

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

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**FORM 11-K**

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(Mark One)

**ANNUAL REPORT OF EMPLOYEE STOCK PURCHASE, SAVINGS AND SIMILAR PLANS PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)**

For the fiscal year ended December 31, 2009

OR

**TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)**

Commission File Number 001-08106

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

**The MasTec, Inc. 401(k) Retirement Plan**

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

**MasTec, Inc.**

800 S. Douglas Road, Suite 1200  
Coral Gables, FL 33134

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**REPORT OF INDEPENDENT REGISTERED  
PUBLIC ACCOUNTING FIRM**

The Trustees  
The MasTec, Inc. 401(k) Retirement Plan  
Coral Gables, FL

We have audited the accompanying statements of net assets available for benefits of The MasTec, Inc. 401(k) Retirement Plan (the "Plan") as of December 31, 2009 and December 31, 2008, and the related statement of changes in net assets available for benefits for the year ended December 31, 2009. 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. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for purposes of expressing an opinion on the effectiveness of the Plan's internal controls 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, 2009 and 2008, and the changes in net assets available for benefits for the year ended December 31, 2009, 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 basic financial statements taken as a whole. The supplemental schedule of assets (held at end of year) and schedule of reportable transactions as of December 31, 2009 is presented for purposes 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. The supplemental schedules are the responsibility of the Plan's management. The supplemental schedules have been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ BDO Seidman, LLP  
June 29, 2010

Miami, FL

The MasTec, Inc. 401(k)  
Retirement Plan

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	December 31,	
	2009	2008
Assets		
Investments, at fair value	\$23,577,436	\$ 21,140,258
Receivables:		
Contributions from employer	95,708	99,420
Contributions from plan participants	102,745	75,769
Payables:		
Refunds to plan participants	(228,619)	(376,298)
Total net assets available for benefits	<u>\$ 23,547,270</u>	<u>\$ 20,939,149</u>

See accompanying notes to the financial statements.

The MasTec, Inc. 401(k)  
Retirement Plan

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

for the Year Ended December 31, 2009

Additions to net assets attributed to:	
Investment income:	
Dividend and interest income	\$ 317,117
Net appreciation in fair value of investments	<u>2,941,609</u>
Total Investment income	<u>3,258,726</u>
Contributions:	
Employer	411,880
Participants	2,160,472
Rollover and other	<u>95,459</u>
Total additions	<u>5,926,537</u>
Deductions to net assets attributed to:	
Benefit payments	(2,099,514)
Cash out distributions	(1,162,973)
Administrative expenses	<u>(55,929)</u>
Total deductions	<u>(3,318,416)</u>
Net increase in net assets available for benefits	2,608,121
Net assets available for benefits at beginning of year	<u>20,939,149</u>
Net assets available for benefits at end of year	<u>\$ 23,547,270</u>

See accompanying notes to the financial statements.

**The MasTec, Inc. 401(k)  
Retirement Plan**

**NOTES TO FINANCIAL STATEMENTS**

**December 31, 2009 and 2008**

NOTE A — DESCRIPTION OF PLAN

Description of the Plan

The following description of The MasTec, Inc. 401(k) Retirement Savings Plan (the “Plan”), as amended, provides only general information. Participants should refer to the Summary Plan Description for a more complete description of the Plan’s provisions.

General

The Plan is a defined contribution plan covering all eligible employees of MasTec, Inc. (the “Company”) who have completed at least six months of service. Employees enter the Plan on the first day of the month coinciding with or the next month following the date on which they meet the eligibility requirements. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (“ERISA”), as amended.

Contributions

Each year, participants may elect to defer from 1% to 75% of pretax annual compensation received during the year, subject to certain limitations as defined by the Plan. Participants may contribute amounts representing distributions from other qualified defined contribution or defined benefit plans at the discretion of the Plan administrator. The Company, at its option, may make discretionary matching contributions for participants. Beginning with the first quarter of 2006, the Company re-instated its employer match program. The match is the lesser of 1% of the employee’s salary or 100% of the employee’s contribution to the Plan. The match is credited on a quarterly basis with payments made in the Company’s common stock.

Contributions from participants are recorded when payroll deductions are made. The Plan is required to return contributions received during the Plan year in excess of the Internal Revenue Service (“IRS”) limits. Participants’ pre-tax contribution limit is \$16,500 for 2009 and \$15,500 for 2008. Also, participants who have attained age 50 during the calendar year are eligible to make catch-up contributions to the Plan. The IRS limit for catch-up contribution amount is \$5,500 for 2009 and \$5,000 for 2008.

