
**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, 2016

☐ 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.
600 Grant Street
Suite 5100
Pittsburgh, Pennsylvania 15219

**KENNAMETAL THRIFT PLUS PLAN
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Exhibit 23.1 – Consent of Herbein + Company, Inc., independent registered public accounting firm

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, 2016 and 2015, and the related statement of changes in net assets available for benefits for the year ended December 31, 2016. 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Plan is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit 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 control over financial reporting. Accordingly, we express no such opinion. An audit also 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, 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, 2016 and 2015, and the changes in net assets available for benefits for the year ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the financial statements, in 2016, the Plan adopted new accounting standards related to Accounting Standards Update (ASU) 2015-07, Fair Value Measurement (Topic 820), 2015-12, Defined Contribution Plan (Topic 962), and 2017-06, Defined Contribution Plan (Topic 962). Our opinion is not modified with respect to this matter.

The supplemental schedules of Schedule of Delinquent Participant Contributions and Schedule of Assets (Held at End of Year) together referred to as "supplemental information" have been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental information is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information, we evaluated whether the supplemental information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental information is fairly stated, in all material respects, in relation to the financial statements taken as a whole.

/s/ Herbein + Company, Inc.

Herbein + Company, Inc.

Pittsburgh, Pennsylvania
June 15, 2017

KENNAMETAL THRIFT PLUS PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS
DECEMBER 31, 2016 AND 2015

	2016	2015
ASSETS		
INVESTMENTS		
Plan interest in the Kennametal Inc. Master Trust investments, at fair value	\$ 455,306,741	\$ 458,085,066
Plan interest in the Kennametal Inc. Master Trust fully benefit-responsive investment contracts, at contract value	94,349,557	87,680,369
Total plan interest in the Kennametal Inc. Master Trust	549,656,298	545,765,435
RECEIVABLES		
Employer contributions	294,791	—
Participant contributions	383,291	—
Notes receivable from participants	11,323,384	11,914,941
TOTAL RECEIVABLES	12,001,466	11,914,941
NET ASSETS AVAILABLE FOR BENEFITS	\$ 561,657,764	\$ 557,680,376

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, 2016

ADDITIONS TO NET ASSETS ATTRIBUTED TO:		
Plan interest in the Kennametal Inc. Master Trust investment income	\$	48,404,498
Interest income on notes receivable from participants		532,766
Contributions:		
Participant		17,948,983
Rollover		2,116,412
Employer		13,074,086
Total contributions		33,139,481
Total additions		82,076,745
DEDUCTIONS FROM NET ASSETS ATTRIBUTED TO:		
Benefits paid to participants		89,454,955
Administrative fees		630,241
Loan distributions		63,549
Total deductions		90,148,745
NET DECREASE BEFORE TRANSFER OF ASSETS		(8,072,000)
Transfers of assets to this plan		12,049,388
NET INCREASE		3,977,388
NET ASSETS AVAILABLE FOR BENEFITS:		
Beginning of year		557,680,376
End of year	\$	561,657,764

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

KENNAMETAL THRIFT PLUS PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016 AND 2015

NOTE 1—DESCRIPTION OF PLAN

The following description of Kennametal Thrift Plus Plan, as amended (the Plan) provides only general information. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions.

GENERAL – 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 business entities and business units (Kennametal or the Company) and to provide a method to supplement their retirement income. Effective January 1, 2017, the Plan was amended to permit participation to certain grandfathered participants of the Kennametal Inc. Retirement Income Plan. 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 employee after-tax and Company contributions. The Plan is subject to certain provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA). The Company is the Plan sponsor.

Fidelity Management Trust Company (FMTC) serves as trustee of the Plan. Fidelity Investments Institutional Operations Company, Inc. (FIIOC) serves as the record keeper. The trustee has overall responsibility for the custody, safekeeping, and investment of the Plan assets that it holds. The Plan also provides for Company contributions. Trust investments in Kennametal Inc. capital stock shall be made via the stock fund.

TRANSFERS OF PLAN ASSETS – During the 2016 plan year, there was \$12,049,388 of transfers into the Plan. These transfers were from the merger of the Kennametal Retirement Income Savings Plan (KRISP), a plan that shared the same Plan Sponsor and was previously included within the Kennametal Inc. Master Trust (Master Trust).

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, Company contributions and all earnings of the Plan do not constitute taxable income to the participants until withdrawn from the Plan by the participants (excluding where applicable, earnings on Roth contributions).

