

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

FORM 11-K

FOR ANNUAL REPORTS OF EMPLOYEE STOCK PURCHASE, SAVINGS AND SIMILAR
PLANS PURSUANT TO SECTION 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2010
- TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF
1934

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:

KENNAMETAL THRIFT PLUS 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

**KENNAMETAL THRIFT PLUS 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 Plus Plan:

We have audited the accompanying statements of net assets available for benefits of the Kennametal Thrift Plus Plan (the Plan) as of December 31, 2010 and 2009, and the related statement of changes in net assets available for benefits for the year ended December 31, 2010. 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 in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2010 and 2009, and the changes in its net assets available for benefits for the year ended December 31, 2010, in conformity with accounting principles generally accepted in the United States of America.

Our audits were performed for the purpose of forming an opinion on the financial statements taken as a whole. The accompanying supplemental schedule of assets (held at end of year) as of December 31, 2010 is presented for purposes of additional analysis and is not a required part of the 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. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

/s/ Schneider Downs & Co., Inc.

Schneider Downs & Co., Inc.

Pittsburgh, Pennsylvania

June 24, 2011

KENNAMETAL THRIFT PLUS PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS
DECEMBER 31, 2010 AND 2009

	2010	2009
ASSETS		
Receivables:		
Notes receivable from participants (Note 2)	\$ 9,666,591	\$ 10,220,353
Participant contributions	753,033	280,854
Employer contributions	447,039	96,818
Total receivables	10,866,663	10,598,025
Investments at fair value (Note 3):		
Mutual funds	258,442,134	224,802,449
Master trust	102,414,233	99,082,473
Kennametal Inc. common stock	65,418,828	45,513,708
Total investments at fair value	426,275,195	369,398,630
Total assets	437,141,858	379,996,655
Adjustment from fair value to contract value for fully benefit-responsive investment contracts	(4,672,663)	(2,933,800)
NET ASSETS AVAILABLE FOR BENEFITS	\$ 432,469,195	\$ 377,062,855

The accompanying notes are an integral part of these financial statements.

KENNAMETAL THRIFT PLUS PLAN
STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
FOR THE YEAR ENDED DECEMBER 31, 2010

	2010
ADDITIONS TO NET ASSETS ATTRIBUTED TO:	
Net appreciation in fair value of investments	\$ 59,031,075
Participant contributions	14,759,394
Dividends and interest	8,538,969
Employer contributions	7,986,069
Employer contributions — Kennametal common stock	4,401,605
Interest — notes receivable from participants (Note 2)	539,697
Total additions	95,256,809
DEDUCTIONS FROM NET ASSETS ATTRIBUTED TO:	
Benefits paid to participants	39,747,802
Loan distributions	67,936
Administrative fees	34,731
Total deductions	39,850,469
NET INCREASE	55,406,340
NET ASSETS AVAILABLE FOR BENEFITS:	
Beginning of year	377,062,855
End of year	\$ 432,469,195

The accompanying notes are an integral part of these financial statements.

**KENNAMETAL THRIFT PLUS PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2010 AND 2009**

NOTE 1 — DESCRIPTION OF PLAN

The following general description of the Kennametal Thrift Plus 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 plan, established to encourage investment and savings for certain salaried, hourly and union employees of Kennametal Inc. and certain of its subsidiaries (Kennametal or the Company) and to provide a method to supplement their retirement income. 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 (IRC). The Plan also provides for Company contributions. 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 — The management of the Company has the authority and responsibility for the general administration of the Plan. Fidelity Management Trust Company functions as the trustee, and Fidelity Investments Institutional Operations Company functions as the record keeper.

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. All Employer contributions (Basic, Matching and Discretionary) cliff vest after the third anniversary of the participant's employment date. At December 31, 2010 and 2009, forfeited nonvested accounts totaled \$462,077 and \$528,156, respectively. These amounts will be used to reduce future employer contributions.

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

CONTRIBUTIONS — The Plan allows participants to elect a contribution rate (either pre-tax, after-tax, or a combination of both) of 1% to 50% of the employee's eligible wages, which include base salary, overtime, shift differential pay and incentive compensation. Highly compensated employees are limited to contributing 9% pre-tax and 4% after-tax of their eligible wages. Newly hired non-union employees are automatically enrolled at 3%. Employees who are age 50 or older and who exceed the annual dollar limit under the law or the Plan are eligible to make catch-up contributions.

