund consists entirely of Kennametal Inc. common stock, for investors who want to participate in the growth of Kennametal Inc. as part owners of Kennametal Inc.

**Vanguard Institutional Index Fund** - This fund seeks long-term growth of capital and income from dividends. The fund holds all 500 stocks that make up the Standard & Poor's 500 Index in proportion to their weighting in the index. The fund attempts to track the performance of the index, a widely recognized benchmark of U.S. stock market performance, and it remains fully vested in stocks at all times.

**PIMCO Renaissance Fund** - This fund seeks long-term growth of capital and income. The fund invests primarily in common stocks of "value" style, midsize companies with market capitalizations of \$1 billion to \$10 billion at the time of investment, although it may invest in

companies of any size. The fund invests all or a portion of its assets in small to midsize companies. Such investments increase the risk of greater price fluctuations.

Retirement Ready Funds - Each Retirement Ready Portfolio has a different target date that relates to expected retirement dates. The dates range from 2010 to 2045 in five-year intervals, with the exception of the Maturity Portfolio, which is designed for participants who are at or near retirement. All of the Retirement Ready Portfolios are diversified across an array of Putnam mutual funds that invest in different styles and include a mix of stocks, bonds, and capital preservation investments. The portfolios can invest significantly in foreign securities, which involve certain risks, such as currency fluctuations, economic instability, and political developments.

Artisan Mid Cap Fund - This fund seeks long-term capital growth through a diversified portfolio of stocks of midsize companies. The fund invests all or a portion of its assets in small to midsize companies. Such investments increase the risk of greater price fluctuations.

MSIF Small Company Growth Portfolio - This fund seeks to maximize long-term capital appreciation by investing primarily in the equity securities of small and midsize companies that are in the early stages of their life cycle. The fund invests all or a portion of its assets in small to midsize companies. Such investments increase the risk of greater price fluctuations.

Lord Abbett Small Cap Value Fund - This fund seeks long-term capital appreciation by investing primarily in common stocks of small companies with a market capitalization of less than \$2 billion. Lord Abbett believes in a low-risk approach to investing in these stocks. The fund invests all or a portion of its assets in small to midsize companies. Such investments increase the risk of greater price fluctuations.

Vanguard Total Bond Market Index Fund - This fund invests in a sample of bonds from the Lehman Aggregate Bond Index, which is an index of U.S. Treasury, federal agency, mortgage-backed, and high-quality corporate securities.

In addition, during the year ended December 31, 2003, participants were able to direct their contributions to certain other investment options. Amounts held in the discontinued investment options were converted to available investment options with similar investment objectives.

## 2. ACCOUNTING POLICIES

**BASIS OF ACCOUNTING** - The financial statements of the Plan are maintained on the accrual basis of accounting.

**INVESTMENTS** - Investment transactions are recorded on a trade date basis. Benefit-responsive investment contracts are valued at contract value in accordance with the provisions of AICPA Statement of Position (SOP) 94-4, "Reporting of Investment Contracts Held by Health and Welfare Benefit Plans and Defined-Contribution Pension Plans". INVESCO Institutional, Inc. certified that all the investment contracts held in the Stable Value Fund (see Note 4) are fully benefit-responsive. Shares of registered investment companies are valued at the net asset value of shares held by the Plan at year-end. Units of common/collective trust funds are valued at the net asset value of units held by the Plan at year-end. Investments in common stock are valued at their quoted market price at year-end. Participant loans are valued at cost, which approximates fair value.



PAYMENT OF BENEFITS - Benefit payments are recorded as distributed.

INVESTMENT INCOME - Interest and dividend income are recorded in the period earned.

PLAN EXPENSES - Investment management fees and certain other administrative fees were paid by the Plan. Investment management fees are included as a reduction in the income of the fund.

