



SPECIAL REPORT

The steel crisis — a US labor perspective

By Locker/Abrecht Associates, Inc.

Since the end of the Second World War the United States has gradually lost its dominant position in the international steel industry.

In this paper Locker/Abrecht Associates look at the background to this development and outlines some possible futures for the US steel industry.

The article is based on a report by Locker/Abrecht Associates to the United Steel Workers of America, AFL—CIO, 1985-12-16: "Confronting the Crisis: a Challenge for Labor."

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The world-wide steel market has been undergoing fundamental changes in the last twenty years. These changes include:

- Growing overcapacity
- Increased international trade of steel and steel-containing products
- Intensified price competition

Throughout the last two decades, according to most analysts, the US integrated producers have been plagued with many problems that placed them at a distinct disadvantage in responding to this changing steel market. Among these problems are the following:

- Aging equipment and infrastructure
- Low capital investment
- Relatively low profit rate
- Poor management performance
- High material and employment costs

Unfortunately, these problems offset the traditional strength of the integrated producers — very high productivity. This left the industry extremely vulnerable to the mounting wave of competition from minimills and foreign imports.

The role of government

In other industrialized nations the government has played a key role in strengthening the aging integrated producers, providing access to low-interest credit, import restrictions, price protection, tax relief, funds for retraining and stimulating steel demand through public investment. But in the United States, the Reagan Administration is hostile to these programs. The "supply side" programs, based on across the board tax cuts for individuals and businesses, predictably failed. They did not spur investment in basic industries, already subject to unfair competition and unprofitability, which were in need of extensive relief. Their failure left the steel industry illequipped to compete against subsidized competition.

The President's trade representative,

Clayton Yeutter, has stated that some industries — such as steel, textiles and footwear — may have to be phased out of US society because they are no longer productive. Though he was later forced to retract his statement, Mr Yeutter went on to say that while this would be a "painful process", the easing out of some industries is preferable to adopting protectionist measures to save jobs.¹