Unless otherwise amended, the Plan provides for employer matching contributions of 50% of employee contributions up to 6%. As such, the maximum employer matching contribution is 3%. Under the Plan, the Company has the discretion to make its employer matching contributions in Kennametal common stock.

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The participants can elect to have their contributions (pre-tax, after-tax, catch-up and rollover amounts) invested in the different investment funds available under the Plan. Currently, the Plan offers 25 mutual funds, Kennametal Inc. common stock and a Master Trust. During January and February 2009, employer matching contributions were invested in the same investment fund elections that the employee elected for their pre-tax or after-tax contributions. As a result of an amendment to the Plan, effective March 1, 2009, the union employee's employer contribution was changed from cash to Kennametal common stock and for non-union employees the employer contributions were temporarily suspended to enable the Company to control its costs during a period of adverse business conditions. Employer matching contributions were reinstated for non-union employees effective March 1, 2010.

In connection with certain changes to the Kennametal Inc. Retirement Income Plan, a Company-sponsored defined benefit pension plan, certain employees are no longer eligible to participate in that plan. These employees are eligible to participate in the Plan and receive a fixed basic contribution equal to 3% of the employee's eligible compensation and an additional discretionary contribution from 0% up to 3% depending on the Company's fiscal year performance. Under the Plan, the Company has the right to make its basic and discretionary contributions in Kennametal common stock. In August 2010, the Company made a discretionary contribution of 2% of participant's eligible compensation. For the period March 1, 2009 to July 31, 2010, the Company elected to make its employer contributions in Kennametal common stock. For the period August 1 through December 31, 2010, employer contributions were made in cash.

DISTRIBUTIONS — Distributions to participants due to disability, retirement or death are payable in either a lump sum or periodic payments for a period not to exceed ten (10) years at the participant's election. If a participant's vested interest in his or her account exceeds \$1,000, a participant may elect to defer distribution to a future date as more fully described in the plan document.

In addition, while still employed, participants may withdraw after-tax employee contributions, rollover contributions and pre-tax employee contributions if over age 59.5, at any time. Vested Company contributions and pre-tax employee contributions may be withdrawn by participants under age 59.5 only for specific hardship reasons.

NOTES RECEIVABLE FROM PARTICIPANTS — A participant may borrow up to the lesser of \$50,000 or 50% of his or her vested account balance, with a minimum note amount of \$1,000. Principal and interest are paid ratably through payroll deductions. The maximum term permissible for a general-purpose note is 5 years and 30 years for a residential note. The interest rate is determined by the plan administrator based on existing market conditions and is fixed over the life of the note. Interest rates on notes receivable from participants ranged from 4.25% to 10.5% at December 31, 2010 and 2009, respectively. Notes receivable from participants outstanding at December 31, 2010 have maturity dates ranging from 2011 to 2040.

INVESTMENTS — Participants direct their contributions and Company cash contributions by electing that such contributions be placed in a single investment fund or allocated to any combination of investment funds available under the Plan. Earnings derived from the assets of any investment fund are reinvested in the fund to which they relate. Participants may elect at any time to transfer all or a portion of the value of their accounts among the investment funds.

For Company contributions made in Kennametal common stock, participants have the ability to exchange the Kennametal common stock for a single investment fund or for any combination of investment funds under the Plan.

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING — The financial statements of the Plan are prepared under the accrual method of accounting.

As described in the guidance on “Reporting of Fully Benefit-Responsive Investment Contracts Held by Certain Investment Companies subject to the AICPA Investment Company Guide and Defined-Contribution Health and Welfare and Pension Plans,” investment contracts held by a defined-contribution plan are required to be reported at fair value. However, contract value is the relevant measurement attribute for that portion of the net assets available for benefits of a defined-contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount participants would receive if they were to initiate permitted transactions under the terms of the Plan. As required by this standard, the statements of net assets available for benefits present the fair value of the investment contract as well as the adjustment of the fully benefit-responsive investment contract from fair value to contract value. The statements of net assets available for benefits are prepared on a contract value basis.

