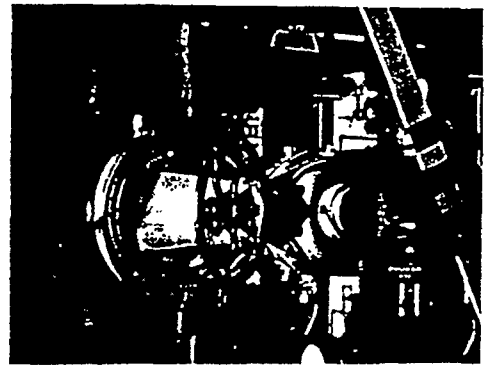
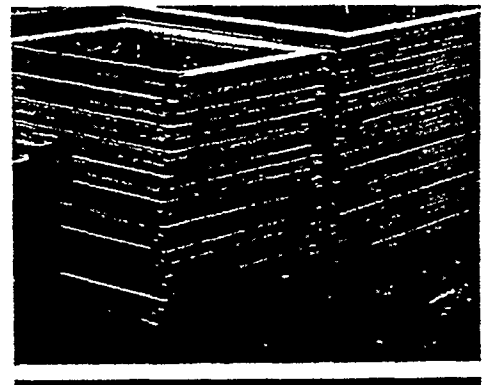
PLAINTIFF'S
EXHIBIT
CRA-31

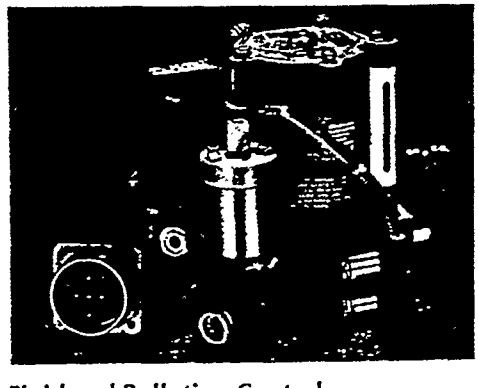
# Crane Co.

# 1977 Annual Report









Fluid and Pollution Control
Steel
Building Products
Aerospace and Aircraft Products

# Crane Co. 1977 Annual Report

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1 Financial highlights
2 Letter to shareholders
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17 Review of operations


## Crane Serves

*Industrial, building and construction markets with—*
Fluid and Pollution Control Products
Steel Products
Building Products
Aerospace and Aircraft Products

## Annual Meeting

The Crane Co. 1978 annual meeting will be held Friday, April 21, 1978, in the Lecture Room, Morgan Guaranty Trust Company of New York, 2nd Floor, 299 Park Avenue, New York City, at 10 A.M.

## Form 10-K

Copies of Form 10-K for the year 1977 which are to be filed with the Securities and Exchange Commission are available without charge to each shareholder of the Company upon written request made to the Secretary, 300 Park Avenue, New York, N.Y. 10022.

## Operations

### United States

Crane-U.S.A.
New York, New York
R. L. Biller, *Senior Vice President & General Manager*

Hydro-Aire Division
Burbank, California
B. J. Barnes, *Vice President & General Manager*

Cavalier Corporation
Chattanooga, Tennessee
(Acquired December 30, 1977)
J. E. N. True, *President*

CF&I Steel Corporation
Pueblo, Colorado
R. J. Slater, *President*

Flutig Sash & Door Company
St. Louis, Missouri
R. F. Eson, *Chairman*
S. P. Wells, *President*

### Canada

Crane Canada Limited
Montreal, Canada
C. A. Kelly, *President*

### International

Crane Australia Pty. Limited
St. Marys, Sydney, Australia
P. J. Farrell, *Managing Director*

Crane Ltd.
London, England
Leslie V. Chater, *Chairman*
J. M. Fraser, *Managing Director*

Crane S.A.
Paris, France
Leon Skarniak, *President*

Crane-Deming de Mexico S.A.
Monterrey, Mexico
Luis Obeso, *General Manager*

Crane Nederland N.V.
Deventer, The Netherlands
G. J. deHorn, *Managing Director*

Crane-FISA, S.A.
Bilbao, Spain
A. J. Pituan, *General Manager*

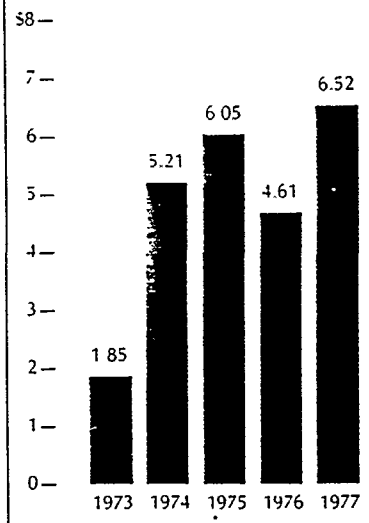
CRTX 0378

# Financial Highlights

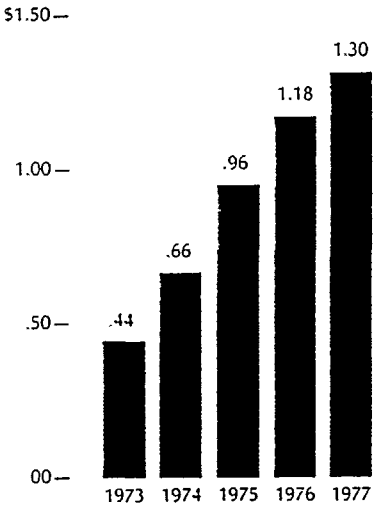
| | 1977 | 1976 |
|---|---|---|
| Sales | **$1,133,822,000** | $1,087,606,000 |
| Net Income | **$ 66,171,000** | $ 47,959,000 |
| Per Common Share: | | |
| Primary earnings* | **$ 6.52** | $ 4.61† |
| Cash dividends | **1.30** | 1.18† |
| Net Working Capital | **$ 240,795,000** | $ 217,731,000 |
| Total Assets | **$ 836,895,000** | $ 760,561,000 |
| Current Ratio | **2.4** | 2.3 |
| Common Shareholders' Equity | **$ 326,152,000** | $ 282,456,000 |
| Per share | **32.56** | 27.61† |
| Common Shares Outstanding at Year-end | **10,017,199** | 10,030,897 |

*Net income per common share would amount to $6.17 ($4.31 in 1976) assuming conversion of subordinated debentures.
†Adjusted for 2% stock dividend in February, 1977.

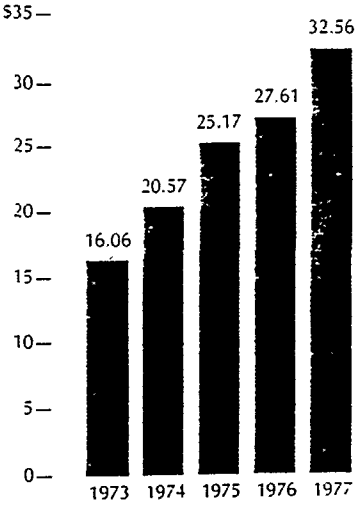
Net Income per Share†




Cash Dividend per Share†




Shareholders' Equity per Share†



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## To the Shareholders:

Sales for 1977 were $1,133,822,000, the second highest in the company's history, compared with $1,087,606,000 for 1976. Net income, including non-recurring items, amounted to $66,171,000 compared with $47,959,000 for the prior year.

Net income per share in 1977 was $6.52 and net income from operations, excluding $2.78 from non-recurring transactions, was $3.74 per common share. Crane's 1977 earnings were reported using the accelerated depreciation method while 1976 earnings were reported using the straight-line method. The effect of this change was to reduce 1977 net income by $2,769,000 or 27 cents per share. Depreciation for 1977 was $44,192,000 compared with $36,380,000 in 1976.

Net income per share in 1976 amounted to $4.61 and net income from operations, excluding 78 cents from non-recurring transactions, was $3.83 per common share. If accelerated depreciation had been used, total net income would have been reduced by $2,370,000 or 23 cents per share from the amount reported.

The 1977 adoption of accelerated depreciation is a continuation of Crane's policy of reporting financial results as realistically as possible. The accelerated method of reporting depreciation gives a closer assessment of the earnings level necessary to allow replacement of plant, property and equipment in today's inflationary economic environment. In addition, recent criticism of corporate profitability levels heightens the need for such an assessment.

Crane has consistently utilized conservative accounting methods whenever possible. The company was one of the pioneers in using the LIFO method of inventory valuation, adopting it in 1940. As a result, Crane had a LIFO reserve in excess of $67 million at December 31, 1977.

Crane's concern over the impact of inflation on reported corporate earnings is further reflected in the company's accelerated pension funding policy. In 1974 Crane began amortizing past service pension costs on a ten year basis, the minimum time allowed under federal tax law, rather than the twenty to forty year periods used by many steel companies. Current service and interest costs are funded annually. Based upon latest estimates, the company's unfunded pension liability at 1977 year-end, before future income tax credits, was $107 million compared with $120 million the prior year.

Early in 1977 Crane reported two non-recurring transactions. First, an after-tax gain of $41,570,000 resulted from the Atlantic Richfield/Anaconda merger; second, an after-tax provision of $13,181,000 was provided principally for unfunded pension liabilities relating to operations phased out or relocated. These transactions increased 1977 net income by $28,389,000 or $2.78 per share. In 1976 there were two non-recurring transactions, which increased net income by $8,148,000 or 78 cents per common share.

Crane Domestic operations and CF&I Steel Corporation were adversely affected by the inability to recover steadily rising production costs through price increases and by the impact of foreign competition on certain traditional markets. Huttig Sash & Door Company, however, performed at record levels. With residential construction as its primary



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market, Huttig benefited from the increased pace of new housing starts and remodeling activity during 1977. Crane Canada and International Operations did not meet the prior year's performance levels, largely due to high inflation rates, low capital investment and generally depressed economic activity.

Plant modernization programs reported a year ago were essentially on schedule during 1977. Crane invested more than $93 million in modernization and environmental improvement projects last year, principally on expansion of the rail mill and development of a second metallurgical coal mine for the company's steelmaking facility. Start-up costs at the new coal mine and the expansion of the rail mill were charged to income in accordance with the company's past practice.

Midway through the year Crane negotiated a new seven year $35 million term loan, which is repayable from August 1980 through May 1984 in equal quarterly installments.