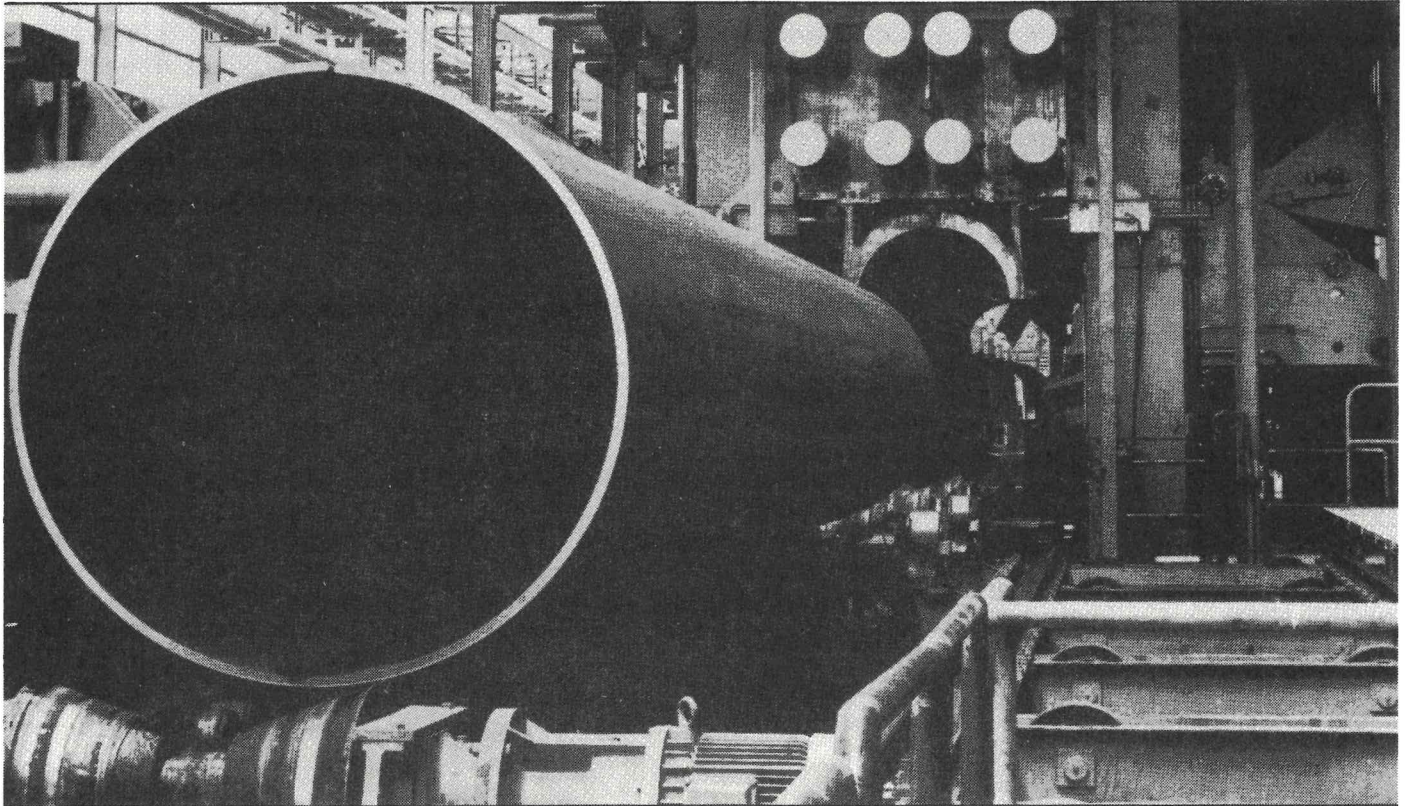
Behind the banner of "free trade", the Reagan Administration has advanced a series of economic programs that triggered a deep crisis for the US manufacturing sector, and especially integrated steel producers. Reagan has:

- Promoted the rise in the value of the dollar, thereby making US goods less competitive in the world market and imports artificially competitive in the US
- Generated very large deficits which produced high interest rates and massive capital inflows
- Restricted access to low-cost credit by supporting high interest rates and excessive speculation
- Inhibited domestic industrial growth by encouraging imported products to fill rising demand
- Failed to stimulate new investment in the basic manufacturing sector
- Lowered steel usage by shifting government expenditures toward hitech defense industries and away from public investment in highways, railroads, bridges and similar infrastructure development and repair
- Tolerated a very high unemployment rate in order to reduce inflation.

As a result of these and other policies, the economy in 1982 was dragged into the worst recession since The Great Depression, sending the steel industry into a long-term crisis from which it may never recover.

The governments of other industrialized countries have recognized the need to support their own distressed steel industries. To maintain their operations and preserve employment, companies in all these countries receive subsidies or

Dramatic shifts have taken place in trade flows in seamless tubes from the mid-60s to the early 1980s. Europe has lost its position as the largest exporter, with Japan and the NIC-countries taking an increasing share. Growing overcapacity has intensified price competition between US, European and Japanese producers.



other forms of support that permit them to sustain *substantial long-term losses*. As Table 1 demonstrates, producers in West Germany, England and France have lost money in practically every year over the last 11 years. On the other hand, while Japanese companies have been profitable, Japan has vehemently protected its domestic market. Producers in the United States have a much better record than these European producers, but even after four years of major losses the Reagan Administration still refuses to recognize their desperate need.