RECENT ACCOUNTING PRONOUNCEMENTS

As of December 31, 2010, the Plan adopted new guidance which clarifies the classification and measurement of participant loans by defined contribution pension plans. That guidance requires that participant loans be classified as notes receivable from participants and measured at their unpaid principal balance, plus any accrued but unpaid interest. The Plan adopted this new guidance in its December 31, 2010 financial statements and has reclassified participant loans of \$10,220,353 for the year ended December 31, 2009 from investments to notes receivable from participants. Net assets of the Plan were not affected by the adoption of the new guidance.

As of December 31, 2010, the Plan adopted new guidance on fair value measurements and disclosures. This guidance requires new disclosures for fair value measurements and provides clarification for existing disclosures requirements. More specifically, this guidance requires (1) an entity to disclose separately the amounts of significant transfers in and out of Levels 1 and 2 fair value measurements and to describe the reasons for the transfers, and (2) information about purchases, sales, issuances and settlements to be presented separately (i.e. present the activity on a gross basis rather than net) in the reconciliation for fair value measurements using significant unobservable inputs (Level 3 inputs). This guidance clarifies existing disclosure requirements for the level of disaggregation used for classes of assets and liabilities measured at fair value and requires disclosures about the valuation techniques and inputs used to measure fair value for both recurring and nonrecurring fair value measurements using Level 2 and Level 3 inputs. The new disclosures about purchases, sales, issuances, and settlements in the roll forward of activity in Level 3 fair value measurements are effective for the Plan beginning January 1, 2011. See Note 3 for required disclosures.

USE OF ESTIMATES — The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America 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.

INVESTMENTS — Investment transactions are recorded on a trade date basis. INVESCO Institutional, Inc. reported that all the investment contracts held in the Master Trust under the Stable Value Fund (see Note 5) are fully benefit-responsive. Fully benefit-responsive investment contracts are reported at fair value under investments with a corresponding adjustment to contract value for purposes of reporting net assets available for investments. Shares of mutual funds are valued at the net asset value of shares held by

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the Plan at year-end. Investments in Kennametal common stock are valued at their quoted market price at year-end.

NOTES RECEIVABLE FROM PARTICIPANTS — Notes receivable from participants are measured at their unpaid principal balance plus any accrued but unpaid interest. Interest income is recorded in the period earned.

PAYMENT OF BENEFITS — Benefit payments are recorded when paid to participants / beneficiaries.

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

NET APPRECIATION — Net appreciation in fair value of investments is composed of unrealized gains and losses, which represent the change in market value compared to the cost of investments in each year, and realized gains or losses on security transactions, which represent the difference between proceeds received and average cost. Net appreciation in fair value of investments for the year ended December 31, 2010 was as follows:

	2010
Mutual Funds	\$ 34,908,199
Kennametal Inc. Common Stock	24,122,876
Total	\$ 59,031,075

PLAN EXPENSES — Investment management fees and all costs incurred in connection with the purchase and sale of securities are equitably apportioned among the respective investment funds. These expenses are included as a deduction from net assets in the statement of changes in net assets available for benefits. Other administrative fees are paid by the Company.

NOTE 3 — FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy consists of three levels to prioritize the inputs used in valuations, as defined below:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates); and inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3: Inputs that are unobservable.

The following sections describe the valuation methodologies used by the Plan to measure investments at fair value, including an indication of the level in the fair value hierarchy in which each major category of investments is generally classified. Where appropriate, the description includes details of the valuation models and any significant assumptions.

Mutual Funds Investments in mutual funds are valued at quoted net asset values at year end.

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Master Trust The plan has an undivided interest in the underlying assets of the Master Trust. Assets of the Master Trust are held in a stable value fund by INVESCO. The Master Trust primarily invests in wrapper contracts, or synthetic guaranteed investment contracts. See Note 5 for additional disclosures on the Master Trust. The fair value of the underlying assets of the Master Trust were determined using a present value model and the principal inputs are discount rate, fee periods, fee invoice schedule, contract value, replacement cost and actual cost.

Common Stock Investments in common stock are valued at their quoted market price at year-end.