Upon enrollment, a participant may direct employee contributions, in 1% increments, to any of the Plan’s fund options. Participants may change their investment options daily.

The Company’s discretionary contributions accrue to the Plan when declared and are remitted prior to the date the Company files its federal income tax return for the corresponding fiscal year of the Company. The Company’s matching contribution is in the form of the Company’s common stock and is not subject to participant direction. During the year ended December 31, 2009, there were no discretionary contributions made to the Plan.

Participants’ Accounts

Each participant’s account is credited with the participant’s contributions and allocations of the Company’s contribution and the Plan’s investment results. The benefit to which a participant is entitled is the benefit that can be provided from the participant’s vested account. Upon distribution of the account to a participant who separates from service before vesting, the portion of the account attributable to the Company’s contributions is forfeited. Forfeited balances of participants’ nonvested accounts are used to reduce future Company contributions or pay administrative expenses of the Plan.

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Vesting

Participants are immediately vested in their voluntary contributions plus actual earnings thereon.

Vesting in the Company's contributed portions of their account plus actual earnings thereon is based on the years of vesting service. A Plan year during which an employee works at least 1,000 hours is counted as one year of vesting service. This is based upon the following gradual vesting scale:

<u>Years of Service</u>	<u>Percentage</u>
1	33%
2	66%
3 or more	100%

A participant also becomes 100% vested in the remainder of his or her account upon the occurrence of any of the following events:

- (a) The participant dies while in service as an employee;
- (b) The participant becomes totally and permanently disabled while still in service as an employee; or
- (c) The Plan is terminated by the Company.

Forfeitures

Forfeitures of nonvested participant account balances are allocated to the general funds of the Plan and can be used to pay administrative expenses of the Plan and to reduce contributions otherwise required of the employer. At December 31, 2009 and 2008, unallocated forfeited accounts totaled \$354,840 and \$313,170, respectively, and are recorded in the Plan's investment in the Guaranteed Income Fund.

Participant Loans

A participant is only entitled to make a withdrawal from his or her account prior to separation from service if the participant qualifies for a hardship withdrawal or a participant loan. The Plan's loan feature allows participants and beneficiaries to borrow up to a maximum equal to the lesser of \$50,000 or 50% of their accrued vested benefit. The loans bear interest at the published prime rate in the Wall Street Journal plus 1%, at the date of the loan. Loan terms range from 1 to 5 years or may exceed 5 years for the purchase of a primary residence. Loans provide level amortization for repayments to be made not less frequently than on a quarterly basis. Repayment generally is made by payroll deduction. Participants pay certain administrative expenses associated with the loan, including document preparation and filing fees. In 2007, the Plan was amended to only allow one loan per participant to be outstanding at any given time.

Payments of Benefits

Upon termination of service due to death, disability, or retirement, a participant is entitled to receive payment of the vested accrued benefit in a single lump sum or the payment can be deferred until a later retirement age upon election by the participant. For termination of service due to other reasons, a participant is entitled to receive only the vested percentage of his account balance.

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NOTE B — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The financial statements of the Plan are prepared in conformity with accounting principles generally accepted in the United States of America.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Risks and Uncertainties

The Plan provides for various investment options for participants to choose in combinations of the Company stock fund, mutual funds, pooled separate accounts and other investment securities. Investment securities are exposed to various risks, such as interest rate, market and credit. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect participants' account balances and the amounts reported in the statement of net assets available for benefits.

Administrative Expenses

All administrative expenses of the Plan, excluding audit fees which are paid by the Plan Sponsor, are chargeable to the Plan. The Company may, at its sole discretion, pay any such expenses, in whole or in part.

Benefit Payments

Benefits are recorded when paid.

Investment Valuation and Income Recognition

Plan investments are stated at estimated fair values. Participant loans are stated at cost plus accrued interest, which approximates their fair value. The MasTec, Inc. Stock is valued at its quoted price on the last business day of the Plan year. Estimated fair values of the pooled separate accounts and the fixed income fund have been determined based on the fair values of the funds. At December 31, 2009, Prudential Retirement and Annuity Company are the Trustee and custodian of the Plan. As described in Accounting Standard Codification ("ASC") 946, Subtopic 210, investment contracts held by a defined contribution plan are required to be reported at fair value. Contract value, which represents net contributions plus interest at the contract rate, approximates fair value. The contracts are fully benefit-responsive, as defined in ASC 946, Subtopic 210.

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.