The industry's performance

Let us take a closer look at the integrated industry's performance during the last three contracts. We have assembled three tables that present comparable data on steel industry income and costs for each of the three contract periods. All figures use *ton of carbon steel ship-*

Table 1

**Operating income of steel producers 1974—1984
(USD/t shipped)**

Year	US	Japan	FRG	France	England
1974	24.5	16.1	35.2	1.2	-1.2
1975	7.6	-8.9	-23.9	-62.7	-61.5
1976	3.6	-15.2	-16.1	-50.7	-31.1
1977	-4.0	-13.1	-41.9	-75.5	-47.0
1978	29.5	10.2	-13.8	-37.5	-60.0
1979	36.3	44.1	10.7	-42.4	-42.3
1980	.1	23.9	-9.4	-69.7	-192.8
1981	26.2	6.5	-41.8	-87.7	-136.5
1982	-52.6	-5.9	-49.8	-78.3	-91.1
1983	-45.3	-4.1	-41.2	-78.5	-21.7
1984	-18.5	11.8	-3.6	-44.2	-10.5
Average	.7	6.0	-17.8	-56.9	-63.2

Source:

World Steel Dynamics, *Steel Strategist* No 11, September 1985.

ped as the measurement for analyzing all the income and cost figures.

1977/1979

In this profitable period (Table 2) the industry was experiencing a high volume of steel consumption and shipments, which in turn pushed up operating rates and lowered unit costs. Unfair import price pressure was temporarily and partially eased through the *Trigger Price Mechanism* (TPM). During this period:

a. Revenues per ton, boosted by rising prices, moved up almost 28 per cent, while costs increased only 17 per cent.

b. Employment costs advanced less than material costs (12 vs 21 per cent); other expenses (depreciation, state and local taxes and interest) showed only small increases.

c. The industry enjoyed one of its most profitable periods, earning a respectable eight per cent return on revenues.

d. Employment remained steady, holding at the 340 000 level.

1980/1982

This period (Table 3) began and ended with a recession, largely induced by the Federal Reserve Bank's high interest rate policy, which started under Carter and was endorsed by the Reagan Administration. Apparent consumption and shipments dropped, especially in 1982, sending operating rates way down and pushing up unit costs. All of this spelled disaster for the major integrated producers, each of whom faced sizable operating losses. For the first time, the major producers were not able to endure a downturn by raising prices to compensate for mounting losses. During this period:

a. Overall revenues per ton grew 15 per cent while costs shot up 26 per cent.

b. For the first time the traditional system of price setting broke down as a rising tide of imports put a cap on domestic price increases.

c. As a consequence of all these for-

ces the industry in 1982 suffered its biggest operating loss in recent history — the equivalent of 53 USD per ton shipped.

d. Employment was cut more than 27 per cent as shutdowns and layoffs ac-

celerated. Employment costs took a notable jump, first rising over 16 per cent between 1979 and 1980 primarily because of COLA increases, and then another 23 per cent by 1982. The second hike was related to the mounting

Table 2

Carbon steel shipments, revenues, costs and operating income 1977—1979 (in USD/t)

	1977	1978	1979	% changing 1977—1979
Steel consumption (Mt)	108	117	115	6
Shipments (Mt)	91	98	100	10
Imports in % of consumption	18	18	15	-3
Operating rate (%)	78	87	88	10
Total employment (000)	452	449	453	0
P&M employment (000)	337	339	342	1
Revenues:				% changing 1977—1979
Sales	339	384	431	27
Other revenue	2	5	4	100
Total revenue	341	389	435	28
Costs:				
Employment	121	120	136	12
Materials:				
Iron ore	46	49	55	20
Coal/coke	44	51	52	18
Energy	27	31	38	41
Other	75	79	89	19
Depreciation	16	16	17	6
Misc taxes	6	6	6	0
Interest	6	6	5	-17
Total operating costs	345	358	399	16
Operating income (Before income taxes & extra items)	-4	30	37	

Note:

Income and cost figures are for carbon steel products from integrated facilities.