The total cash dividend of $1.30 per share paid to shareholders in 1977 compared with $1.18, as adjusted, paid in 1976. This was the seventh consecutive annual cash dividend increase. A 2 percent stock dividend was paid in February 1978, the tenth year that such a stock dividend has been paid.

In December 1977 Crane acquired the assets of Cavalier Corporation of Chattanooga, Tennessee. Cavalier, which is being operated as a subsidiary of Crane, manufactures a complete line of refrigerated, coin operated vending machines for soft drinks. These machines are marketed to franchised bottlers throughout the U.S. and Canada for use in supermarkets, service stations and other high traffic locations.

Early this year in order to strengthen the management structure of the company, Crane's Board of Directors elected R. L. Biller and R. S. Evans senior vice presidents.

On behalf of the Board of Directors, we wish again to express our thanks to Crane's employees, customers, suppliers and shareholders for their continuing support.

Respectfully submitted,

D. C. Fabiani, President

T. M. Evans, Chairman

February 21, 1978



D. C. Fabiani, President



T. M. Evans, Chairman



CRTX 0381

# Consolidated Statement of Income

FOR YEARS ENDED DECEMBER 31

CRANE CO. AND SUBSIDIARIES

| | 1977 | 1976 |
|---|---|---|
| **Net Sales** | **$1,133,822,269** | $1,087,605,797 |
| **Operating Costs and Expenses:** | | |
| Cost of sales | **916,846,784** | 866,531,695 |
| Selling, general and administrative | **105,665,342** | 104,098,743 |
| Depreciation | **44,191,500†** | 36,380,436 |
| | **1,066,703,626** | 1,007,010,874 |
| **Operating Profit** | **67,118,643** | 80,594,923 |
| **Other Income (Deductions):** | | |
| Interest—net | **(18,698,083)** | (18,764,292) |
| Dividend income on investments | **3,932,461** | 2,609,300 |
| Miscellaneous—net* | **26,441,871** | 12,338,181 |
| | **11,676,249** | (3,816,811) |
| **Income Before Income Taxes** | **78,794,892** | 76,778,112 |
| **Provision for Income Taxes** | **12,623,727** | 28,819,335 |
| **Net Income** | **$ 66,171,165** | $ 47,958,777 |
| Net income per common share: | | |
| Average shares outstanding* | **$6.52** | $4.61 |
| Assuming conversion of debentures | **6.17** | 4.31 |

†Changed from straight-line to accelerated depreciation, which increased depreciation by $5,538,000 in 1977.

*The year 1977 included the following non-recurring transactions:

(a) A cash dividend of $24,721,000, a realized gain of $4,541,000 on 260,115 Atlantic Richfield common shares sold and an unrealized gain of $22,968,000 on 1,800,000 Atlantic Richfield common shares for a total gain of $52,230,000 as a result of the Atlantic Richfield/Anaconda merger.

(b) A provision of $26,291,000 principally for unfunded pension liabilities for operations being phased out or relocated.

(c) The net income from these transactions was $28,389,000, or $2.78 per share.

The year 1976 included the following non-recurring transactions:

(a) A gain of $19,960,000 from the sale of one steam coal property.

(b) A provision of $1,122,000 for surplus and inactive building and equipment and a provision of $5,100,000 for termination expenditures and operating losses of an international plant.

(c) The net income from these transactions was $8,148,000, or 78 cents per share.

## Consolidated Statement of Capital Surplus

FOR YEARS ENDED DECEMBER 31

CRANE CO. AND SUBSIDIARIES

| | 1977 | 1976 |
|---|---|---|
| **Balance at Beginning of Year** | **$ 27,201,643** | $ 18,711,733 |
| Excess of subordinated debentures converted over par value of 128,857 common shares issued (495,898 in 1976) | **918,332** | 3,783,335 |
| Excess of market value over par value of common shares issued as a 2% stock dividend | **4,374,650** | 4,706,575 |
| **Balance at End of Year** | **$ 32,494,625** | $ 27,201,643 |

## Consolidated Statement of Earned Surplus

FOR YEARS ENDED DECEMBER 31

| | 1977 | 1976 |
|---|---|---|
| **Balance at Beginning of Year** | **$192,561,537** | $181,442,574 |
| **Net Income** | **66,171,165** | 47,958,777 |
| | **258,732,702** | 229,401,351 |
| **Dividends:** | | |
| Preferred shares—$3.75 per share | **90,054** | 90,575 |
| Common shares: | | |
| Cash—$1.30 per share ($1.18 in 1976) | **13,166,871** | 12,224,986 |
| Stock—2%, market value of 200,580 shares (203,220 in 1976) | **5,628,275** | 5,976,700 |
| **Excess of Cost Over Par Value of Reacquired Shares—Net:** | | |
| 282 preferred (146 in 1976) and 381,100 common (755,900 in 1976) reacquired, less 37,965 issued under stock options (48,655 in 1976) | **8,797,769** | 18,547,553 |
| | **27,682,969** | 36,839,814 |
| **Balance at End of Year** | **$231,049,733** | $192,561,537 |

See Financial Review.

# Consolidated Balance Sheet

AT DECEMBER 31

| ASSETS | 1977 | 1976 |
|---|---|---|
| **Current Assets:** | | |
| Cash | $ 35,513,764 | $ 36,193,742 |
| Short-term investments, at lower of cost or market | 88,521,494 | 78,440,074 |
| Accounts receivable, less allowances of $2,924,635 ($2,665,872 in 1976) | 141,958,357 | 129,243,861 |
| Inventories, less LIFO reserves of $67,334,697 ($61,022,801 in 1976), at lower of cost or market: | | |
| Finished goods | 73,756,830 | 77,359,437 |
| Work in process | 42,030,379 | 38,331,439 |
| Raw materials and supplies | 28,913,367 | 18,661,468 |
| | 144,700,576 | 134,352,344 |
| Prepaid expenses | 2,203,230 | 2,545,492 |
| **Total current assets** | 412,897,421 | 380,775,513 |
| **Investments and Other Assets:** | | |
| Investments (see page 10) | 74,736,349 | 71,576,716 |
| Unamortized debt discount on 8% debentures | 9,002,664 | 11,375,050 |
| Outlying lands | 1,232,300 | 1,232,364 |
| Miscellaneous | 1,548,623 | 2,310,892 |
| | 86,519,936 | 86,495,022 |
| **Property, Plant and Equipment at Cost:** | | |
| Land | 20,768,952 | 20,384,729 |
| Buildings and improvements | 135,364,592 | 130,368,796 |
| Machinery and equipment | 522,395,983 | 479,213,975 |
| | 678,529,527 | 629,967,500 |
| Less accumulated depreciation | 345,669,510 | 336,677,394 |
| | 332,860,017 | 293,290,106 |
| Capitalized 1977 Leases—Net | 4,617,496 | — |
| | $836,894,870 | $760,560,641 |

CRANE CO. AND SUBSIDIARIES

| LIABILITIES AND SHAREHOLDERS' EQUITY | 1977 | 1976 |
|---|---|---|
| **Current Liabilities:** | | |
| Current maturities of long-term debt | $ 18,535,380 | $ 17,692,397 |
| Loans payable to banks | 12,812,935 | 18,040,916 |
| Accounts payable | 69,910,625 | 69,093,557 |
| Accrued payrolls, taxes and other liabilities | 66,619,878 | 55,038,089 |
| U.S. and foreign taxes on income | 4,223,108 | 3,179,443 |
| **Total current liabilities** | 172,101,926 | 163,044,402 |
| **Long-Term Debt** (see page 9) | 270,744,441 | 260,866,023 |
| **Capitalized 1977 Lease Obligations** | 4,551,196 | — |
| **Deferred Income Taxes** | 31,437,834 | 32,720,214 |
| **Reserves and Other Liabilities** | 16,907,367 | 6,968,782 |
| **Minority Interest in Subsidiaries** | 10,704,155 | 10,400,634 |
| **Shareholders' Equity:** | | |
| Preference stock of a subsidiary, 5½% | 1,920,000 | 1,700,000 |
| Cumulative preferred shares, 3¾%, par value $100 (redeemable): Authorized—43,389 shares (47,159 in 1976); outstanding—23,761 shares (24,043 in 1976) after deducting 19,628 shares in treasury (23,116 in 1976) | 2,376,100 | 2,404,300 |
| Serial preferred shares, par value $5: Authorized—600,000 shares | — | — |
| Common shareholders' equity: | | |
| Common shares, par value $6.25: Authorized—20,000,000 shares; outstanding—10,017,199 shares (10,030,897 in 1976) after deducting 4,566,694 shares in treasury (4,185,594 in 1976) | 62,607,493 | 62,693,106 |
| Capital surplus | 32,494,625 | 27,201,643 |
| Earned surplus—$103,173,875 ($73,241,372 in 1976) is not restricted under a long-term debt indenture | 231,049,733 | 192,561,537 |
| Total common shareholders' equity | 326,151,851 | 282,456,286 |
| **Total shareholders' equity** | 330,447,951 | 286,560,586 |
| | $836,894,870 | $760,560,641 |

See Financial Review.