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Fair Value Measurements

ASC 820, Fair Value Measurement and Disclosures, establishes 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 in active markets for identical assets or liabilities (level 1 measurement) and the lowest priority to unobservable inputs (level 3 measurements). The three levels of the fair value hierarchy under ASC 820 are described below:

Basis of Fair Value Measurement

- Level 1 Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level 2 Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly;
- Level 3 Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The following table set forth by level within the fair value hierarchy of individual investments that represent the Plan's net assets at December 31, 2009 and 2008 are as follows:

	Investment Assets at Fair Value as of December 31, 2009			
	Level 1	Level 2	Level 3	Total
<b>Investment Contract #768019 with Prudential:</b>				
MasTec, Inc. Stock (a)	\$3,765,958	\$ —	\$—	\$ 3,765,958
Pooled separate accounts	3,445,846	1,491,709	—	4,937,555
Mutual Funds	7,612,376	—	—	7,612,376
Loans to participants	—	928,969	—	928,969
Guaranteed Income Fund	—	6,332,578	—	6,332,578
<b>Total investment assets at fair value</b>	<b>\$14,824,180</b>	<b>\$8,753,256</b>	<b>\$—</b>	<b>\$23,577,436</b>

	Investment Assets at Fair Value as of December 31, 2008			
	Level 1	Level 2	Level 3	Total
<b>Investment Contract #768019 with Prudential:</b>				
MasTec, Inc. Stock (a)	\$ 3,723,489	\$ —	\$—	\$ 3,723,489
Pooled separate accounts	2,956,953	1,504,242	—	4,461,195
Mutual Funds	5,645,533	—	—	5,645,533
Loans to participants	—	891,982	—	891,982
Guaranteed Income Fund	—	6,418,059	—	6,418,059
<b>Total investment assets at fair value</b>	<b>\$12,325,975</b>	<b>\$ 8,814,283</b>	<b>\$—</b>	<b>\$21,140,258</b>

(a) Includes nonparticipant-directed amounts

NOTE C — INVESTMENTS

The estimated fair values of individual investments that represent 5% or more of the Plan's net assets available for benefits as of December 31, 2009 and 2008 are summarized below.

	December 31, 2009	December 31, 2008
<b>Investment Contract #768019 with Prudential:</b>		
Guaranteed Income Fund	\$ 6,332,578	\$ 6,418,059
Growth Fund of America R3	3,047,249	2,499,009
Lge Cap Val/LSV Asset Mgmt	2,409,438	2,001,082
Core Plus Bond/PIMCO	1,491,709	1,504,242
AMER: Europacific Grow R3	2,062,780	1,480,467
<b>MasTec, Inc. Stock Fund (a)</b>	<b>\$ 3,765,958</b>	<b>\$ 3,723,489</b>

(a) Includes nonparticipant-directed amounts

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The Plan's investments (including investments bought, sold and held during the year) appreciated in fair value for the year ended December 31, 2009 as follows:

Mutual Funds	\$ 1,907,271
Pooled Separate Accounts	778,660
MasTec, Inc. Stock Fund (a)	255,678
	<u>\$2,941,609</u>

(a) Includes nonparticipant-directed amounts

NOTE D — INVESTMENT CONTRACT WITH INSURANCE COMPANY

The Plan maintains a fully benefit-responsive investment contract with Prudential. The account is credited with earnings on the underlying investments and charged for participant withdrawals and administrative expenses charged by Prudential. As described in Note B, because the investment is fully benefit-responsive, contract value is the relevant measurement attribute for that portion of the net assets available for benefits attributable to the investment contract. Contract value, as reported by Prudential, 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; however, the investment contract is subject to certain restrictions which may impact the Plan's ability to fully realize the investment contract's value under certain conditions. The average yield and crediting interest rates on the contract was 2.90% for 2009. The minimum crediting rate under the contract is 1.50%. Interest crediting rates are reviewed on a semi annual basis for resetting. Certain events limit the ability of the investment contract to transact at contract value with the issuer of its investment contracts. Specifically, any event outside the normal operation of the investment contract which causes a withdrawal from an investment may result in a negative market value adjustment with respect to such withdrawals. Such events include, but are not limited to, the following: (1) partial or complete legal termination of the investment contract, (2) tax disqualification of the investment contract or participant, or (3) certain investment contract amendments if issuers' consent is not obtained. As of December 31, 2009, the occurrence of an event outside the normal operation of the investment contract which would cause a withdrawal from an investment contract is not considered to be probable.