NET APPRECIATION / (DEPRECIATION) - Net appreciation (depreciation) of investments is comprised of unrealized gains and losses due to the change in market value compared to the cost of investments retained in the Plan and realized gains or losses on security transactions which represents the difference between proceeds received and average cost. Net appreciation (depreciation) for the years ended December 31, 2003 and 2002 were as follows:

	2003 ----	2002 ----
Kennametal Inc. Common Stock Fund	\$ 3,867,011	\$ (3,298,862)
Common/Collective Trusts	2,974,376	--
All Other	24,324,512	(32,072,250)
	-----	-----
Total	\$ 31,165,899	\$(35,371,112)
	=====	=====

USE OF ESTIMATES IN PREPARATION OF FINANCIAL STATEMENTS - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

### 3. INVESTMENTS EXCEEDING FIVE PERCENT OF NET ASSETS

The values of individual investments that represent five percent or more of the Plan's total net assets as of December 31, 2003 and 2002 were as follows:

	2003 ----	2002 ----
AT CONTRACT VALUE:		
Stable Value Fund	\$69,180,859	\$75,133,338
AT FAIR VALUE, AS DETERMINED BY QUOTED MARKET PRICES:		
Putnam Voyager Fund	39,297,924	36,117,568
Artisan Mid Cap Fund	21,714,650	--
Putnam New Opportunities Fund	--	16,760,025
Putnam Fund for Growth & Income	16,223,043	13,250,275
Putnam Asset Allocation - Balanced Portfolio	--	11,109,993
Kennametal Inc. Common Stock Fund	25,845,155	22,901,159
AT ESTIMATED FAIR VALUE:		
Putnam Retirementready 2015	14,255,745	--

### 4. STABLE VALUE FUND

A portion of the Plan's investments are held in a Stable Value Fund which was established for the investment of assets of the Plan and several other Company-sponsored retirement plans. Each plan has an undivided interest in the underlying assets of the Stable Value Fund. The assets of the Stable

Value Fund are held by Mellon Bank, N.A. (Trustee). At December 31, 2003 and 2002, the Plan's interest in the Stable Value Fund was 62.1 percent and 62.7 percent, respectively. Investment income and administrative expenses relating to the Stable Value Fund are allocated to the individual plans based upon average monthly balances invested by each plan. The underlying assets of the Stable Value Fund include benefit-responsive investment contracts (the contracts). The crediting interest rates on the contracts ranged from 1.0 percent to 7.1 percent and 1.4 percent to 7.2 percent at December 31, 2003 and 2002, respectively. The average yields on the contracts ranged from 1.2 percent to 7.1 percent and 2.2 percent to 7.1 percent for the years ended December 31, 2003 and 2002, respectively. The fair value of all investment contracts was \$115,879,042 and \$126,432,678 at December 31, 2003 and 2002, respectively.

Investments at contract value held by the Stable Value Fund at December 31, 2003 and 2002 are as follows:

	December 31,	
	2003	2002
	----	----
Short Term Investments	\$ 1,253,506	\$ 4,055,704
Insurance Investment Contracts	11,861,790	13,088,689
Synthetic Investment Contracts		
Underlying Assets:		
Common / Collective Trusts	93,307,466	48,955,815
Insurance Separate Account	4,464,219	6,563,123
Asset-Backed Securities	1,003,413	46,488,164
Treasury Obligations	3,367,910	5,590,884
Cash	117,088	777,965
Synthetic Wrapper Agreement	(4,007,195)	(5,670,635)
	-----	-----
Investments	\$ 111,368,197	\$ 119,849,709
	=====	=====

Total investment income for the Stable Value Fund was \$5,061,804 and \$6,178,565 for the years ended December 31, 2003 and 2002, respectively.

#### 5. TAX STATUS

The Internal Revenue Service has determined and informed the plan sponsor by a letter dated April 22, 2003, that the Plan and related trust are designed in accordance with applicable sections of the Code.