# Consolidated Statement of Changes in Financial Position

CRANE CO. AND SUBSIDIARIES

FOR YEARS ENDED DECEMBER 31

| | 1977 | 1976 |
|---|---|---|
| **Source of Funds:** | | |
| Operations: | | |
| Net income | $ 66,171,165 | $ 47,958,777 |
| Depreciation | 44,191,500 | 36,380,436 |
| Amortization of debt discount | 2,372,386 | 3,352,778 |
| Other, net | 3,074,588 | 6,296,522 |
| Unrealized non-recurring credits—net | (8,515,000) | — |
| | 107,294,639 | 93,988,513 |
| Increase in long-term debt | 35,000,000 | 55,600,396 |
| Capitalized 1977 lease obligations | 4,551,196 | — |
| Conversion of debt to common stock | 1,725,000 | 6,903,600 |
| Disposals of property, plant and equipment | 9,428,880 | 8,557,899 |
| Decrease in long-term investments | 18,466,716 | — |
| Increase (decrease) in reserves and other | 2,147,471 | (892,020) |
| | 178,613,902 | 164,158,388 |
| **Application of Funds:** | | |
| Additions to property, plant and equipment | 93,190,291 | 82,530,214 |
| Capitalized 1977 leases | 4,617,496 | — |
| Increase in long-term investments | 8,611,349 | 14,471,457 |
| Reduction in long-term debt | 25,121,582 | 36,863,002 |
| Reacquisition of shares, less options exercised | 10,751,875 | 23,323,337 |
| Cash dividends | 13,256,925 | 12,315,561 |
| | 155,549,518 | 169,503,571 |
| **Net Source (Application) of Funds** | $ 23,064,384 | $ (5,345,183) |
| **Increase (Decrease) in Components of Working Capital:** | | |
| Current assets: | | |
| Cash and short-term investments | $ 9,401,442 | $ 5,605,929 |
| Accounts receivable | 12,714,496 | 2,534,370 |
| Inventories | 10,348,232 | (22,285,889) |
| Prepaid expenses | (342,262) | 598,814 |
| | 32,121,908 | (13,546,776) |
| Current liabilities: | | |
| Current maturities of long-term debt | 842,983 | 4,557,506 |
| Loans payable to banks | (5,227,981) | 6,476,111 |
| Accounts payable | 817,068 | 3,567,200 |
| Accrued payrolls, taxes and other liabilities | 11,581,789 | (3,763,412) |
| U.S. and foreign taxes on income | 1,043,665 | (19,038,998) |
| | 9,057,524 | (8,201,593) |
| **Increase (Decrease) in Working Capital** | $ 23,064,384 | $ (5,345,183) |

See Financial Review.

## Details of Long-Term Debt

AT DECEMBER 31

CRANE CO. AND SUBSIDIARIES

| | 1977 | 1976 |
|---|---|---|
| **Crane Co.:** | | |
| 6½% Sinking fund debentures due 1992, $2,000,000 due annually after deducting $4,572,000 in treasury in 1977 | **$ 25,428,000** | $ 27,663,000 |
| 8% Bank term loan due 1980, $1,875,000 due quarterly, fluctuating with minimum commercial lending rate | **13,125,000** | 20,625,000 |
| 8% Bank term loan due 1984, $2,187,500 due quarterly, commencing August 31, 1980, fluctuating with minimum commercial lending rate | **35,000,000** | — |
| | **73,553,000** | 48,288,000 |
| Subordinated debentures: | | |
| 8% Sinking fund debentures due 1985, $8,241,000 due annually, after deducting $2,747,000 in treasury in 1977 | **57,682,600** | 65,922,600 |
| 7% Sinking fund debentures due 1993, 5% due annually, after deducting $4,282,000 in treasury in 1977 | **12,183,400** | 13,563,400 |
| 7% Debentures due 1994, after deducting $3,818,000 in treasury in 1977 | **48,259,000** | 48,259,000 |
| 5% Convertible debentures due 1993, convertible at $12.50 per share (114,216 common shares reserved in 1977) | **1,427,700** | 2,283,200 |
| 5% Convertible debentures due 1994, convertible at $14.37 per share (436,583 common shares reserved in 1977) | **6,273,700** | 7,143,200 |
| | **125,826,400** | 137,171,400 |
| | **199,379,400** | 185,459,400 |
| **CF&I Steel Corporation:** | | |
| 8% First mortgage and collateral trust bonds, sinking fund series due 1983, $1,000,000 due quarterly | **21,000,000** | 25,000,000 |
| 8% Bank term loan due 1985, $2,500,000 due quarterly commencing August 1, 1981, fluctuating with minimum commercial lending rate | **40,000,000** | 40,000,000 |
| 8% Mortgage note due 1983, $71,429 due annually | **357,142** | 428,571 |
| | **61,357,142** | 65,428,571 |
| **Huttig Sash & Door Company:** | | |
| 7½% Loan payable due 1980, $43,953 due quarterly | **307,672** | 483,485 |
| **Crane Canada Limited:** | | |
| 5¾% Sinking fund debentures (collateralized by a general claim on property and assets), due 1985, $403,000 due annually | **4,831,200** | 5,662,800 |
| **International Operations:** | | |
| Crane Ltd. (England): | | |
| 6¾% Bank term loan, fluctuating with bank rate, due 1981, $960,000 due annually in 1980 and 1981 | **1,920,000** | 1,360,000 |
| 7⅜% Bank term loan, fluctuating with bank rate, due 1982 | **480,000** | — |
| 5¾% Unsecured loan stock due 1982 | **1,062,204** | 1,006,861 |
| Other | **1,406,823** | 1,464,906 |
| | **4,869,027** | 3,831,767 |
| | **$270,744,441** | $260,866,023 |

# Financial Review and accounting policies

### Consolidation

The consolidated financial statements include all subsidiaries, and accounts carried in foreign currencies have been translated at the appropriate rates.

Subsidiaries operating outside the United States and Canada represented 8 percent of shareholders' equity in 1977, down from 10 percent in 1976.

### Long-Term Investments

Long-Term Investments are valued, in the aggregate, at the lower of cost or market.

In early 1977 the company exchanged 4,120,230 common shares of The Anaconda Company (cost $71,577,000) for 2,060,115 Atlantic Richfield common shares in a tax-free exchange. As required by Accounting Principles Board Opinion No. 29, the company assigned a market value of $47.50 to each Atlantic Richfield share retained (see page 4, "Consolidated Statement of Income"). Overall, 560,115 Atlantic Richfield common shares were sold during 1977.

Details of Long-Term Investments are as follows:

| | 1977 | 1976 |
|---|---|---|
| | (in thousands) | |
| Atlantic Richfield Company 1,500,000 common shares | $71,250 | $71,577 |
| Asarco, Inc., 564,000 common shares | 8,611 | — |
| Deferred income taxes on unrealized gain—net | (5,125) | — |
| | $74,736 | $71,577 |

### Depreciation

The basis of charging depreciation for buildings, plant and equipment acquisitions was stepped up to the accelerated method from the straight-line method during 1977 in order to provide a better matching of costs and revenues in an inflationary environment. The effect of this change in depreciation methods is set forth on page 4, "Consolidated Statement of Income."

The new method of computing depreciation eliminates a substantial reporting difference between financial and income tax basis.

### Pensions

Current service and interest costs are funded annually and prior service costs are funded on a 10-year basis. Pension plans in the United States are in compliance with the Employee Retirement Income Security Act of 1974.

Pension costs charged against operating income were $30,743,000 in 1977, compared with $34,549,000 in 1976. An additional charge of $21,070,000 was incurred in 1977 as a provision for unfunded pension liabilities for operations being phased out or relocated.

Based upon latest estimates as of December 31, 1977 vested benefits exceeded pension plan assets and balance sheet accruals by $107,000,000 ($120,000,000 at December 31, 1976) before future income tax credits.

### Miscellaneous—Net

| | Components 1977 | 1976 |
|---|---|---|
| | (in thousands) | |
| Non-recurring transactions—net | $25,939 | $13,738 |
| Gain on investments—net | 4,924 | 668 |
| Gain (loss) on disposal of capital assets—net | (1,605) | 1,880 |
| Minority interest | (1,116) | (1,680) |
| Loss on foreign exchange adjustments | (1,166) | (1,514) |
| Loss on repurchase of debentures | (470) | (675) |
| Other | (64) | (79) |
| | $26,442 | $12,338 |

### Long- and Short-Term Financing

Long-term debt was increased during 1977 by a $35,000,000 unsecured six and one half year bank term loan and was reduced during 1977 by $25,122,000, compared with $36,863,000 during 1976. The 1977 decrease included $1,725,000 of debentures converted, compared with $6,904,000 in 1976.

At December 31, 1977, the principal amounts of long-term debt repayments required for the next five years were $18,535,000 in 1978, $20,706,000 in 1979, $25,426,000 in 1980, $29,713,000 in 1981, and $34,655,000 in 1982.

At year end there were $100,000,000 of unused short-term credit lines available with domestic and foreign banks, and such lines are subject to annual review.



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Covenants contained in instruments under which the company has outstanding indebtedness: (i) require the company to maintain consolidated working capital of at least $185,000,000; (ii) require the company to maintain consolidated tangible net worth of at least $225,000,000; (iii) restrict payment of cash dividends; and (iv) restrict issuance of additional senior funded debt to $9,000,000 as of December 31, 1977.

**Reserves and Other Liabilities**

| | Components | |
|---|---|---|
| | 1977 | 1976 |
| | (in thousands) | |
| Pension and wage benefits | $11,271 | $ 2,530 |
| Retainage on purchase contracts | 2,802 | 1,798 |
| Miscellaneous | 2,834 | 2,641 |
| | $16,907 | $ 6,969 |

**Income Taxes**

United States income taxes have not been provided on undistributed earnings of foreign subsidiaries, since foreign tax credits available on any portion of these earnings not required for indefinite reinvestment are such that no significant tax would be payable upon distribution.

A reconciliation of consolidated income before income taxes to the provision for income taxes (federal, state and foreign) is as follows:

| | 1977 | 1976 |
|---|---|---|
| | (in thousands) | |
| Income before income taxes | $78,795 | $76,778 |
| Non-recurring transactions—net | (25,939) | (13,738) |
| | 52,856 | 63,040 |
| Less permanent tax adjustments: | | |
| Depletion | 3,759 | 3,942 |
| Original issue bond discount | 720 | 840 |
| Nontaxable net capital gains | 840 | 127 |
| Nontaxable domestic dividends | 3,699 | 2,216 |
| Foreign exchange adjustments | (1,166) | (1,514) |
| Other | 626 | (117) |
| | 8,478 | 5,494 |
| Taxable income for accounting purposes | 44,378 | 57,546 |
| Tax @ 50% (composite rate) | 22,189 | 28,773 |
| Less investment tax credit realized | 7,115 | 5,026 |
| | $15,074 | $23,747 |

The foregoing provision includes foreign taxes of $2,803,000 and $5,423,000, and state taxes of $2,002,000 and $2,062,000, in 1977 and 1976, respectively.

The provision for income taxes is composed of the following:

| | 1977 | 1976 |
|---|---|---|
| | (in thousands) | |
| Tax effect of timing differences: | | |
| Depreciation | $ — | $ 2,370 |
| Other | 2,503 | 2,719 |
| Deferred income taxes | 2,503 | 5,089 |
| Current income taxes | 12,571 | 18,658 |
| | $15,074 | $23,747 |

Income taxes on non-recurring transactions were a credit of $2,450,000 for 1977 and a charge of $5,072,000 for 1976.