VESTING – Employee contributions are fully vested. All Company contributions (basic, matching, and discretionary) cliff vest after the third anniversary of the participant's employment date. Effective January 1, 2016, the Board of Directors of the Company amended the vesting provisions of the Plan so that any employee terminated for other than cause will be 100% vested in their account on their date of separation. At December 31, 2016 and 2015, forfeited nonvested accounts totaled \$284,995 and \$147,243, respectively. These amounts will be used to reduce future Company contributions. Company contributions were reduced by \$954,704 for forfeited nonvested accounts for 2016.

PARTICIPANT ACCOUNTS – A separate account is maintained for each participant in the Plan. Each participant's account is credited with the participant's contributions, the Company matching contributions, the Company required basic contribution and the Company's discretionary contribution. Fixed administrative expenses are deducted quarterly from the participants' accounts. The benefit to which a participant is entitled is the balance of the participant's vested account.

CONTRIBUTIONS – The Plan allows participants to elect a contribution rate (either pre-tax, Roth, after-tax, or a combination) of 1% to 50% of the employee's eligible wages as defined in the Plan agreement. Newly hired employees are automatically enrolled at 3%. Employees who are age 50 or older and who have met or will meet the annual Internal Revenue Service (IRS) limit under the law or the Plan are eligible to make catch-up contributions.

The Plan provides for Company matching contributions of 50% of employee contributions, up to 6% of compensation. As such, the maximum Company matching contribution is 3% of compensation. Effective January 1, 2017, the employer contribution was increased to 100% of the employee's contributions, up to 6% of compensation. Under the Plan, the Company has the discretion to make matching contributions in Kennametal Inc. capital stock.

The participants can elect to have their contributions (pre-tax, Roth, after-tax, catch-up, and rollover amounts) invested in the different investment funds available under the Plan. Company matching contributions are invested in the same investment elections that the employee elected for their pre-tax or after-tax contributions.

Participants receive a fixed basic contribution equal to 3% of the employee's eligible compensation and an additional discretionary contribution from 0% up to 3%. Effective January 1, 2017, the employer basic contribution was removed from the Plan. Under the Plan, the Company has the right to make its basic and discretionary contributions in Kennametal Inc. capital stock. During 2016, the Company did not make a discretionary contribution. Company basic and discretionary contributions are invested in the same investment fund elections that the employee elected for their pre-tax or after-tax contributions.

DISTRIBUTIONS – Distributions to participants due to disability, retirement, or death are payable, at the participant's election, as a single distribution consisting of whole shares of Kennametal Inc. capital stock plus cash for fractional shares, a cash lump-sum, or periodic payments for a period not to extend beyond the life (or life expectancy) of the participant or the joint lives (or life expectancy) of the participant and his or her designated beneficiary. If a participant's vested interest in his or her account exceeds \$1,000, a participant may elect to receive distributions as either lump sum or as periodic distributions as more fully described in the Plan document.

In addition, while still employed, participants may withdraw certain employee contributions or rollover contributions at any time. Participants over the age of 59.5 may withdraw their vested balance at any time. Vested contributions and pre-tax employee contributions may be withdrawn by participants under age 59.5 only for specific hardship reasons.

NOTES RECEIVABLE FROM PARTICIPANTS – The minimum loan available is \$1,000 and the maximum loan amount is the lesser of 50% of the participant's total vested account balance or \$50,000. The maximum term permissible for a loan is 5 years for a general-purpose loan and longer for a residential loan as determined by the Plan administrator (defined as 30 years in the Summary Plan Document (SPD)). Principal and interest are paid ratably through payroll deductions. Interest rates on notes receivable from participants ranged from 4.25% to 10.00% at December 31, 2016 and 2015. Notes receivable from participants outstanding at December 31, 2016 have maturity dates ranging from 2017 to 2046.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING – The financial statements of the Plan are prepared under the accrual basis of accounting.

USE OF ESTIMATES – The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires the Plan administrator to make estimates and assumptions that affect the reported amounts of assets, liabilities, and changes therein, and disclosure of contingent assets and liabilities. Accordingly, actual results may differ from those estimates.

INVESTMENT VALUATION AND INCOME RECOGNITION – The Plan holds an interest in the net assets of the Master Trust as of December 31, 2016 and 2015. The Master Trust investments are reported at fair value (except for the fully benefit-responsive investment contract, which is reported at contract value). Fair value is 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 Plan's ERISA Compliance Committee determines the Plan's valuation policies utilizing information provided by its investment advisors, investment consultants, and the custodian. See Note 4 for discussion of fair value measurements.