Sources:

World Steel Dynamics, *Steel Strategist* No 11, September 1985.

number of layoffs that in effect spread the fixed costs (pension, insurance, holiday and SUB costs) over a smaller number of hours worked.

e. Material costs increased 22 per cent because energy prices shot up after

the second oil shock and iron ore costs escalated.

f. Other expenses, including depreciation and interest, also rose sharply in 1982, principally because a

smaller number of tons had to pay for the same amount of fixed charges.

1983/1985

In the most recent contract period (Table 4) the major integrated producers registered three straight years of disastrous operating losses totalling more than 2 billion USD. A majority of these losses were caused by lower shipments and falling prices, both due primarily to increased imports and import price pressure. In contrast to the overall economy, the steel industry did not experience a recovery. Although the market has recovered, *most of the growth has been captured by soaring imports*. Operating rates fell to very low, unprofitable levels. During this period:

a. Costs per ton fell, by 8.5 per cent, but revenues failed to rise, thereby triggering major losses.

b. Employment costs took a sharp downturn, declining 35 per cent from the 1982 high as result of the relief granted in the 1983 agreement, the drop of fixed charges related to laid-off workers, and productivity gains. *Employment cost reductions constituted 72 per cent of the total decline in costs in this period.*

c. Total employment fell more than 17 per cent; for the first time salaried cuts outpaced the drop in P&M workers.

d. Material costs fell only slightly.

e. Depreciation held steady but interest payments shot up from the previous period, reflecting heavier borrowing at higher rates.

f. Under enormous pressure (spearheaded by the USWA), the Reagan Administration finally granted some import relief through the Voluntary Steel Restraint Agreement (VRA). But the results so far have been disappointing, primarily because of inadequate implementation of the program. Imports remain near their historic 1984 high of 26 per cent of apparent consumption.

g. Lower than anticipated revenues precipitated a cash crunch that forced

Table 3

Carbon steel shipments, revenue, costs and operating income 1980—1982 (in USD/t)

	1980	1981	1982	% changing 1980—1982
Steel consumption (Mt)	95	105	76	-20
Shipments (Mt)	84	88	62	-26
Imports in % of consumption	16	19	22	6
Operating rate (%)	73	78	48	-25
Total employment (000)	399	391	289	-28
P&M employment (000)	291	286	198	-32
Revenues:				% changing 1980—1982
Sales	454	515	516	14
Other revenue	7	7	12	71
Total revenue	461	522	528	15
Costs:				
Employment	159	168	195	23
Materials:				
Iron ore	64	70	80	25
Coal/coke	52	56	60	15
Energy	49	58	75	53
Other	101	107	112	11
Depreciation	22	21	33	50
Misc taxes	7	8	14	100
Interest	7	7	13	86
Total operating costs	461	496	581	26
Operating income (before income taxes & extra items)	0	26	-53	

Source:

Same as for Table 2.

Table 4**Carbon steel shipments, revenues, costs and operating income, 1983—1985
(in USD/t)**

	1983	1984	1985	% changing 1983—1985
Steel consumption (Mt)	83	99	97	17
Shipments (Mt)	68	74	74	9
Imports in % of consumption	21	26	25	4
Operating rate (%)	56	68	70	14
Total employment (000)	243	236	203	-16
P&M employment (000)	169	171	148	-12
Revenues:				
	1983	1984	1985	% changing 1983—1985
Sales	474	484	467	-1
Other income	10	10	9	-10
Total revenue	484	494	476	-2
Costs:				
Employment	157	136	126	-20
Materials:				
Iron ore	78	79	79	1
Coal/coke	56	58	55	-2
Energy	74	74	72	-3
Other	106	105	94	-11
Depreciation	32	33	32	0
Misc taxes	11	10	10	-9
Interest	16	17	17	6
Total operating costs	530	512	485	-8
Operating income (before income taxes & extra items)	-45	-19	-9	

Source:

Same as for Tables 2, 3.