**Leases**

The company leases a portion of its warehouse buildings, several manufacturing facilities (primarily through industrial revenue bonds) and certain of its vehicles and equipment under capital and operating leases running from one to thirty years. Certain leases may be renewed for periods of from three to twenty-five years and provide for an option to purchase or for reduced annual payments of minimal amounts.

In accordance with Financial Accounting Standards Board Statement No. 13—"Accounting for Leases"—the company has included capital leases entered into subsequent to December 31, 1976 in its financial statements as "Capitalized 1977 Leases" and "Capitalized 1977 Lease Obligations."

Beginning in 1978 all capital leases, regardless of when entered into, will be included in the financial statements. If these capital leases had been capitalized in the financial statements in 1977 the additional amounts reflected would have been as follows:

| | December 31, | |
|---|---|---|
| | 1977 | 1976 |
| | (in thousands) | |
| Current | $ 1,606 | $ 1,572 |
| Noncurrent | 36,451 | 38,030 |
| Total capitalized | $38,057 | $39,602 |

Net income for the years ended December 31, 1977 and 1976 would not have been significantly affected if these leases had been capitalized.

Leases capitalized in 1977 by major classes were as follows:

| | December 31, 1977 |
|---|---|
| | (in thousands) |
| Buildings and improvements | $2,241 |
| Machinery and equipment | 2,416 |
| | 4,657 |
| Less amortization | 40 |
| | $4,617 |

Future minimum payments, by year and in the aggregate, under capitalized 1977 leases, non-capitalized capital leases and operating leases with initial or remaining terms of one year or more consisted of the following at December 31, 1977:

| | Capitalized 1977 leases | Non-capitalized capital leases | Operating leases | Minimum noncancelable sublease rentals | Net |
|---|---|---|---|---|---|
| | | | (in thousands) | | |
| 1978 | $ 407 | $ 3,950 | $ 5,938 | $1,155 | $ 9,140 |
| 1979 | 468 | 3,956 | 4,735 | 915 | 8,244 |
| 1980 | 579 | 3,952 | 3,698 | 775 | 7,454 |
| 1981 | 579 | 3,889 | 2,944 | 692 | 6,720 |
| 1982 | 579 | 3,855 | 2,187 | 543 | 6,078 |
| 1983 & beyond | 6,688 | 43,130 | 9,061 | 743 | 58,136 |
| Total minimum lease payment | 9,300 | 62,732 | $28,563 | $4,823 | $95,772 |
| Amounts representing interest | (4,650) | (24,675) | | | |
| Present value of net minimum lease payment | $4,650 | $38,057 | | | |

Rental expense was as follows for all leases not capitalized:

| | 1977 | 1976 |
|---|---|---|
| | (in thousands) | |
| Rentals on non-capitalized capital leases: | | |
| Minimum | $ 3,991 | $ 4,048 |
| Contingent | — | 1 |
| Sublease income | (603) | (554) |
| | 3,388 | 3,495 |
| Rentals on operating leases: | | |
| Minimum | 13,318 | 11,529 |
| Contingent | 972 | 1,000 |
| Sublease income | (788) | (800) |
| | 13,502 | 11,729 |
| | $16,890 | $15,224 |

**Stock Options**

A summary of option transactions follows:

| | Number of shares | Price per share |
|---|---|---|
| Outstanding January 1, 1977 | 125,107 | $ 7.95-36.03 |
| 2% Stock dividend | 2,354 | — — |
| Options granted | 24,000 | 27.00-31.75 |
| Options expired | (1,952) | 14.51-23.08 |
| Options exercised | (37,965) | 7.95-23.08 |
| Outstanding December 31, 1977 | 111,544 | $ 8.10-36.03 |

At December 31, 1977 options for 64,853 shares were exercisable and 61,631 shares were available for grant. In 1976 options for 40,392 shares were granted and options for 48,655 shares were exercised. Shares and per share statistics have been adjusted for the 2 percent stock dividend. The plan is not a compensatory plan which would require charges to income.

**Estimated Replacement Cost Information**

In compliance with the rules of the Securities & Exchange Commission, the company has estimated the cost of replacing its plant and equipment as of December 31, 1977, together with estimated depreciation based on replacement cost for the year then ended. The company's Annual Report on Form 10-K (a copy of which is available upon request) contains unaudited estimates with respect to replacement cost.

The replacement cost estimates in the company's Form 10-K are not necessarily indicative of either the amounts for which the assets could be sold or the company's intent to replace such assets, nor are they representative of costs that might be incurred in a future period, nor do they reflect any cost savings from improved equipment.

The company principally uses the LIFO method for inventory valuation so that substantially all inventory profits caused by inflation have been eliminated from net income.

**Analysis by Segment of Business**

An analysis by segment of sales, operating profit and assets appears on page 15. Additional segment information regarding capital expenditures and depreciation appears on page 16.

Segment description by products and industries served is given on pages 17 through 24.

## Quarterly Results for the Year (Unaudited)
(IN THOUSANDS)

CRANE CO. AND SUBSIDIARIES

| Quarter | Sales | Gross Profit | Net Income | Net Income Per Common Share Primary | Net Income Per Common Share Fully Diluted |
|---|---|---|---|---|---|
| 1977† | | | | | |
| 1st | $ 270,053 | $ 40,838 | $37,132* | $3.63* | $3.42* |
| 2nd | 297,349 | 46,862 | 10,218 | 1.00 | .95 |
| 3rd | 294,037 | 44,592 | 9,530 | .95 | .91 |
| 4th | 272,383 | 41,229 | 9,291 | .94 | .89 |
| | $1,133,822 | $173,521 | $66,171 | $6.52 | $6.17 |
| 1976 | | | | | |
| 1st | $ 270,048 | $ 47,732 | $11,960 | $1.14 | $1.05 |
| 2nd | 285,217 | 47,969 | 18,520* | 1.77* | 1.65* |
| 3rd | 271,559 | 43,611 | 8,113 | .78 | .74 |
| 4th | 260,782 | 46,165 | 9,366 | .92 | .87 |
| | $1,087,606 | $185,477 | $47,959 | $4.61** | $4.31** |

## Market and Dividend Information—Common Shares

| Quarter | New York Stock Exchange Price Per Share 1977 High | 1977 Low | 1976 High | 1976 Low | Dividends Per Share 1977 | 1976** |
|---|---|---|---|---|---|---|
| 1st | $33¼ | $26⅞ | $39⅜ | $23⅝ | $ .30 | $ .29 |
| 2nd | 36 | 30¾ | 37½ | 30⅝ | .30 | .30 |
| 3rd | 34⅜ | 27⅛ | 39¾ | 26⅝ | .35 | .29 |
| 4th | 28¾ | 25 | 29⅜ | 23¼ | .35 | .30 |
| | | | | | $1.30 | $1.18 |

†First three quarters restated for change in depreciation method. The full-year effect of this change increased depreciation by $5,538,000 and decreased net income by $2,769,000, or 27 cents per share.
*Includes non-recurring transactions.
**Adjusted for 2% stock dividend in February, 1977.

## Report of Independent Auditors

To the Shareholders of Crane Co.

We have examined the consolidated balance sheet of Crane Co. and subsidiaries as of December 31, 1977 and 1976, and the related consolidated statements of income, earned surplus, capital surplus and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We did not examine the financial statements of CF&I Steel Corporation, a consolidated subsidiary, which statements were examined by other independent certified public accountants whose reports thereon have been furnished to us. Total assets and net sales of CF&I Steel Corporation constituted approximately 45% and 39%, respectively, of the related consolidated totals in 1977 (47% and 38% in 1976). Our opinion expressed herein, insofar as it is related to the amounts included for the foregoing subsidiary, is based solely upon the reports of the other independent certified public accountants.

In our opinion, based upon our examinations and the aforementioned reports of other independent certified public accountants, the financial statements referred to above present fairly the consolidated financial position of Crane Co. and subsidiaries at December 31, 1977 and 1976, and the consolidated results of their operations and changes in financial position for the years then ended, in conformity with generally accepted accounting principles consistently applied during the period except for the change, with which we concur, in the method of computing depreciation as described under "Depreciation" in the Financial Review.

New York, N.Y.
January 23, 1978

Ernst & Ernst

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# Analysis of Summary of Operations



**Sales**

Consolidated sales for 1977 were $1,133,822,000, 4.2 percent higher than 1976. Crane Domestic sales were 1.1 percent below the 1976 level, reflecting a flat demand for industrial products. CF&I Steel Corporation sales increased 7.0 percent, attributable to improved price realization on rails, steel pipe and wire products. This was partially offset by lower rail tonnage due to the modernization program. Huttig Sash & Door Company sales were 30.3 percent higher than 1976, reflecting the increased level of residential construction during 1977. Crane Canada sales for 1977 decreased 10.4 percent due to the generally depressed economic state of its marketing area. International Operations sales increased 1.8 percent during 1977, which was attributable to improved price realization. This improvement, however, was substantially offset by lower unit shipments.

Consolidated sales for 1976 decreased 2.8 percent from 1975. Crane Domestic sales were 8.3 percent less than in 1975 due to depressed demand for capital goods and building products. CF&I Steel Corporation sales for 1976 were 3.5 percent lower than in 1975, primarily because of reduced shipments of steel pipe. Huttig Sash & Door Company sales increased 44.5 percent in 1976 over 1975, again reflecting the strong conditions in the residential housing markets. Crane Canada sales declined 4.0 percent in 1976 compared with 1975. International Operations sales declined 17.4 percent in 1976 from the 1975 level due to slowdowns in the economies these operations serve.

**Operating Profit**

Consolidated operating profit in 1977 decreased 16.7 percent from 1976 levels. Crane Domestic's operating profit in 1977 decreased 30.9 percent from 1976 due to a 1.1 percent decline in sales and the inability to offset higher operating costs with price increases. In addition, certain of the traditional markets, particularly valves, were significantly affected by foreign competition. CF&I Steel Corporation experienced a 16.1 percent decline in operating profit compared with the prior year. This decline was primarily caused by the additional depreciation resulting from an accounting change to the use of the accelerated method for financial reporting purposes. Huttig Sash & Door Company's operating profit increased 39.3 percent over 1976 results, reflecting the significant increase in sales volume. Crane Canada's operating profit declined 34.4 percent from 1976, due to the decline in sales volume and change in product mix. During 1977 the International operating profit declined by 20.6 percent. The decline was the result of an economic slowdown together with rising costs of labor and materials.