Purchases and sales of securities are recorded on the trade-date basis. Gains and losses on securities sold or redeemed are determined on the basis of average cost. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Plan interest in the Kennametal Inc. Master Trust investment loss includes the Plan's gain and losses on investments bought and sold as well as held during the year and interest and dividends.

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. Related fees are recorded as administrative expenses and are expensed when they are incurred. No allowance for credit losses has been recorded as of December 31, 2016 and 2015. If a participant ceases to make loan repayments and the Plan administrator deems the participant loan to be in default, the participant loan balance is reduced and a benefit payment is recorded.

PAYMENT OF BENEFITS – Benefit payments are recorded when paid to participants/beneficiaries. As of December 31, 2016, two individuals had elected to withdraw funds of \$571,373. However, these benefits were not paid out until January 2017.

PLAN EXPENSES – Certain expenses of maintaining the Plan are paid directly by the Company and are excluded from these financial statements. Record keeping fees are charged equally to each participant and are classified as administrative fees on the Statement of Changes in Net Assets Available for Benefits. Fees related to the administration of notes receivable from participants are charged directly to the participant's account and are included in administrative fees in the accompanying Statement of Changes in Net Assets Available for Benefits. Investment related expenses are included in the Plan interest in the Kennametal Inc. Master Trust investment income.

RECENT ACCOUNTING PRONOUNCEMENTS – In May 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2015-07 Fair Value Measurement (Topic 820) (ASU 2015-07), which removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. Removing those investments from the fair value hierarchy not only eliminates the diversity in practice resulting from the way in which investments measured at net asset value per share (or its equivalent) with future redemption dates are classified, but also ensures that all investments categorized in the fair value hierarchy are classified using a consistent approach. ASU 2015-07 is effective for fiscal years beginning after December 15, 2015 and interim periods within those fiscal years. A reporting entity should apply the amendments retrospectively to all periods presented. The Plan administrator has adopted this ASU in the current year, which resulted in changing the prior year comparison presentation to conform to the current year presentation.

In July 2015, the FASB issued ASU 2015-12 Plan Accounting: Defined Benefit Pension Plans (Topic 960) Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): (Part I) Fully Benefit-Responsive Investment Contracts, (Part II) Plan Investment Disclosures, (Part III) Measurement Date Practical Expedient. This ASU reduces the complexity in employee benefit plan reporting. Part I designates contract value as the only required measure for fully benefit-responsive investment contracts. Currently, fully benefit-responsive investment contracts are required to be measured at contract value with a reconciliation of contract value to fair value, when these measures differ, on the face of the Plan financial statements. Part II eliminates the requirement to disclose individual investments representing 5% or more of net assets available for benefits for both participant-directed investments and nonparticipant-directed investments. Additionally, net appreciation or depreciation in investments for the period is no longer required to be disaggregated and disclosed by general type, however, should still be presented in the aggregate. Part II also requires that investments of employee benefit plans be grouped only by general type, eliminating the need to disaggregate the investments in multiple ways. Part III provides a practical expedient to permit plans to measure investments and investment-related accounts (e.g., a liability for a pending trade with a broker) as of a month-end date that is closest to the Plan's fiscal year-end, when the fiscal period does not coincide with month-end. This guidance is effective for fiscal years beginning after December 15, 2015. A reporting entity should apply the amendments to Parts I and II retrospectively to all periods presented, while Part III should be applied prospectively. The Plan administrator has adopted Parts I and II of this ASU in the current year, which resulted in changing the prior year comparison presentation to conform to the current year presentation. Part III is not applicable as the Plan's fiscal year-end coincides with a calendar month-end.

In February 2017, the FASB issued ASU 2017-06 Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): Employee Benefit Plan Master Trust Reporting. This ASU is intended to reduce diversity and improve the usefulness of information provided by employee benefit plans that hold interests in master trusts. Under the new guidance, a plan's interests in master trust balances and activities need to be presented on the face of the plan's financial statements. Balance in the statement of net assets and activities in the statement of changes in net assets should be shown net, as a single line item for each interest in a master trust. The new guidance also requires the following disclosures:

- The master trust's investments by general type and the dollar amount of the plan's interest in each type of investment
- The master trust's other assets and liabilities on a gross basis and the dollar amount of the plan's interest in each balance

Upon adoption of the new guidance, plans with a divided interest in a master trust will no longer need to disclose the plan's overall percentage interest in the trust. Health and welfare plans will no longer need to disclose 401(h) investment account information, but will need to reference the defined benefit plan that discloses such information. This guidance is effective for fiscal years beginning after December 15, 2018. Early application is permitted. The Plan administrator has adopted this ASU in the current year, which resulted in changing the prior year comparison presentation to conform to the current year presentation.