NOTE E — NONPARTICIPANT-DIRECTED INVESTMENTS

Information about the net assets and significant components of changes in net assets related to the investment that includes non-participant-directed amounts is as follows:

	December 31.	
	2009	2008
MasTec, Inc. Stock	\$2,559,328	\$2,536,699

  

	Year Ended
	December 31,
<u>Changes in Net Assets</u>	<u>2009</u>
Contributions	\$ 411,880
Net appreciation in fair value of investments	169,696
Benefit payments	(143,158)
Cash out distributions	(195,655)
Other	(220,134)
	<u>\$ 22,629</u>

NOTE F — INCOME TAX STATUS

On April 1, 2008, the Company adopted the Prudential Insurance Co of America plan. This plan received a favorable opinion letter from the IRS on March 31, 2008 stating that the form of the plan is acceptable under Section 401(k) of the Internal Revenue Code (the "Code").

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Once qualified, the Plan is required to operate in conformity with the Code to maintain its qualification.

**NOTE G — PARTY-IN-INTEREST TRANSACTIONS**

Certain Plan investments include units of pooled separate accounts and a fixed income fund, managed by Prudential Retirement Insurance and Annuity Company is the custodian, as defined by the Plan, and therefore, such transactions are considered party-in-interest transactions. The Company is a related party and these transactions qualify as party-in-interest. In addition, there are \$928,969 and \$891,982 in outstanding participant loans as of December 31, 2009 and 2008, respectively.

**NOTE H — PLAN TERMINATION**

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

**NOTE I — SUBSEQUENT EVENT**

On April 1, 2010, the Company merged the GlobeTec Construction, Inc. (a wholly owned subsidiary of Mastec, Inc.), 401(k) Plan with the MasTec 401(k) Retirement Savings Plan.

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**The MasTec Inc.  
401(k) Retirement Plan**

**Employer Identification Number 65-0829355  
Plan # 002**

**SCHEDULE H, LINE 4i-  
SCHEDULE OF ASSETS (HELD AT END OF YEAR)**

**December 31, 2009**

(a)	(b) Identity of Issuer	(c) Description of Investment	(d) Cost	(e) Current Value
	Investment Contract #768019 with Prudential Retirement and Annuity Company:			
*	Guaranteed Income Fund	Fixed Income Fund	**	\$ 6,332,578
	Growth Fund of America R3	Mutual Fund	**	3,047,249
*	Lge Cap Val / LSV Asset Management	Pooled Separate Account	**	2,409,438
*	Core Plus Bond / PIMCO	Pooled Separate Account	**	1,491,709
	Amer: Europacific Grow R3	Mutual Fund	**	2,062,780
*	Dryden S&P 500 Index Fund	Pooled Separate Account	**	1,036,408
	Allianz NFJ Sm Cap Val	Mutual Fund	**	942,972
	Alger Mid Cap Grow Inst I	Mutual Fund	**	787,923
	Wells Fargo Adv Sm Cap A	Mutual Fund	**	533,403
	Columbia Mid Cap Value Z	Mutual Fund	**	238,049
				<u>18,882,509</u>
*	MasTec, Inc. Stock	Separate Account	\$2,699,829	3,765,958
*	Participants' Loans	Loans (interest rates range from 4.25% to 9.25%)		928,969

\* Represents a party-in-interest

\*\* Not applicable as the investment is participant-directed

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The MasTec Inc.  
401(k) Retirement Plan

Employer Identification Number 65-0829355  
Plan # 002

SCHEDULE H, LINE 4j-  
SCHEDULE OF REPORTABLE TRANSACTIONS

December 31, 2009

(A) Identified party involved	(B) Description of asset	(C) Purchase Price	(D) Selling Price	(G) Cost of Assets	(H) Current Value on Transaction Date	(I) Net Gain or (Loss)
Prudential Investments	MasTec, Inc. Stock	Various		\$ 662,422	\$ 662,422	\$ —
Prudential Investments	MasTec, Inc. Stock		Various	\$ 708,349	\$ 876,068	\$ 167,719

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Trustee (or other persons who administer the employee benefit plan) has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

**The MasTec, Inc. 401(k) Retirement Plan**

/s/ Jose R. Mas

Jose R. Mas  
Chairman, Benefits Committee of MasTec, Inc.

Date: June 29, 2010

/s/ C. Robert Campbell

C. Robert Campbell  
Chief Financial Officer of MasTec, Inc.

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Trustees  
The MasTec, Inc. 401(k) Retirement Plan  
Coral Gables, FL

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Registration Statement Numbers 333-139996 and 033-55327) of our report dated June 29, 2010, relating to the financial statements and supplemental schedules of The MasTec, Inc. 401(k) Retirement Plan appearing on this Form 11-K for the year ended December 31, 2009.

/s/ BDO Seidman, LLP  
Miami, FL

June 29, 2010