As of December 31, 2010, the fair values of the Plan's investments measured on a recurring basis are categorized as follows:

	Level 1	Level 2	Level 3	Total
Mutual funds:				
Growth funds	\$ 101,149,586	—	—	\$ 101,149,586
Balanced funds	85,506,774	—	—	85,506,774
Value funds	41,239,503	—	—	41,239,503
Fixed income funds	17,314,393	—	—	17,314,393
Index funds	13,231,878	—	—	13,231,878
Plan's interest in Kennametal				
Inc. Master Trust:				
Synthetic guaranteed investment contracts	—	\$ 97,608,218	—	97,608,218
Money market fund	—	4,806,015	—	4,806,015
Kennametal Inc. common stock	65,418,828	—	—	65,418,828
Total investments	\$ 323,860,962	\$ 102,414,233	—	\$ 426,275,195

As of December 31, 2009, the fair values of the Plan's investments measured on a recurring basis are categorized as follows:

	Level 1	Level 2	Level 3	Total
Mutual funds:				
Growth funds	\$ 89,210,966	—	—	\$ 89,210,966
Balanced funds	76,033,101	—	—	76,033,101
Value funds	33,130,553	—	—	33,130,553
Fixed income funds	14,414,584	—	—	14,414,584
Index funds	12,013,245	—	—	12,013,245
Plan's interest in Kennametal				
Inc. Master Trust:				
Synthetic guaranteed investment contracts	—	\$ 96,780,062	—	96,780,062
Money market fund	—	2,302,411	—	2,302,411
Kennametal Inc. common stock	45,513,708	—	—	45,513,708
Total investments	\$ 270,316,157	\$ 99,082,473	—	\$ 369,398,630

NOTE 4 — INVESTMENTS EXCEEDING FIVE PERCENT OF NET ASSETS

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

	2010	2009
Stable Value Fund	\$ 102,414,233	\$ 99,082,473
Kennametal Inc. Common Stock	65,418,828	45,513,708
MSIFT MidCap Growth Portfolio	40,229,128	32,663,283
Fidelity Capital Appreciation Fund	29,755,749	26,056,484
American Funds EuroPacific Growth Fund	23,101,514	23,879,809
Fidelity Freedom 2015 Fund (a)	N/A	19,104,644

(a) The fair value of the investment in Fidelity Freedom 2015 Fund is \$19,464,646 as of December 31, 2010. The fair value of this investment is not five percent or more of the Plan's total net assets available for benefits.

NOTE 5 — MASTER TRUST

A portion of the Plan's investments are held in a Master Trust that was established for the investment of assets of the Plan and two other Company-sponsored defined contribution plans. Each plan has an undivided interest in the underlying assets of the Master Trust. The assets of the Master Trust are held in a stable value fund by INVESCO. Investment income relating to the Master Trust is allocated to the individual plans based upon average monthly balances invested by each plan. The underlying assets of the Master Trust include benefit-responsive investment contracts (the contracts).

The Master Trust's key objectives are to provide preservation of principal, maintain a stable interest rate, and provide daily liquidity at contract value for participant withdrawals and transfers in accordance with the provisions of the Plan.

To accomplish the objectives described above, the Master Trust primarily invests in wrapper contracts, or synthetic guaranteed investment contracts (GICs). In wrapper contracts, the investments are owned and held by the Master Trust for Plan participants. The Trust purchases a wrapper contract from an insurance company or bank. The wrapper contract amortizes the realized and unrealized gains and losses on the underlying fixed-income investments, typically over the duration of the investments, through adjustments to the future interest-crediting rate, the rate earned by participants in the Master Trust for the underlying investments. The issuer of the wrapper contract provides assurance that the adjustment to the interest-crediting rate will not result in a future interest-crediting rate that is less than zero. An interest-crediting rate less than zero would result in a loss of principal or accrued interest.

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The key factors that influence future interest-crediting rates for a wrapper contract include the level of market interest rates, the amount and timing of participant activity within the wrapper contract, the investment returns and the duration of the underlying investments. Most wrapper contracts use a formula based on the characteristics of the underlying fixed-income portfolio to determine a crediting rate. Over time, the crediting rate formula amortizes the Master Trust's realized and unrealized market value gains and losses over the duration of the investments. The wrapper contracts' interest-crediting rates are typically reset on a monthly or quarterly basis.

The average yield earned by the Plan based on actual earnings was 2.20% and 3.10% for the years ended December 31, 2010 and 2009, respectively. The average yield earned by the Plan based on the interest rate credited to participants was 3.84% and 4.07% for the years ended December 31, 2010 and 2009, respectively.