Wheeling-Pittsburgh into bankruptcy and threatens the viability of some other firms, particularly LTV Steel, Armco and Bethlehem.

h. The most distressing event in this period was the continued downward pressure on domestic prices. Under these conditions, it was almost impossible for the integrated producers to make a profit.

The impact of import penetration on different products

During the most recent contract, the import avalanche obviously hurt some products more than others. As Table 5 illustrates, there is a direct correlation by product between the level of import penetration, operating rates for domestic finishing facilities and net losses. Higher import levels drive down operating rates and prices, which in turn generate losses. For example, sheet products have had low levels of import penetration and only slight losses, while pipe and tube products have been very unprofitable.

What would government support mean?

It is probably safe to assume that the Reagan Administration will do little if anything to help the distressed integrated producers, unless tremendous public pressure forces a change. Our review has shown that three simple but important programs would go a long way in stabilizing the industry by raising domestic shipments, operating rates, prices and profits and thereby preserving jobs. In fact, if these programs had been in effect in 1985, they could have turned the year's 9 USD/t losses into a profit of 14 USD/t.

• Proper implementation of the VRA program

Significantly reducing imports would be the most direct support the government could offer the domestic steel industry. Forcing the Reagan Administration to

Table 5**Level of import penetration, operating rate and profitability by product
1984**

(in %)

Product	Level of import penetration	Domestic operating rate	Net profit as % of sales
Plate	25.8	41	-6.1
Sheets and strip	19.5	70	-0.6
Hot rolled	18.1	66	-6.2
Cold rolled	18.6	75	-0.7
Galvanized	24.6	78	3.4
Other	15.7	79	3.8
Structural shapes	33.8	54	-7.1
Pipe & tube	55.4	34	-17.7
Oil country & tube	58.1	30	-19.5
Line pipe & other	54.1	37	-16.3
Reinforcing bar	10.1	47	-0.7

Source:

International Trade Commission, Annual Survey Concerning Competitive Conditions in the Steel Industry and Industry Efforts to Adjust and Modernize, August 1985.

live up to its word would *add four million tons* to 1985 shipments. By granting very high quotas to the participating foreign countries, the Administration has subverted the VRA program. A recent evaluation by Economic Consulting Services (ECS) reveals that the negotiated agreements will only reduce imports to 24 per cent of apparent consumption, not the 20.3 per cent level announced by the Administration when it promised to implement the VRAs.

• *Reduction of indirect imports*

New research commissioned by the USWA has revealed that steel containing products brought into the US robbed the domestic steel industry of 13.7 million tons of shipments this year. By restricting such hidden imports by 20 per cent, the government could provide the domestic producers with three million tons more in shipments.

• *National infrastructure rebuilding program*

The alarming deterioration of bridges,

roads, airports, ports, locks and dams demands much attention. A program could be financed through a government sponsored revolving fund, much like the federal highway trust fund, to avoid increasing the federal deficit. According to one expert, a reasonable program of government infrastructure rebuilding would use about five per cent of domestic shipments, which in 1985 would amount to more than three million tons.

As we can see from Table 6, under this very limited program of government assistance shipments would go up 10 million tons, raising operating rates to 79 per cent. This, combined with the reduction in imports, would raise domestic prices approximately five per cent and revenues by 23 USD/t, turning the 9 USD/t net loss to a 14 USD/t net profit before income taxes and extraordinary items.

Costs decline, but not enough

Prior to 1982, operating costs in the steel

industry had been rising steadily. Management paid little attention to reducing costs because they passed them along in the form of higher prices. However, domestic producers are now forced to compete with low cost and heavily subsidized foreign producers. This has created tremendous pressure to cut both prices and costs. In the following, we will examine how costs have been lowered. We also look at the cost position of US producers relative to foreign producers and minimills.

How costs have been lowered

Some of the trends discussed in this chapter are summarized in Table 7, which shows the costs per ton by major cost item.