Consolidated operating profit in 1976 decreased 35.9 percent from 1975 results, which was primarily attributable to the failure to recover higher operating costs through price increases. CF&I Steel Corporation experienced the sharpest decline in operating profit in 1976, 56.3 percent below the 1975 level. The decline was attributable to higher employment, maintenance and other costs, which were not offset by price increases.

**Depreciation**

Depreciation expense increased 21.5 percent during 1977 as compared to 1976. This increase was caused by a change from the straight-line method to the accelerated method and the higher level of capital expenditures particularly at CF&I Steel Corporation.

**Other Income (Deductions)**

Interest expense in 1977 increased 3.9 percent from 1976, largely due to an increase in the prime lending rate. During 1976 interest expense increased by 42.7 percent, as a result of the issuance in late 1975 and early 1976 of $82,404,600 principal amount of 8 percent subordinated debentures given in exchange for 4,120,230 common shares of The Anaconda Company.

Miscellaneous—net in 1977 and 1976 included non-recurring transactions resulting in gains of $25,939,000 and $13,738,000 respectively. See page 4, "Consolidated Statement of Income," for details.

**Income Taxes**

Income taxes for 1977 were at an effective tax rate of 16.0 percent compared with 37.5 percent for 1976. The decrease was attributable primarily to the significant increase in non-recurring transactions, which included dividends and capital gains not subject to maximum income tax rates, and to higher investment tax credits. The effective tax rate for 1976 was lower than 1975 due to non-recurring capital gains and higher investment tax credits.



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## Five Year Summary of Operations

(IN THOUSANDS)

CRANE CO. AND SUBSIDIARIES

| | 1977 | 1976 | 1975 | 1974 | 1973 |
|---|---|---|---|---|---|
| **Net Sales** | $1,133,822 | $1,087,606 | $1,119,494 | $1,144,031 | $947,093 |
| Depreciation | 44,192 | 36,380 | 35,784 | 34,880 | 30,163 |
| **Operating Profit** | 67,119 | 80,595 | 125,738 | 120,885 | 50,973 |
| Interest Expense | 23,574 | 22,699 | 15,905 | 18,933 | 19,406 |
| **Income Before Income Taxes** | 78,795 | 76,778 | 114,202 | 97,354 | 32,558 |
| Income Taxes | (12,624) | (28,819) | (50,594) | (41,221) | (11,981) |
| **Net Income** | $ 66,171 | $ 47,959 | $ 63,608 | $ 56,133 | $ 20,577 |
| **Net Income per Common Share:** | | | | | |
| Average Shares Outstanding | $6.52 | $4.61 | $6.05 | $5.21 | $1.85 |
| Assuming Conversion of Debentures | 6.17 | 4.31 | 5.36 | 4.14 | 1.47 |
| **Dividends per Common Share:** | | | | | |
| Cash | 1.30 | 1.18 | .96 | .66 | .44 |
| Stock | 2% | 2% | 2% | 2% | 2% |

## Analysis by Segment of Sales, Operating Profit and Assets

(IN THOUSANDS)

| | 1977 | | 1976 | | 1975 | | 1974 | | 1973 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | % | Amount | % | Amount | % | Amount | % | Amount | % |
| **Net Sales:** | | | | | | | | | | |
| Crane Domestic | $ 322,187 | 29 | $ 325,897 | 30 | $ 355,341 | 32 | $ 377,312 | 33 | $319,423 | 34 |
| CF&I Steel Corporation | 441,869 | 39 | 413,054 | 38 | 427,900 | 38 | 438,721 | 38 | 342,814 | 36 |
| Huttig Sash & Door Company | 151,628 | 13 | 116,328 | 11 | 80,495 | 7 | 89,762 | 8 | 93,904 | 10 |
| Crane Canada Limited | 135,383 | 12 | 151,030 | 14 | 157,386 | 14 | 155,869 | 14 | 115,190 | 12 |
| International Operations | 82,755 | 7 | 81,297 | 7 | 98,372 | 9 | 82,367 | 7 | 75,762 | 8 |
| Total Net Sales | $1,133,822 | 100 | $1,087,606 | 100 | $1,119,494 | 100 | $1,144,031 | 100 | $947,093 | 100 |
| **Operating Profit:** | | | | | | | | | | |
| Crane Domestic | $21,869* | 29 | $31,648 | 36 | $ 38,081 | 28 | $ 28,532 | 22 | $ 9,433 | 17 |
| CF&I Steel Corporation | 24,855* | 34 | 29,611 | 33 | 67,788 | 50 | 75,261 | 59 | 27,016 | 48 |
| Huttig Sash & Door Company | 15,133 | 20 | 10,861 | 12 | 5,110 | 4 | 7,253 | 6 | 9,062 | 16 |
| Crane Canada Limited | 5,540 | 8 | 8,448 | 9 | 15,995 | 12 | 13,437 | 11 | 6,452 | 11 |
| International Operations | 6,766 | 9 | 8,520 | 10 | 7,841 | 6 | 3,025 | 2 | 4,551 | 8 |
| | 74,163 | 100 | 89,088 | 100 | 134,815 | 100 | 127,508 | 100 | 56,514 | 100 |
| Corporate | (7,044) | | (8,493) | | (9,077) | | (6,623) | | (5,541) | |
| Total Operating Profit | $67,119* | | $80,595 | | $125,738 | | $120,885 | | $50,973 | |
| **Assets:** | | | | | | | | | | |
| Crane Domestic | $124,902 | 19 | $116,731 | 18 | $124,369 | 21 | $138,122 | 23 | $138,831 | 25 |
| CF&I Steel Corporation | 374,242 | 57 | 353,309 | 56 | 308,814 | 52 | 287,567 | 49 | 284,996 | 50 |
| Huttig Sash & Door Company | 44,650 | 7 | 36,135 | 6 | 29,360 | 5 | 25,507 | 4 | 27,349 | 5 |
| Crane Canada Limited | 52,929 | 8 | 61,033 | 10 | 62,859 | 10 | 63,697 | 11 | 50,942 | 9 |
| International Operations | 60,651 | 9 | 60,345 | 10 | 69,680 | 12 | 74,391 | 13 | 61.033 | 11 |
| | 657,374 | 100 | 627,553 | 100 | 595,082 | 100 | 589,284 | 100 | 563,151 | 100 |
| Corporate | 179,521 | | 133,008 | | 127,119 | | 18,663 | | 24,115 | |
| Total Assets | $836,895 | | $760,561 | | $722,201 | | $607,947 | | $587,266 | |

*Changed from straight-line to accelerated depreciation, which increased depreciation by $862,000 and $4,676,000 respectively, a total of $5,538,000 in 1977.

## Capital Expenditures and Depreciation by Segment

(IN THOUSANDS)

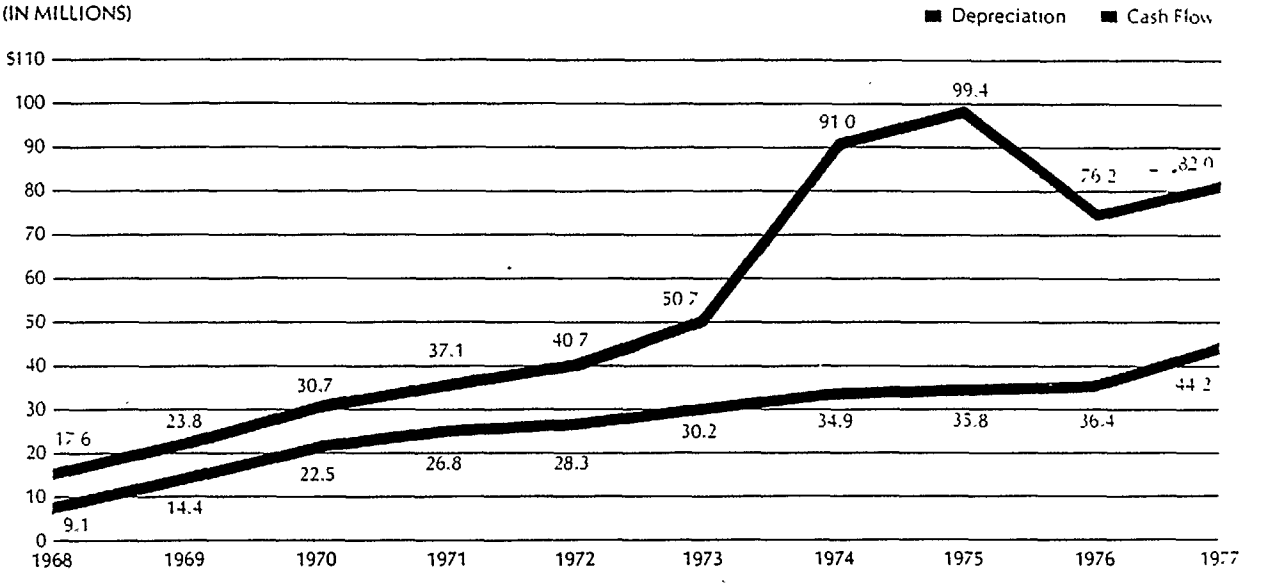
CRANE CO. AND SUBSIDIARIES

| | 1977 | 1976 | | 1977 | 1976 |
|---|---|---|---|---|---|
| **Capital Expenditures:** | | | **Depreciation:** | | |
| Crane Domestic | $ 9,154 | $ 7,066 | Crane Domestic | $ 6,355 | $ 5,400 |
| CF&I Steel Corporation | 73,685 | 71,143 | CF&I Steel Corporation | 33,317 | 26,336 |
| Huttig Sash & Door Company | 4,290 | 869 | Huttig Sash & Door Company | 612 | 526 |
| Crane Canada Limited | 2,440 | 1,137 | Crane Canada Limited | 1,531 | 1,586 |
| International Operations | 3,621 | 2,315 | International Operations | 2,377 | 2,532 |
| Total Capital Expenditures | $93,190 | $82,530 | Total Depreciation | $44,192 | $36,380 |