In certain circumstances, the amount withdrawn from the wrapper contract would be payable at fair value rather than at contract value. These events include termination of the Plan, a material adverse change to the provisions of the Plan, if the employer elects to withdraw from a contract in order to switch to a different investment provider, or if the terms of a successor plan do not meet the wrapper contract issuer's underwriting criteria for issuance of a clone wrapper contract. Management believes that the events described above could result in the payment of benefits at fair value rather than contract value and are not probable of occurring in the foreseeable future.

Investments held by the Master Trust at December 31, 2010 were as follows:

Security	Issuer Rating	Investments at Fair Value	Adjustments to Contract Value	Investments at Contract Value
Wrapped Portfolios				
Common Collective Trusts:				
NATIXIS IGT INVESCO				
Short-term Bond Fund	A+/Aa3	\$ 21,001,687	\$ (846,444)	\$ 20,155,243
ING IGT INVESCO Multi-Mgr A or				
Better Interm. G/C Fund	A/A2	21,111,206	(1,236,191)	19,875,015
Pacific Life IGT INVESCO				
Multi-Mgr A or Better Interm. G/C Fund	A+/A1	21,155,488	(1,290,450)	19,865,038
Monumental IGT INVESCO				
Multi-Mgr A or Better Core Fund	AA-/A1	18,519,297	(757,955)	17,761,342
JP Morgan Chase IGT INVESCO				
Short-term Bond Fund	AA-/Aa1	15,457,065	(618,435)	14,838,630
State Street IGT INVESCO				
Short-term Bond Fund	AA-/Aa2	14,848,896	(616,130)	14,232,766
Pacific Life Wrapper contracts	A+/A1	58,152	(3,547)	54,605
Monumental Wrapper contracts	AA-/A1	38,168	(1,562)	36,606
Short-Term Investments				
Fidelity Money Market	N/A	5,523,988	—	5,523,988
Total		\$ 117,713,947	\$ (5,370,714)	\$ 112,343,233

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At December 31, 2010, the Plan's interest in the Master Trust was approximately 87 percent. Total investment income for the Master Trust was \$4,297,357 for the year ended December 31, 2010. The investment income for the Master Trust is recorded in dividends and interest in the statement of changes in net assets available for benefits.

Investments held by the Master Trust at December 31, 2009 were as follows:

Security	Issuer Rating	Investments at Fair Value	Adjustments to Contract Value	Investments at Contract Value
Wrapped Portfolios				
Common Collective Trusts:				
NATIXIS IGT INVESCO				
Short-term Bond Fund	A+/Aa3	\$ 21,911,322	\$ (528,132)	\$ 21,383,190
Pacific Life IGT INVESCO				
Multi-Mgr A or Better Interm. G/C Fund	AA-/A1	20,455,173	(871,925)	19,583,248
ING IGT INVESCO Multi-Mgr A or Better Interm. G/C Fund	A+/A2	20,413,406	(854,223)	19,559,183
Monumental IGT INVESCO				
Multi-Mgr A or Better Core Fund	AA-/A1	17,799,101	(372,217)	17,426,884
JP Morgan Chase IGT INVESCO				
Short-term Bond Fund	AA-/Aa1	16,214,023	(404,935)	15,809,088
State Street IGT INVESCO				
Short-term Bond Fund	AA-/Aa2	15,628,716	(376,358)	15,252,358
JP Morgan Chase Wrapper contracts	AA-/Aa1	29,797	(744)	29,053
Pacific Life Wrapper contracts	AA-/A1	20,625	(879)	19,746
Short-Term Investments				
Fidelity Money Market	N/A	2,675,666	—	2,675,666
Total		\$ 115,147,829	\$ (3,409,413)	\$ 111,738,416

At December 31, 2009, the Plan's interest in the Master Trust was approximately 86 percent.

NOTE 6 — TAX STATUS

The Internal Revenue Service has determined and informed the plan sponsor by a letter dated December 16, 2005, that the Plan and related trust are designed in accordance with applicable sections of the IRC. The Plan has been amended since receiving the determination letter. However, the Plan administrator and the Plan's tax counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC. Therefore, no provision for income taxes has been included in the Plan's financial statements. The Plan is subject to routine audits by taxing jurisdictions; however there are currently no audits for any tax periods in progress. The plan administrator believes it is no longer subject to income tax examinations for years prior to 2007.

NOTE 7 — PLAN TERMINATION

Although it has not expressed any intent to do so, the Company has the right to 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.

NOTE 8 — RISKS AND UNCERTAINTIES

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits.

