CARPENTER TECHNOLOGY CORP
Form SC 13G/A
February 10, 2011

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 2)*

CARPENTER TECHNOLOGY

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

144285103

(CUSIP Number)

December 31, 2010

(Date of Event which Requires Filing of Statement)

Check the appropriate box to designate the Rule pursuant to which this Schedule is filed:

[x] Rule 13d - 1(b)

Rule 13d - 1(c)

Rule 13d - 1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes.)

(Continued on following page(s)

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1 Name of Reporting Person
S.S. or I.R.S. Identification No. of Above Person

T. ROWE PRICE ASSOCIATES, INC.

52-0556948

2 Check the Appropriate Box if a Member of a Group*

(a) ____
NOT APPLICABLE (b) ____

3 SEC Use Only

_____

4 Citizenship or Place of Organization

MARYLAND

Number of	5	Sole Voting Power **
Shares		663,770
Beneficially	6	Shared Voting Power **
Owned By Each		-0-
Reporting	7	Sole Dispositive Power **
Person		2,477,170
With	8	Shared Dispositive Power
		-0-

9 Aggregate Amount Beneficially Owned by Each Reporting Person

2,477,170

10 Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares*

NOT APPLICABLE

11 Percent of Class Represented by Amount in Row 9

5.6%

12 Type of Reporting Person*

IA

*SEE INSTRUCTION BEFORE FILLING OUT!
**Any shares reported in Items 5 and 6 are also reported in Item 7.

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Item 1(a) Name of Issuer:

Reference is made to page 1 of this Schedule 13G

Item 1(b) Address of Issuer's Principal Executive Offices:

2 MERIDIAN BLVD, WYOMISSING, PA 19612

Item 2(a) Name of Person(s) Filing:

(1) T. Rowe Price Associates, Inc. ("Price Associates")

(2) _____

_____ Attached as Exhibit A is a copy of an agreement between the Persons Filing (as specified hereinabove) that this Schedule 13G is being filed on behalf of each of them.

Item 2(b) Address of Principal Business Office:

100 E. Pratt Street, Baltimore, Maryland 21202

Item 2(c) Citizenship or Place of Organization:

(1) Maryland

(2) _____

Item 2(d) Title of Class of Securities:

Reference is made to page 1 of this Schedule 13G

Item 2(e) CUSIP Number: 144285103

Item 3 The person filing this Schedule 13G is an:

X Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940

_____ Investment Company registered under Section 8 of the Investment Company Act of 1940

Item 4 Reference is made to Items 5-11 on page 2 of this Schedule 13G.

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Item 5 Ownership of Five Percent or Less of a Class.

X Not Applicable.

This statement is being filed to report the fact that, as of the date of this report, the reporting person(s) has (have) ceased to be the beneficial owner of more than five percent of the class of securities.

Item 6 Ownership of More than Five Percent on Behalf of Another Person

(1) Price Associates does not serve as custodian of the assets of any of its clients; accordingly, in each instance only the client or the client's custodian or trustee bank has the right to receive dividends paid with respect to, and proceeds from the sale of, such securities.

The ultimate power to direct the receipt of dividends paid with respect to, and the proceeds from the sale of, such securities, is vested in the individual and

institutional clients which Price Associates serves as investment adviser. Any and all discretionary authority which has been delegated to Price Associates may be revoked in whole or in part at any time.

Except as may be indicated if this is a joint filing with one of the registered investment companies sponsored by Price Associates which it also serves as investment adviser ("T. Rowe Price Funds"), not more than 5% of the class of such securities is owned by any one client subject to the investment advice of Price Associates.

(2) With respect to securities owned by any one of the T. Rowe Price Funds, only State Street Bank and Trust Company, as custodian for each of such Funds, has the right to receive dividends paid with respect to, and proceeds from the sale of, such securities. No other person is known to have such right, except that the shareholders of each such Fund participate proportionately in any dividends and distributions so paid.

Item 7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.

Not Applicable.

Item 8 Identification and Classification of Members of the Group.

Not Applicable.

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Item 9 Notice of Dissolution of Group.

Not Applicable.

Item 10 Certification.

By signing below I (we) certify that, to the best of my (our) knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect. T. Rowe Price Associates, Inc. hereby declares and affirms that the filing of Schedule 13G shall not be construed as an admission that Price Associates is the beneficial owner of the securities referred to, which beneficial ownership is expressly denied.

Signature.

After reasonable inquiry and to the best of my (our) knowledge and belief, I (we) certify that the information set forth in this statement is true, complete and correct.

Dated: February 14, 2011

T. ROWE PRICE ASSOCIATES, INC.

By: /s/ David Oestreicher
David Oestreicher, Vice President

Note: This Schedule 13G, including all exhibits, must be filed with the Securities and Exchange Commission, and a copy hereof must be sent to the issuer by registered or certified mail not later than February 14th following the calendar year covered by the statement or within the time specified in Rule 13d-1(b)(2), if applicable.

12/31/2010