## Cash Flow

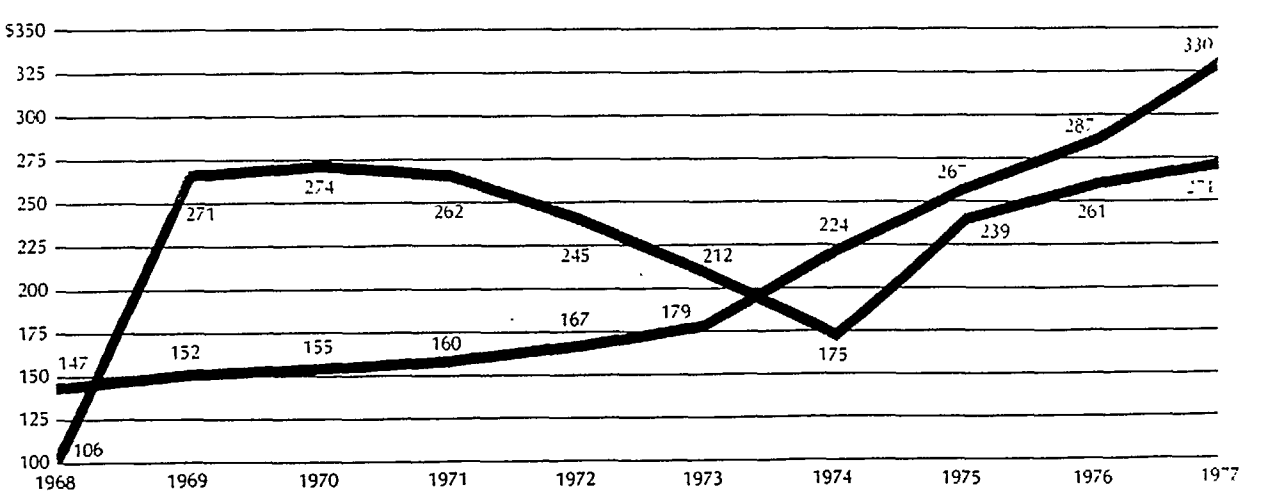
Net income, excluding non-recurring transactions, plus depreciation.

(IN MILLIONS)




## Debt to Equity Relationship

(IN MILLIONS)



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Crane fittings are used on the Trans-Alaska Pipeline.

Steel valves and Crane Teledyne operators are installed in the power house at one of the country's busiest airports.

# Crane Domestic

**Crane's Domestic operations provide capital goods markets with a broad range of industrial products.**

**Fluid and pollution control products—valves, fittings, pumps and water conditioning and waste treatment systems—serve petroleum, chemical, power, pulp and paper, and municipal markets.**

**Plumbing and related building products serve residential, commercial and industrial construction markets.**

**Aircraft systems and accessories serve commercial transport, general aviation, and military aerospace markets.**

**Fluid and Pollution Control Products**

The long awaited upturn in capital spending failed to materialize in 1977 as basic industries continued to defer sizeable investments in new plant and equipment. The slow pace of economic growth has left excessive capacity in Crane's major fluid and pollution control markets—the petroleum, chemical, power, and pulp and paper industries.

Slack demand in Crane's industrial valve markets during 1977 resulted in sales and earnings below 1976 levels. However, sales of pump products exceeded year-earlier results, while water treatment and pollution control equipment performed well. Throughout 1977 and into 1978 Crane has focused upon market segments which continue active, such as energy conservation and pollution abatement. The company also has acted to tighten operations by phasing down high cost facilities, improving productivity and streamlining product lines.

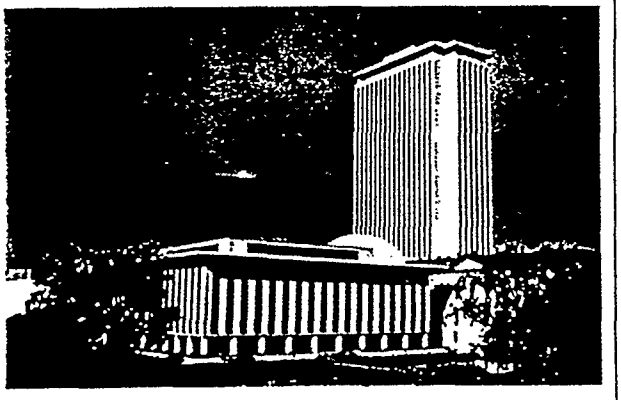
In addition to low overall demand, the Valves and Fittings Division experienced keen competition from imports diverted from weak European markets. Sales of quarter-turn valves, however, increased substantially last year, reflecting better penetration of this growing segment of the industry. Such factors as lighter weight, smaller space requirements, and ease of maintenance and operation are causing these valves to replace the more traditional gate and globe valves in many applications.

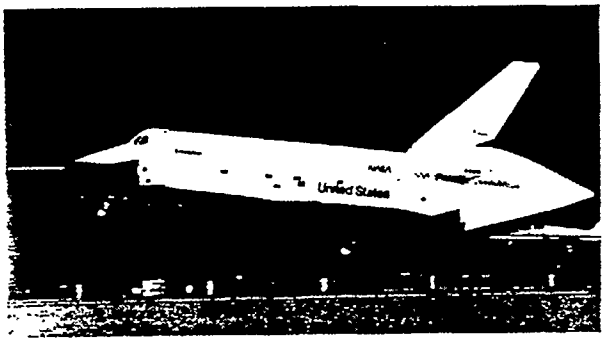
Two new designs were added to Crane's butterfly valve line in 1977, broadening this line to include products engineered to meet both general and specialty service applications. Crane's line of standard ball valves has been redesigned, and engineering is now underway on several new valve designs as well as extensions of the current standard lines.

Crane continued to upgrade valve production facilities in 1977. The company's original valve plant in Chicago was closed and the profitable product lines transferred to other modern locations with increased production capability. A new bronze casting center be-









Large Deming turbine pumps provide fire protection on this offshore drilling platform.

Cochrane chemist analyzes a customer's waste water problem.

Florida's State Capitol Building, designed by Edward Durell Stone Associates, is equipped with Crane plumbing fixtures.

Hydro-Aire's computerized braking system is installed on the Space Shuttle.

came fully operational during the year, while modernization of the company's steel casting center will be completed in early 1978.

Crane had improved pump sales in 1977. This performance is attributable largely to greater market penetration through broader product lines and entry into new market areas.

With full-line capability in the manufacture of large solids handling pumps, Crane enjoyed higher sales for municipal and industrial sewage applications. During the year, the company also acquired a line of high quality smaller sewage pumps for residential and light commercial use. This addition enables Crane to serve the market from the smallest domestic need to large municipal and industrial fluid waste applications.

The Deming line of double suction split-case pumps was broadened with the inclusion of several large sizes. These are specified primarily for industrial and municipal potable water service as well as for the growing agricultural/irrigation markets.

Domestic water systems pumps, although a smaller percentage of Deming's business than the industrial lines, experienced a sharp increase in sales, paralleling the strong activity in home construction and remodeling.

Sales of Chempump canned motor pumps for nuclear service continued strong last year, confirming Crane's leadership in this market for critical service pumps. Though chemical process markets weakened, Chempump products have entered several new market areas. Chempump units are handling coal slurry in coal conversion technology, while the smaller, fractional horsepower Dynapump units are in use for solution transfer in solar cooling systems. A new metering pump was successfully introduced last year. This low flow, high pressure, controlled volume pump is in strong demand for precision fluid transfer in medical and industrial research.

Cochrane Environmental Systems Division achieved higher earnings in 1977. Sales of water treatment systems improved markedly, reflecting increased capital investment for cost saving equipment. Key to this improvement was stepped-up demand for Cochrane's proprietary Ammonex boiler water treatment process. This process, which contributes significant savings in the cost of boiler water treatment, is finding increasing use in power plant applications. Cochrane also anticipates growing demand for its condensate booster recycling system, which offers unique energy conservation features for industrial steam boilers.

As a further step in the development of specialized fluid and pollution control systems, Cochrane introduced a line of comprehensive fluid monitoring instruments in 1977. These instruments utilize ultrasonics to

detect and precisely measure pollutant agents present in industrial wastewater. The line complements Cochrane's recently developed Uni-Pac Clarifier, a packaged system which separates the toxic elements in metal-bearing wastewater. Early market reaction to both products has been favorable. With environmental controls demanding an ever greater share of corporate investment dollars and production costs steadily on the rise, the outlook for increased sales of Cochrane's engineered systems is encouraging.

Crane Supply Company, Crane's wholly-owned industrial distribution network, had a difficult year in 1977. Crane Supply offers industrial markets a full line of standard Crane valves, pumps and fittings plus related products of other manufacturers. Industry's slow pace of spending for new plant and equipment coupled with ready availability of imports in some standard products made certain lines extremely competitive. With a branch network which extends nationwide, Crane Supply is well positioned to benefit from improved commercial and industrial construction activity when it occurs.

**Building Products**

With housing starts at their highest level since the 1973 pre-recession peak, Crane's Plumbing Division experienced improved sales and earnings in 1977. The division's performance also was aided by strong remodeling activity and the introduction of additional products directed to both the new construction and remodeling markets.

A line of pulsating showerheads was added last year, and the high-style Classic Brass fixture group was expanded to include additional decorative finishes and designs. Early in 1978 the division introduced a new, streamlined pedestal lavatory in both solid and dual-tone colors. Crane is steadily expanding its line of water economy fixtures for both domestic and commercial use and has added a series of flow control adaptors and showerheads to its plumbing brassware.

In order to reach the rapidly expanding home improvement market more directly, Crane formed the Classic Home Products Division in 1977. Classic Home Products markets Crane plumbing products, related accessories and other home improvement lines to home centers and other retailers that specialize in reaching the remodeling customer. Through Classic, Crane has direct access to the do-it-yourself segment of this growth market, a segment which now accounts for more than half of the over $30 billion in annual home improvement sales.

With building activity expected to continue strong again in 1978, the outlook for Crane's building products is encouraging. If an upswing occurs in multi-family and commercial construction as is anticipated, the company should enjoy renewed order strength in its commercial and institutional plumbing fixtures, as well.