NOTE 9 — RELATED PARTY TRANSACTIONS

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

One of the investment fund options available to participants is common stock of Kennametal Inc., the Plan sponsor. The Plan held 1,656,205 and 1,754,661 shares of Kennametal common stock, or \$65,418,828 and \$45,513,708 at December 31, 2010 and 2009, respectively. As a result, transactions related to this investment fund qualify as party-in-interest transactions.

KENNAMETAL THRIFT PLUS PLAN
PLAN NUMBER: 002
EIN: 25-0900168
SCHEDULE H, LINE 4i
SCHEDULE OF ASSETS (HELD AT END OF YEAR)
DECEMBER 31, 2010

(a)	(b) Issuer	(c) Description	(d) Cost	(e) Fair Value
	<u>Mutual Funds</u>			
	Morgan Stanley	MSIFT MidCap Growth Portfolio	N/A	\$ 40,229,128
*	Fidelity	Fidelity Capital Appreciation Fund	N/A	29,755,749
	American Funds	American Funds EuroPacific Growth Fund	N/A	23,101,514
*	Fidelity	Fidelity Freedom 2015 Fund	N/A	19,464,646
*	Fidelity	Fidelity Freedom 2025 Fund	N/A	16,842,798
	Lord Abbett	Lord Abbett SmallCap Value Fund	N/A	16,206,801
	Hotchkis & Wiley	H&W LargeCap Value Fund	N/A	15,756,019
*	Fidelity	Fidelity Freedom 2020 Fund	N/A	13,913,494
	Vanguard	Vanguard Institutional Index Fund	N/A	12,570,175
*	Fidelity	Fidelity Freedom 2030 Fund	N/A	9,198,106
	Vanguard	Vanguard Total Bond Market Index Signal	N/A	8,825,933
	Hotchkis & Wiley	H&W MidCap Value Fund	N/A	8,597,835
	Pimco	Pimco Total Return Fund	N/A	8,488,460
*	Fidelity	Fidelity Freedom 2035 Fund	N/A	6,902,143
*	Fidelity	Fidelity Freedom Income Fund	N/A	6,799,312
	Morgan Stanley	MSIF Small Company Growth Portfolio	N/A	6,773,795
*	Fidelity	Fidelity Freedom 2040 Fund	N/A	6,244,810
*	Fidelity	Fidelity Freedom 2010 Fund	N/A	4,316,226
*	Fidelity	Fidelity Freedom 2050 Fund	N/A	1,059,807
	Vanguard	Vanguard Total International Stock	N/A	985,575
*	Fidelity	Fidelity Freedom 2045 Fund	N/A	765,432
	Vanguard	Vanguard Mid Capitalization Index Signal	N/A	661,703
	Allianz	Allianz NFJ Dividend Value Fund	N/A	445,701
	Lord Abbett	Lord Abbett SmallCap Blend Fund	N/A	303,825
	Columbia	Columbia MidCap Value Fund	N/A	233,147
		Total Mutual Funds		258,442,134
	<u>Master Trust</u>			
	INVESCO	Stable Value Fund	N/A	102,414,233
	<u>Kennametal Inc. Common Stock</u>			
*	Kennametal Inc.	Kennametal Inc. Common Stock	N/A	65,418,828
		Total Investments		426,275,195
*	Notes receivable from participants	Maturities from 2011 to 2040, interest rates from 4.25% to 10.5%	N/A	9,666,591
		Total		\$435,941,786

* 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 Plus Plan has duly caused this annual report to be signed by the undersigned hereunto duly authorized.

KENNAMETAL THRIFT PLUS PLAN

Date: June 24, 2011

By: /s/ John Bielinski
John Bielinski
Plan Administrator

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Nos. 333-170348, 333-18423, 333-88049 and 333-124774) on Form S-8 of Kennametal Inc. of our report dated June 24, 2011, with respect to the statements of net assets available for benefits of the Kennametal Thrift Plus Plan as of December 31, 2010 and 2009, the related statement of changes in net assets available for benefits for the year ended December 31, 2010, and the supplemental schedule of assets (held at end of year) as of December 31, 2010, which report appears in the December 31, 2010 Annual Report on the Form 11-K of the Kennametal Thrift Plus Plan.

/s/ Schneider Downs & Co., Inc.

Schneider Downs & Co., Inc.

Pittsburgh, Pennsylvania
June 24, 2011