SUBSEQUENT EVENTS – The Plan's management evaluated subsequent events after the statement of net assets available for benefits date of December 31, 2016 through June 15, 2017, prior to the issuance of the Plan's financial statements and concluded that no subsequent events occurred that would require recognition or disclosure in the Plan's financial statements.

NOTE 3 – INVESTMENT IN MASTER TRUST

All of the Plan's investments are held in the Master Trust, which was established for the investment of assets of the plans making up the Kennametal Inc. Program, which consists of Kennametal Savings Plan, KRISP and Kennametal Thrift Plus Plan (Thrift). As of December 31, 2016, KRISP was merged into the Plan. The Master Trust offers mutual funds, Common/Collective trusts, Kennametal Inc. capital stock, a Stable Value Fund and a self-directed brokerage account as investment options. Only participants participating in the KRISP and Thrift plans are permitted to invest in Kennametal Inc. capital stock. Each participating plan's interest in the investment funds (i.e. separate accounts) of the Master Trust is based on the account balances of the participants and their elected investment funds. The Master Trust additions and deductions are allocated among the participating plans in the Master Trust by assigning to each such plan those transactions (primarily contributions, benefit payments, and plan-specific expenses) that can be specifically identified and by allocating among all plans, based on the respective Plan's asset allocation and fair value, income and expenses resulting from the collective investment of the assets of the Master Trust.

Fair value of investments held by the Master Trust at December 31 is as follows:

	2016		2015	
	Master Trust Balances	Plan's Interest in Master Trust Balances	Master Trust Balances	Plan's Interest in Master Trust Balances
Investments valued at net asset value (NAV):				
Common/Collective trusts	\$ 202,624,453	\$ 197,554,165	\$ 211,832,320	\$ 203,394,844
Investments at fair value:				
Mutual funds	219,579,499	215,794,354	232,661,946	223,474,534
Kennametal Inc. capital stock	35,515,682	35,515,682	26,015,315	25,084,246
Self-directed brokerage account	6,443,342	6,442,540	6,208,972	6,131,442
Total investments at fair value	464,162,976	455,306,741	476,718,553	458,085,066
Investments at contract value:				
Stable Value Fund	101,382,700	94,349,557	99,203,404	87,680,369
Total investments	\$ 565,545,676	\$ 549,656,298	\$ 575,921,957	\$ 545,765,435

At December 31, 2016 and 2015, the Plan's interest in the Stable Value Fund was approximately 17% and 16% of total Plan net assets, respectively.

The Master Trust has no other assets or liabilities at December 31, 2016 and 2015.

Investment income attributable to the Master Trust for the year ended December 31, 2016 was as follows:

Net appreciation in fair value of investments	\$ 39,810,091
Interest and dividends	10,633,166
Total investment income	\$ 50,443,257

NOTE 4 – FAIR VALUE MEASUREMENT

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices to active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under FASB ASC 820 are described as follows:

- Level 1: Inputs to the valuation methodology are unadjusted quoted prices for identical unrestricted assets or liabilities in active markets that the Plan has the ability to access.
- 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 inactive markets;
 - Inputs other than quoted prices that are observable for the asset or liability;
 - Inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3: Inputs are unobservable.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at December 31, 2016 and 2015.

Mutual Funds -

Valued at the daily closing price as reported by the fund. The mutual funds held by the Plan are deemed to be actively traded.

Kennametal Inc. Capital Stock -

Valued at the closing price reported on the active market on which the individual securities are traded.

Common/Collective Trusts -

Investments in Common/Collective trusts are valued using net asset value (NAV) of units of a bank collective trust. The NAV, as provided by the trustee, is used as a practical expedient to estimate fair value. The NAV is based on the fair value of the underlying investments held by the fund less its liabilities. This practical expedient is not used when it is determined to be probable that the fund will sell the investment for an amount different than the reported NAV. Participant transactions (purchases and sales) may occur daily. Were the Master Trust to initiate a full redemption of the collective trust, the investment advisor reserves the right to temporarily delay withdrawal from the trust in order to ensure that securities liquidations will be carried out in an orderly business manner. These investments do not have any unfunded commitments as of December 31, 2016 and 2015, and have a nominal redemption period.