**Aerospace and Aircraft Products**

The company's Hydro-Aire Division designs and manufactures brake control systems, fuel and hydraulic pumps, controls and other accessories and systems for military, commercial and general aviation aircraft. Both sales and earnings achieved new records in 1977 as all segments of the division's markets were strong.

Hydro-Aire's products, designed specifically to improve aircraft safety and dependability, are found on virtually all commercial transport aircraft and the majority of military and general aviation craft. The past year saw a resurgence of domestic airline travel and a corresponding upswing in new equipment orders. This increase coupled with heavy export sales has resulted in an improved commercial market, and consequently, high order levels for Hydro-Aire's automatic braking and skid control systems.

The business aircraft sector of the general aviation market is exceptionally strong as new uses emerge for this class of aircraft. Worldwide, the search for energy, geodetic and agricultural research, and the transportation needs of developing nations should assure a strong market for years to come. Hydro-Aire anti-skid brake controls are specified on most of these aircraft. During 1977 the new Power Brake/Anti-Skid package was certified for the Cessna Citation II and the Beech Aircraft Super King Air. Also, the highly reliable invermotor fuel boost pump is certified for all Beech, Swearingen and Mitsubishi turboprop aircraft.

The first flight of the Space Shuttle, which occurred last year, was significant to Hydro-Aire. This new hybrid air/spacecraft, incorporating Hydro-Aire's automatic brake controls, will become the key element in the nation's space exploration program during the next decade. It gives the United States the capability of building sophisticated structures in space to house research laboratories and communication networks devoted to scientific advancement.

During 1977 Hydro-Aire's manufacturing capabilities were expanded as the production assembly area was increased by 26,000 square feet. This addition permitted the consolidation of many related operations to further improve production efficiency.



CRTX 0397

# CF&I Steel Corporation

**CF&I serves the transportation, petroleum, mining, construction and agricultural industries, primarily in the western United States. A vertically integrated steel manufacturer, CF&I supplies most of its own coking coal, iron ore, limestone and dolomite from company-operated mines and quarries. A common carrier subsidiary, The Colorado & Wyoming Railway Company, transports raw materials from CF&I mines in Colorado and Wyoming in addition to serving other customers in the region.**

## Operations

Pressured by escalating operating costs, slack capital goods markets and steep import competition, the steel industry as a whole experienced one of its most difficult periods last year. In the face of these severe business conditions, CF&I performed well in 1977 even though operating results did not match the prior year.

The company's creditable performance, despite major industry problems, is largely attributable to increased productivity resulting from the large scale facility modernization program at CF&I's Pueblo plant in recent years. Important, as well, are the company's product mix and geographic location. One of the few integrated steel facilities in the West, CF&I enjoys strategic access to important oil and gas producing regions, the independent and successful western rail lines, major mining activity, the farm and ranch sector, and a construction industry attendant upon western expansion. It is to these markets that CF&I's product lines are targeted.

Sales of oil country casing and tubing rose sharply as domestic drilling activity increased during 1977, and improved demand for tubular goods has continued into 1978. Oil industry projections indicate a 15 percent increase in exploration spending during 1978, with a larger portion of this investment going into domestic drilling. With the heightened need for new domestic petroleum sources, this market should continue to expand over the long term.

Demand for rails and accessories softened as the year progressed due to delays by major railroads in their replacement programs. Last year the western roads, which derive a high percentage of revenue from basic commodity haulage, suffered from special factors such as low grain traffic, a prolonged iron ore strike and the coal strike.

The outlook for CF&I's rail products is encouraging for 1978 and beyond, however, as the railroads return to high levels of track construction and maintenance. The efficiency of rail transportation becomes increasingly important as energy costs continue to rise. Western coal development is heavily dependent upon rail transportation, and the vast coal reserves in CF&I's market area are virtually certain to be in demand as the nation moves toward greater energy self-sufficiency. With CF&I's rail mill modernization nearing completion, early this year the company will offer longer length rail and a new high strength alloy rail, which are expected to increase market penetration.

Mining products experienced a sharp sales increase during 1977 despite labor contract problems in the copper, taconite and coal industries. With improved mining activity anticipated for 1978, these products are expected to continue to perform well.

Sales of some wire products were favorably influenced by a high level of home building and government spending on water projects during 1977. However, wire rod and nail markets eroded dramatically as a result of import pricing pressures. Although CF&I has been affected by the large influx of steel imports to a lesser extent than many of the major companies, foreign competition remains a serious problem for the industry. Measures are needed to re-establish equal competitive opportunities in an open market environment for both foreign and domestic producers.

Demand for structural products mirrored the continued slow pace of capital expenditures for plant and equipment last year. An increase in heavy construction activity in 1978, if it occurs, would have a positive impact on shipments of rolled products.

## Facilities

CF&I continued to pursue its aggressive plant improvement program during 1977 as capital expenditures totaled $73,685,000. Of this sum, $6,910,000 was invested in environmental quality improvements at various CF&I facilities.

Approximately 50 percent of the company's capital expenditures went into expansion and modernization of the rail mill facilities. The first phase of this three year project became operational in August. Included in the program's initial phase were cooling boxes, roller straightener, and automated end finishing and drilling equipment. A new rolling mill and rail rolling equipment will go into production during 1978. CF&I now has the capability of producing rails up to 25 meters in length, more than twice the prior standard length. Upon completion of the program in early 1979, CF&I will have the most modern rail producing facility in North America.

Improvements were implemented in other production areas last year. Billet conditioning capacity, which will increase production capability of high grade oil country goods, was added to the seamless tube mill. In March a new coupling shop went into opera-



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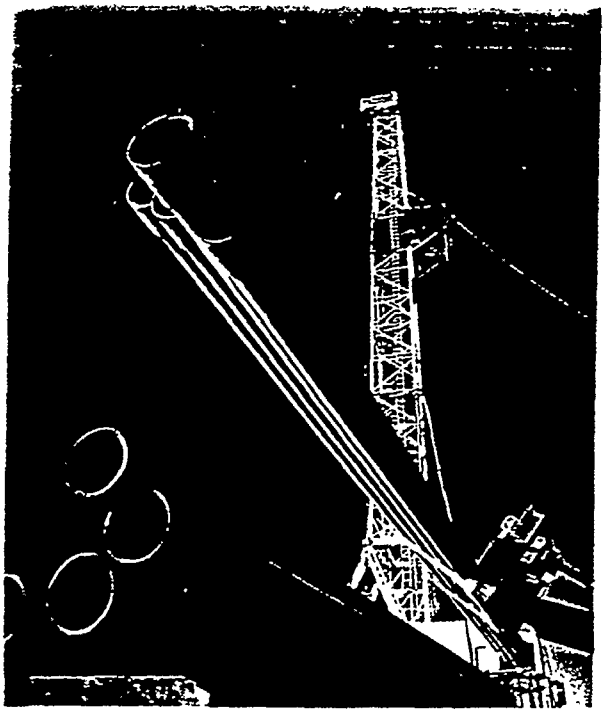
tion, which reduces the need to purchase couplings from outside suppliers. New nail and barbed wire machines of substantially improved design and higher throughput also were installed in 1977. Facilities currently are being installed to enable CF&I to produce high quality specialty bar products. These products command higher prices in the marketplace.

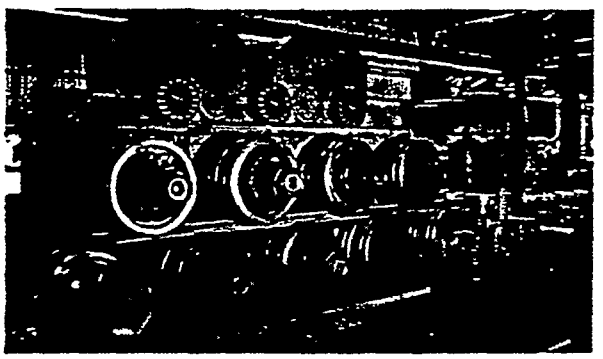
CF&I continues to focus upon development of its raw material supplies. The new Maxwell coal mine, located in southern Colorado, became operational in early 1977 and final development was completed before year-end. With the opening of this mine, the company became completely self-sufficient in supplying the high volatile metallurgical coal required for steelmaking. In order to attain self-sufficiency in low volatile metallurgical coal supplies, CF&I has initiated plans to develop a mine in eastern Oklahoma, which will be the company's third coal mine.

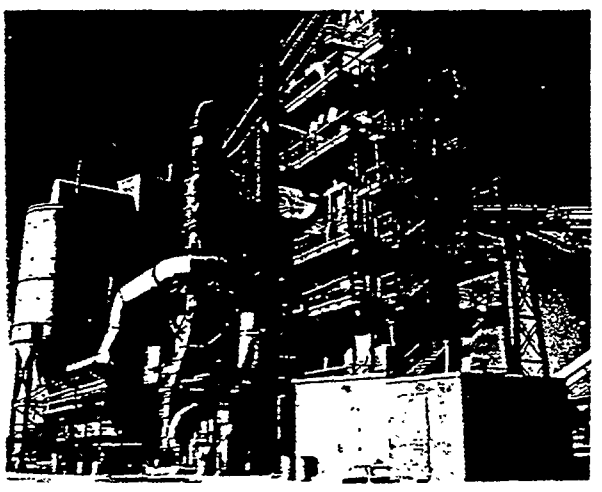
The Colorado & Wyoming Railway Company has expanded its rail car fleet by acquiring 40 new rapid discharge hopper cars to transport coal from the Maxwell and Allen mines in a unit train system. Further improvements in raw material supplies include a new auto shredder at one of the company's scrap metal processing operations and the start-up of an iron ore beneficiation plant at the Sunrise Mine in Wyoming. By refining the ore quality at the mining site, the beneficiation plant reduces shipping costs to Pueblo and improves the efficiency of blast furnace operations.

During 1977 CF&I's environmental improvement program focused on upgrading air quality control equipment. Four major emission control projects are now underway. At the basic oxygen furnace a new electrostatic precipitator is being installed, and facilities are being added to control fumes emitted during charging and tapping of the furnace. Improved facilities also are under construction for controlling emissions which escape as coke is pushed from oven to quench car, and upgraded air quality control facilities are being added at the sinter plant.