Employment costs

Since 1982, employment costs have been reduced by 35 per cent and are the major factor in the overall decline in operating costs. This was achieved through reductions in hourly and salaried employment, improvements in productivity and compensation reductions from the 1983 Basic Steel Agreement. Employment costs have dropped from a third of total operating costs to only a quarter over the last 3 1/2 years.

The productivity portion of this cost savings is quite impressive. US steelworkers are among the most productive in the world. Man hour per ton levels have fallen from 8.3 in 1980 to 6.1 in 1984. However, our analysis shows that some of this improvement is partially offset by the growing use of outside contractors.

Due to the impact of layoff and pension costs, the hourly employment cost to the company can go up or down without affecting what a steelworker receives in wages and benefits. When there is a sudden large increase in layoffs, the pension and unemployment benefits of the laid-off worker are included in the hourly cost of the active steelworkers. Temporarily in 1982, this

Table 6

Contribution of government programs to shipments, operating rate and revenues for 1985

Government program	Contribution to:	
	Total shipments (Mt)	Operating rate (%)
— VRA enforcement at 20.3 %	+ 4	+ 4
— 20 % decline of indirect imports	+ 3	+ 3
— Infrastructure development	+ 3	+ 3
Total additions	+ 10	+ 10
1985 actual figures	74	70
1985 with government support	84	79

Note:
See text for assumptions on indirect imports and infrastructure program.

Source:
Locker/Abrecht Associates analysis.

"artificially" inflated hourly employment costs to 26 USD per hour.

In some cases, pension costs have been reduced by simply changing actuarial assumptions. For example, in 1984, such changes permitted Bethlehem to reduce employment costs 58 million USD or 6.50 USD per ton shipped. If economic conditions change, companies may be forced to make opposite adjustments in actuarial assumptions which could raise pension costs.

Materials and energy costs

Materials, energy and other cost inputs have declined only eight per cent since 1982. They comprised approximately 28 per cent of the total cost savings during that period.

Energy costs have fallen four per cent since 1982 and appear to have stabilized. These costs are high compared to foreign competitors, particularly because domestic companies have failed to achieve efficient energy practices.

Iron ore costs have increased slightly since 1982. These costs put domestic producers at a competitive disadvantage with foreign competitors.

New equipment

Cost savings are also attributable to new equipment, especially continuous casters. On average, casters reduce costs by 40 USD per ton, primarily through energy savings (less reheating), improved yields and lower manning requirements.

In the next two years, nine casters will be brought on line by integrated producers. While this will help to further reduce costs, payments for financing the purchase and installation of these casters will offset some of the cost savings.

Low operating rates

The lower level of shipments since 1981 has led to much lower operating rates,

and therefore raised costs. As Table 8 shows, there is a strong correlation between operating rates and the industry's operating income.

In addition to being affected by shipment levels, operating rates are also affected by reductions in steelmaking capacity. For example, the industry's operating rate rose 12 per cent from 1983 to 1984, but only five per cent of this improvement was due to increased production. The remaining seven per cent came from closing down 15 million tons of capacity. Management is rejecting the old philosophy of maintaining extra capacity in hope of future good times. It is trying to boost operating rates through shutdowns and the concentration of production in the best plants.

Imports also have a direct impact on operating rates by displacing domestic shipments. To give some sense of this impact: if in 1985 imports had been reduced by four million tons, domestic operating rates would have increased to 73 per cent from an actual 69 per cent.

Table 7

Carbon steel costs 1980—1985 (USD/t)

Breakout by cost item:	1980	1981	1982	1983	1984	1985
Employment cost	159	168	195	157	136	126
Materials:						
Iron ore	64	70	80	78	79	79
Coal/coke	52	56	60	56	58	55
Energy	49	58	75	74	74	72
Other	101	107	112	106	105	94
Depreciation	22	21	33	32	33	32
Misc taxes	7	8	14	11	10	10
Interest	7	7	13	16	17	17
Total operating costs	461	496	581	530	512	485

Source:
Same as for Tables 1—4.