Self-Directed Brokerage Account -

The following investment types of the self-directed brokerage account are valued as follows:

Common Stock and Preferred Stock - Valued at the closing price reported on the active market on which the individual securities are traded.

Mutual Funds - Value at the daily closing price as reported by the fund.

Cash and Cash Equivalents - Value approximates fair value due to the short term of this investment.

Units in Trust - Valued at the quoted NAV at year end.

The methods described above might produce a fair value calculation that might not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Plan administrator believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial statements could result in a different fair value measurement at the reporting date.

The following table sets forth by level, within the fair value hierarchy, the Plan's investments at fair value measurements at December 31, 2016:

	Level 1	Level 2	Level 3	Total
Mutual funds	\$ 215,794,354	\$ —	\$ —	\$ 215,794,354
Kennametal Inc. capital stock	35,515,682	—	—	35,515,682
Self-directed brokerage account:				
Common and preferred stocks	2,694,298	—	—	2,694,298
Mutual funds	1,523,945	—	—	1,523,945
Cash and cash equivalents	2,000,428	—	—	2,000,428
Units in trust	223,869	—	—	223,869
Total Investments in the fair value hierarchy	\$ 257,752,576	\$ —	\$ —	\$ 257,752,576
Investments measured at NAV ⁽¹⁾				197,554,165
Investments, at fair value				\$ 455,306,741

The following table sets forth by level, within the fair value hierarchy, the Plan's investments at fair value measurements at December 31, 2015:

	Level 1	Level 2	Level 3	Total
Mutual funds	\$ 223,474,534	\$ —	\$ —	\$ 223,474,534
Kennametal Inc. capital stock	25,084,246	—	—	25,084,246
Self-directed brokerage account:				
Common and preferred stocks	2,323,470	—	—	2,323,470
Mutual funds	1,443,690	—	—	1,443,690
Cash and cash equivalents	2,141,787	—	—	2,141,787
Units in trust	222,495	—	—	222,495
Total Investments in the fair value hierarchy	\$ 254,690,222	\$ —	\$ —	\$ 254,690,222
Investments measured at NAV ⁽¹⁾				203,394,844
Investments, at fair value				\$ 458,085,066

¹ In accordance with Subtopic 820-10, certain investments that were measured at NAV per share (or its equivalent) have not been classified in the fair value hierarchy. The fair value amounts presented in the table above are intended to permit reconciliation of the fair value hierarchy to the line items presented in the statements of net assets available for benefits.

Transfers Between Levels - The availability of observable market data is monitored to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques might require the transfer of financial instruments from one fair value level to another. In such instances, the transfer is reported at the beginning of the reporting period.

The Plan evaluates the significance of transfers between levels based upon the nature of the financial instrument and size of the transfer relative to total net assets available for benefits. There were no significant transfers between levels during 2016 or 2015.

NOTE 5 – STABLE VALUE FUND

The Master Trust has a fully benefit-responsive guaranteed investment contract (Stable Value Fund) with Invesco which participants in the Plan own interest in. Invesco maintains the contributions in a general account. The account is credited with earnings on the underlying investments and charged for participant withdrawals and administrative expenses. The guaranteed investment contract with Invesco is contractually obligated to repay the principal and a specified interest rate that is guaranteed to the Master Trust, and in turn, the Plan.

Because the guaranteed investment contract is fully benefit-responsive, contract value is the relevant measurement attribute for that portion of the net assets available for benefits attributable to the guaranteed investment contract. The guaranteed investment contract is presented on the face of the Statements of Net Assets Available for Benefits at fair value with an adjustment to contract value in arriving at net assets available for benefits. Contract value, as reported to the Plan by Invesco, represents contributions made under the contract, plus earnings, less participant withdrawals, and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value.

There are no reserves against contract value for credit risk of the contract issuer or otherwise. The crediting interest rate is based on a formula agreed upon with the issuer, but it may not be less than 0%. Such interest rates are reviewed on a quarterly basis for resetting.

Certain events limit the ability of the Master Trust and the Plan to transact at contract value with the issuer. Such events include: 1) amendments to the Master Trust or Plan documents (including complete or partial termination of the Master Trust or merger with another plan that does not participate in the Master Trust arrangement), 2) changes to the Master Trust's prohibition on competing investment options or deletion of equity wash provisions, 3) bankruptcy of the Plan sponsor or other Plan sponsor events (for example, divestitures or spin-offs of a subsidiary) that cause a significant withdrawal from the Master Trust or the Plan, or 4) the failure of the trust to qualify for exemption from federal income taxes or any required prohibited transaction exemption under ERISA. The Plan administrator believes that any events that would limit the Master Trust's or Plan's ability to transact at contract value with participants are probable of not occurring.