#### 6. PLAN TERMINATION

Although it has not expressed any intent to do so, Kennametal Inc. has the right to amend, suspend or terminate the Plan at any time, subject to the provisions of ERISA. In the event of Plan termination, the accounts of all participants will become fully vested and non-forfeitable.

#### 7. RELATED PARTY TRANSACTIONS

Certain investments of the Plan are mutual funds managed by Putnam Investments. The trustee of the Plan is Putnam Fiduciary Trust Company and, therefore, these transactions qualify as party-in-interest transactions.

One of the investment fund options available to participants contains stock of Kennametal Inc., the plan sponsor. The Plan held 650,193 and 664,916 shares of the Company's Common Stock at December 31, 2003 and 2002, respectively. As a result, transactions related to this investment fund qualify as party-in-interest transactions.

THE KENNAMETAL THRIFT PLAN  
 PLAN NUMBER: 002  
 KENNAMETAL INC.  
 EIN: 25-0900168  
 SCHEDULE OF ASSETS (HELD AT END OF YEAR)  
 SCHEDULE H, LINE 4i  
 DECEMBER 31, 2003

(a) (b) Issuer	(c) Description	(d) Cost	Fair (e) Value
-----			
Mutual Funds -----			
*Putnam	Putnam Voyager Fund		\$ 39,297,924
Artisan	Artisan Mid Cap Fund		21,714,650
*Putnam	The Putnam Fund for Growth & Income		16,223,043
*Putnam	Putnam International Growth Fund		8,595,365
Vanguard	Vanguard Institutional Index Fund		6,022,240
Lord Abbett	Lord Abbett Small Cap Value Fund		4,646,613
PIMCO	PIMCO Renaissance Institutional Fund		4,385,111
Vanguard	Vanguard Total Bond Market Index Fund		2,925,252
Morgan Stanley	MSIF Small Company Growth Portfolio		2,761,808
			-----
Total Mutual Funds			106,572,006
			-----
Common/Collective Trusts -----			
*Putnam	Putnam Retirementready 2015		14,255,745
*Putnam	Putnam Retirementready 2025		6,238,292
*Putnam	Putnam Retirementready Income Fund		4,747,467
*Putnam	Putnam Retirementready 2010		2,593,330
*Putnam	Putnam Retirementready 2020		2,501,242
*Putnam	Putnam Retirementready 2030		1,010,140
*Putnam	Putnam Retirementready 2035		647,041
*Putnam	Putnam Retirementready 2040		192,594
*Putnam	Putnam Retirementready 2045		89,883
			-----
Total Common / Collective Trusts			32,275,734
			-----
Master Trust -----			
Invesco	Stable Value Fund		69,180,859
			-----
Kennametal Inc. Common Stock -----			
*Kennametal	Kennametal Inc. Common Stock Fund		25,845,155
			-----
Loans to Participants -----			
Participants	Loans to Participants, Maturities: From 2004 to 2028 Interest rates: 5.0% to 10.5%		5,646,469
			-----
Total Investments			\$ 239,520,223
			=====

\* Party-in-interest, for which a statutory exemption exists.

SIGNATURES

THE PLAN. Pursuant to the requirements of the Securities Exchange Act of 1934, the plan administrator of the Kennametal Thrift Plan has duly caused this annual report to be signed on its behalf by the undersigned, hereunto duly authorized, in Unity Township, Westmoreland County, Commonwealth of Pennsylvania.

Date: June 29, 2004

THE KENNAMETAL THRIFT PLAN

By: /s/ Veronica McDonough

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Veronica McDonough  
Plan Administrator

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement of Form S-8 (No. 333-18423) of Kennametal Inc. of our report dated June 25, 2004 relating to the financial statements of The Kennametal Thrift Plan, which appears in this Form 11-K.

/s/ PricewaterhouseCoopers LLP  
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PricewaterhouseCoopers LLP

Pittsburgh, Pennsylvania  
June 29, 2004