Table 8

Pretax operating income and operating rates 1977—1985

	Operating rate (%)	Pretax operating income/t
1977	78.4	— 4
1978	86.8	30
1979	87.8	36
1980	72.8	0
1981	78.3	26
1982	48.4	—53
1983	56.2	—45
1984	68.4	—19
1985	69.0	— 9

Source:
AISI, "Annual Statistical Report", 1984, World Steel Dynamics, *Steel Strategist* No 11, September 1985.

Extraordinary items

— shutdowns have been costly

Until now, we have been describing costs associated with the normal operations of steel production. However, there are additional non-recurring costs or gains that can greatly affect the companies' net income. For the steel industry, plant shutdowns contributed to one-time charges resulting in sizable losses in 1982 and 1983. On the other hand, in 1984, several companies showed gains associated with the sale of assets.

As Table 9 shows, in all but two of the last six years, extraordinary items were registered as losses rather than gains. For the six year period, the total extraordinary items amounted to a staggering 3.7 G USD in net losses.

The enormous one-time cost of shutting down a plant is largely due to the special retirement and severance benefits that are part of the USWA contract. For a period of time, these costs force companies to continue operations even

though they may be losing money. By saddling the companies with extensive shutdown costs, the union found a powerful way of preserving jobs. This precarious situation could offer the union and companies opportunities to explore ways of making steel mills viable. As exemplified in the *Employee Stock Ownership Plan (ESOP)* buyout of Weirton Steel, one way this common objective can be achieved is through worker buyouts.

International cost comparison

In the past four years, despite substantial cost reductions, US costs remained the highest among major steel producers. The cost reductions did not lower the gap between domestic and foreign producers, primarily because of the severe penalty caused by the overvalued dollar.

In Table 10, we can see that in 1985, US operating costs for producing hot rolled band ranged from 42 to 108 USD

per ton above the production costs of various foreign producers. Much of this difference is due to:

- Overvalued dollar
- Higher US input costs (employment and materials)
- Aging equipment and infrastructure
- Subsidization of foreign financing, research and development and other costs.

Traditional cost comparisons between imported and domestic steel products do not include costs incurred for bringing foreign steel into the US. These costs include international shipping, customs and other charges. If we add these costs to the production costs for each country, the US is only five per cent above the average delivered cost of all eight producers (see Table 10).

Comparative employment costs

Table 10 indicates that while the US has comparatively low man hours per ton

Table 9

Net extraordinary items for all companies (in M USD)

	Extraordinary loss/gain
1979	-760
1980	-35
1981	161
1982	-1 996
1983	-1 335
1984	295

Source:

AISI, Annual Statistical Report, 1984.

Table 10

International cost comparison for hot rolled band: major mills, Spring 1985 (in USD/t)

	USA	Brazil	Canada	France	South Korea	Japan	UK
Man hours/t	3.6	5.9	3.5	4.9	5.5	3.4	4.6
Employment (USD)	84	26	57	49	16	37	31
Materials	189	145	147	125	119	135	145
Financial:							
Depreciation	19	23	20	13	56	28	9
Interest	13	73	13	24	12	25	15
Other	7	3	5	5	1	5	3
Operating cost	312	270	246	215	205	231	204
Shipping	—	26	—	26	46	46	26
Customs & other	—	37	37	37	37	37	37
Total cost delivered US (USD)	312	333	283	278	288	314	267

Source:

Locker/Abrecht Analysis and World Steel Dynamics, *Steel Strategist* No 11, September 1985.

levels, it has the highest employment costs. Despite the compensation reductions made in the 1983 contract agreement, the gap between US and foreign wage levels has not narrowed. This is, again, primarily because of the high value of the dollar.