Late in 1977 CF&I formed a new subsidiary, CF&I Energy Resources Company, in order to further develop resources of its own as well as those of others. With its 350,000 outlying acres in the Rocky Mountain area, CF&I has substantial reserves of sub-bituminous steam coal. Drawing on this raw supply plus its years of experience in mining coal, CF&I will explore and develop coal resources throughout the area for sale to energy consuming industries.



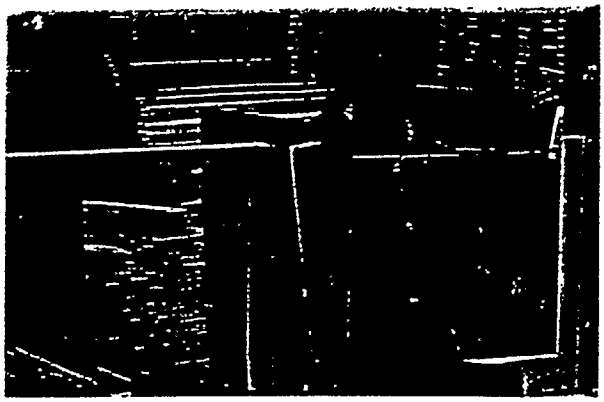




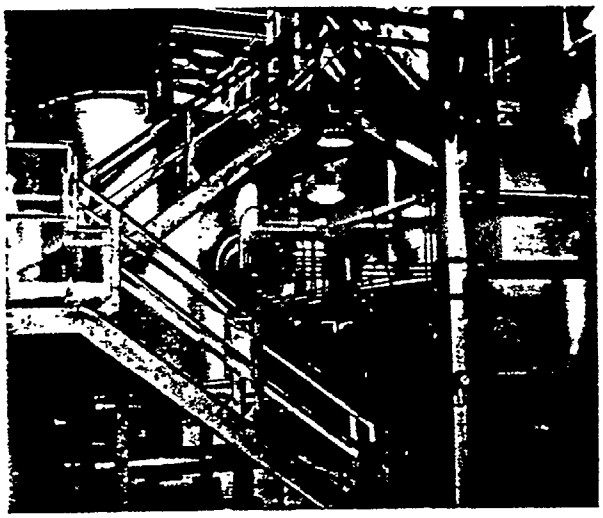
CF&I casing is unloaded at a drilling site near Hobbs, New Mexico.

The new roller straightener in the rail mill handles rails up to 25 meters in length.

Air quality improvement included a new baghouse cleaning system at the Pueblo lime plant.







Insulated window units are manufactured at Huttig's Charlotte facility.

Crane Canada furnished valves and plumbing fixtures for the Place du Portage project in Hull.

Cochrane cation hydrogen exchange vessels and demineralizers being installed at an Ontario refinery. Completed water treatment system will handle 3,600 gallons per minute.

## Huttig Sash & Door Company

**Huttig manufactures and distributes millwork and allied building products primarily to residential construction markets. Huttig's branches are concentrated in the South, Southeast, Southwest and Midwest, among the fastest growing residential construction areas in the country.**

Huttig achieved record results in 1977 for the second consecutive year.

The surge in residential construction activity, which continued throughout the year, meant strong and consistent demand for Huttig products. The 1977 housing market also reflected increased remodeling activity, another growing sector for Huttig. A major factor in the escalation of home improvement activity in the past several years has been the emergence of the do-it-yourself market. With steeply rising labor costs, greater consumer awareness and the availability of detailed instructional data, homeowners are investing in self-installed improvements. Huttig products are ideally suited to this self-sufficient market sector.

Higher utility costs have reinforced the importance of energy saving home improvements, and Huttig experienced a marked upswing in sales of these products in 1977. Metal entrance door systems and insulated glass window units were especially strong. Huttig is expanding production capability of these and related energy saving products. In 1977 the company established a third separate glazing facility for wood windows, and this year will expand the original facility, which became operational in 1976. Additional energy saving products, tailored for the remodeling market, will be added at these glazing operations.

Last year Huttig completed a new larger facility at Rockford, Illinois and expanded operations at Rock Island, Illinois. Construction has begun on facilities for a new branch in Champaign, Illinois and on a new building at the Des Moines, Iowa location. These are scheduled for completion in 1978. Each of these midwestern regions continues to offer fine growth opportunities for Huttig's business. Last fall new branch operations were opened in North Carolina and Tennessee to strengthen penetration of southern markets.

Although 1978 housing starts are expected to fall below the 1977 level, home building activity should continue brisk and remodeling markets, led by the do-it-yourself customer, should strengthen further. These factors, coupled with Huttig's strategic geographic concentration in the South and Midwest, make the outlook for 1978 quite favorable.



CRTX 0400

## Crane Canada

**Crane Canada Limited manufactures and distributes valves, pumps, plumbing fixtures and fittings for the construction industry, as well as fluid and pollution control and water conditioning equipment for basic industrial applications. Primary Canadian markets parallel those in the United States.**

The pervasive slow-down in Canadian economic activity in 1977 had an adverse effect on Crane Canada's sales and earnings. Capital spending markets account for the majority of the company's business. Such factors as government wage and price controls, an unsettled political environment, the declining value of the Canadian dollar and a continuing high level of inflation had a depressing effect on business investment in new plant and equipment.

### Manufacturing Operations

Crane Canada's manufacturing operations performed reasonably well in 1977 although results were below the prior year. Despite an unfavorable business climate, the company maintained a firm market share in its major product areas.

Sales of bronze and iron valves for commercial, government and institutional construction markets approximated year-earlier levels, while waterworks product sales held up well in the face of keen domestic and import competition. In the past several years Crane Canada has focused on these municipal and industrial wastewater markets, areas which should offer better-than-average growth potential when capital investment again picks up.

Demand for plumbing products in 1977 remained level with 1976 even though Canadian housing starts were below the record number of the prior year. As one of the country's largest plumbing manufacturers, Crane Canada holds a strong market position which should result in continued good performance of these products.

### Distribution Operations

Crane Supply Division, which distributes the company's products and related items of other manufacturers, was severely affected by the low level of economic activity. Lack of demand, particularly in industrial markets, resulted in decreased sales volume and a consequent squeeze on profit margins. For the current year commercial and industrial construction are expected to strengthen only marginally, while the government, in its efforts to control inflation, will continue to restrain spending for public facilities. With distribution branches located in key industrial areas of Canada, however, Crane Supply should participate in renewed business activity once it occurs.

One area of industrial construction which is expected to improve during 1978 and beyond is energy related building. Twenty major power generation projects are planned for Canada before the end of 1980, with work beginning on several large nuclear facilities this year. The Alaska Highway Pipeline project, scheduled to commence in 1979, offers additional market potential. Such activity in the energy related sector—a major market for a wide range of Crane Canada's products—should have a positive effect on both manufacturing and distribution operations.

## Crane International

**One of the largest valve and fittings manufacturers in Europe, with operations in the United Kingdom, France, Spain and The Netherlands, Crane is a leading supplier to petroleum, petrochemical, chemical, power and marine markets. An Australian valve plant serves that country, while a pump facility in Mexico sells to industrial and agricultural markets in Latin America.**

The pace of the world economy was disappointing in 1977. Plagued by continuing high inflation, rising labor costs and, in some cases, tight credit and price restraints, private industry deferred investment in new plant and equipment while governments, as well, held back on projects. This lack of capital investment depressed the overall performance of Crane's international operations, although several sectors showed improvement.

In the United Kingdom, Crane Ltd. achieved higher earnings in 1977. Crane Ltd. manufactures valves, pumps, fittings and castings for construction engineering, mechanical services and petrochemical applications both domestically and overseas. Although these markets generally were not strong in 1977, the company bettered its performance largely because of increased productivity and greater market penetration. Plant improvements were concentrated upon labor saving equipment, particularly at the malleable iron foundry and machining facilities.

Crane Ltd. is gaining a larger share of export markets despite keen competition in these sectors. During 1977 the company extended its pump and malleable fittings markets in the Middle East and developed export business for steel castings in Europe and North America. With increased investment by Middle East and African countries, demand in these regions is expected to grow at a faster pace than in the more mature economies.

Crane Nederland N.V. manufactures valves, pipe fittings and central heating products for residential, commercial and light industrial construction. The company experienced a good year in 1977 as profit margins improved despite a lower level of sales. Last year Crane Nederland introduced a new residential boiler line, which was well received in the marketplace, and improved manufacturing efficiency at its production facilities. Such factors indicate a favorable outlook for Crane Nederland even though domestic construction markets are not expected to strengthen notably in 1978.

Crane's industrial valve operations in Spain and France were depressed in 1977. In Spain Crane-FISA, S.A. suffered deterioration of its domestic markets. An inflation rate exceeding 25 percent, tight credit and general economic uncertainty following the change in government brought business investment in Spain to a virtual standstill last year. In view of these conditions, it is difficult to foresee any improvement in 1978.

Because of the decline in worldwide demand for standard cast steel valves, Crane S.A., located in France, concentrated on developing markets for its high pressure valves. This has led to a situation of dependence on project work, particularly in petrochemical and power markets, and the transition to more specialized markets proved difficult. Crane S.A. should benefit from better penetration of these specialized markets in 1978. At this writing France is on the eve of a national election, the outcome of which will affect basic economic policy. It is, therefore, impossible to assess the near term business environment.

Crane Australia Pty. Limited performed well in 1977 despite the continued slow rate of capital investment in Australia. The company continues to maintain a strong position in refining and chemical processing markets, areas which should expand during the next several years.

Crane-Deming de Mexico S.A., which manufactures pumps for industrial and agricultural applications, enjoyed higher sales and profitability in 1977. The company has increased its sales of pumps to agricultural/irrigation markets, sectors which exhibit firm growth potential. The development of Mexico's oil and gas resources, now underway, offers additional market opportunities for 1978 and beyond.





These Crane steel valves operate at temperatures as low as −45°F in an Australian natural gas plant.

High capacity Crane pumps help heat the Central Terminal at London's Heathrow Airport.

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## Equal Employment Opportunity Policy

Crane Co. is an equal opportunity employer. It is the policy of the Company to recruit, hire, promote and transfer to all job classifications without regard to race, color, religion, sex, age or national origin.

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Fluid and Pollution Control
Steel
Building Products
Aerospace and Aircraft Products

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