The average yield earned by the Plan based on actual earnings was 1.90% and 1.86% for the years ended December 31, 2016 and 2015 respectively. The average yield earned by the Plan based on the interest rate credited to participants was 2.18% and 2.16% for the years ended December 31, 2016 and 2015, respectively.

NOTE 6 – TAX STATUS

The IRS has determined and informed the Plan sponsor by a letter dated December 4, 2014, that the Plan and related trust are designed in accordance with applicable sections of the IRC. Although the Plan has been amended since receiving the determination letter, the Plan administrator and the Plan's tax counsel believe the Plan is currently designed and is currently being operated in compliance with the applicable regulations of the Internal Revenue Code and therefore believe that the Plan is qualified and the related trust is tax-exempt. Accordingly, no provision for income taxes has been included in the Plan's financial statements.

Accounting principles generally accepted in the United States of America require the Plan administrator to evaluate tax positions taken by the Plan and recognize a tax liability or asset if the Plan has taken an uncertain tax position that more likely than not would be sustained upon examination by the IRS. 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 examination for Plan years prior to December 31, 2013.

NOTE 7 – PLAN TERMINATION

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions and to terminate the Plan at any time, subject to the provisions of ERISA. In the event of Plan termination, participants would become 100 percent vested in the Company contributions.

NOTE 8 – RISKS AND UNCERTAINTIES

The Plan, through the Master Trust, 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 at least 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 AND PARTY-IN-INTEREST TRANSACTIONS

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

One of the investment fund options available to participants is capital stock of Kennametal Inc., the Plan sponsor. The Plan held 1,135,074 and 1,296,080 shares of Kennametal Inc. capital stock, or \$35,515,682 and \$25,084,246 at December 31, 2016 and 2015, respectively. As a result, transactions related to this investment qualify as party-in-interest transactions.

KENNAMETAL THRIFT PLUS PLAN
PLAN NUMBER: 002
EIN: 25-0900168
SCHEDULE H, LINE 4a
SCHEDULE OF DELINQUENT PARTICIPANT CONTRIBUTIONS
DECEMBER 31, 2016

Participant Contributions Transferred Late to Plan	Total That Constitute Nonexempt Prohibited Transactions			Total Fully Corrected Under Voluntary Fiduciary Correction Program (VFCP) and Prohibited Transaction Exemption 2002-51
Check Here if Late Participant Loan Repayments are Included	Contributions Not Corrected	Contributions Corrected Outside VFCP	Contributions Pending Correction in VFCP	
2015	—	30,830	—	—

KENNAMETAL THRIFT PLUS PLAN
PLAN NUMBER: 002
EIN: 25-0900168
SCHEDULE H, LINE 4i
SCHEDULE OF ASSETS (HELD AT END OF YEAR)
DECEMBER 31, 2016

(a)	(b) Identity of issue, borrower, lessor or similar party	(c) Description of investment including maturity date, rate of interest, collateral, par or maturity value	(d) Cost	(e) Current Value
*	Plan Interest in the Kennametal Inc. Master Trust	Master Trust	**	549,656,298
PARTICIPANT LOANS*		Interest rates from 4.25% to 10.00%	\$ —	11,323,384
* - Designates party-in-interest as defined by ERISA				
** - Cost omitted for participant directed accounts				

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 on its behalf by the undersigned hereunto duly authorized.

KENNAMETAL THRIFT PLUS PLAN

Date: June 15, 2017

By: /s/ Erik Agostoni
Erik Agostoni
Interim Plan Administrator

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement Nos. (333-18423, 333-88049 and 333-124774) on Form S-8 of Kennametal Inc. of our report dated June 15, 2017, with respect to the statements of net assets available for benefits of the Kennametal Thrift Plus Plan as of December 31, 2016 and 2015, the related statement of changes in net assets available for benefits for the year ended December 31, 2016, and the supplemental schedule of delinquent participant contributions as of December 31, 2016 and the supplemental schedule of assets (held at end of year) as of December 31, 2016, appearing in this Annual Report on Form 11-K of the Kennametal Thrift Plus Plan for the year ended December 31, 2016.

/s/ Herbein + Company, Inc.

Herbein + Company, Inc.

Pittsburgh, Pennsylvania
June 15, 2017