Low wages subsidize Third World producers

The extremely low employment costs enjoyed by most Third World producers poses a real threat to American steelworkers. With imports from these countries growing rapidly, this competition represents the transfer of low wages and benefits to the US economy. US workers cannot be expected to compete with South Korean compensation costs of 3.00 USD per hour or 4.50 USD per hour in Brazil. According to a recent study by World Steel Dynamics, South Korean workers on average work 51 hours per week and are the highest paid manufacturing workers in their country. However, 39 per cent of the work is contracted out.

To some extent, the US government has helped countries such as South Korea and Brazil to keep wages at subsistence levels. The US has supported dictatorships in these countries which have a long history of brutal repression against workers and their trade unions.

Minimills are low cost producers

Minimills became a success by serving regional markets and supplying specific product niches. They have sizable cost advantages over integrated producers due to highly efficient electric furnaces which use low cost scrap, modern equipment (including continuous casters), low capital construction costs, less expensive employment costs and lean management structures.

Because of these cost advantage (see Table 11), minimills have captured some major markets from the integrated producers. They now control over 70 per cent of the market for wire rods, 80 per

cent of the market for concrete reinforcing bars and barsize light shapes. Minimills also hold major portions of the market for light and medium size structurals and hot rolled bar.

It is difficult to gauge the future impact of minimills on the integrated sector. If certain breakthroughs in technology occur, particularly the development of thin slab casters, they could challenge the integrated producers in the lucrative flat rolled market. On the other hand, minimills could be weakened if there is an increase in high quality scrap prices. This would partially erode their competitive advantages over integrated mills.

For the first time, minimills are facing some of the same problems that integrated producers are confronting — most notably, low profitability, low priced import competition and overcapacity. This has caused several companies to file for bankruptcy in the past year and there are signs that this shake-out will continue.

Table 11
Comparative costs for integrated and minimill wire rod producers, 1985

Cost item	Integrated	Minimill
Employment	121	30
Iron ore	67	—
Scrap	17	94
Coal	44	—
Other energy	20	42
Other costs	97	60
Depreciation	11	11
Interest	6	19
Total cost	383	256
Man hour/t	5.4	1.7

Source:

Donald Barnett, *Canada and the World Steel Industry: Coping with a New Economic Environment*, 1985.

USWA RESPONSE TO THE CRISIS

How did the USWA respond to the steel crisis during the period covered by the current contract? Let's look at the union's most important efforts to save jobs and fight for a stronger domestic industry.

- First, the 1983 contract agreement which demonstrated the union's willingness to make sacrifices in order to improve the financial viability of the industry.
- Second, the USWAs intensive lobbying effort for import controls — a campaign which pressured the Reagan Administration to adopt the VRA program.
- Finally, the successful 1983 campaign to stop US Steel from importing semi-finished steel from British Steel and subsequent related developments.

Space does not permit an analysis neither of the USWA lobbying campaigns nor of USWA's effort to preserve jobs in certain bankrupt companies such as Continental Steel & Wire, McLouth Steel, etc.

1983 contract agreement

In early 1983, the USWA and the major integrated producers signed a 41 month contract which initially reduced wage and benefit costs for the first year by about 2.20 USD/hour — slightly less than 10 per cent. According to our calculations, between 1983—1985 this agreement resulted in savings to the companies of approximately 1.4 G USD. At the time the agreement was signed, it was expected to save considerably more, but the lost hours greatly reduced the results. The key questions are how did the companies use this money and what did the agreement accomplish?

The Union Survey showed that 68 per cent of those local presidents responding felt the agreement had a positive effect, either in terms of preserving some

employment and/or preventing a strike.

In 1982 the overall industry suffered losses totaling 3.4 G USD. The major companies came to the union seeking some relief to help stem these staggering losses. The union, recognizing the gravity of the situation, tried to find a way to channel the labor cost savings into improving the industry's long-term viability. It therefore decided to make the companies put the money into new equipment, thereby helping to modernize the industry and make it more competitive.

The union also tried to have the savings put back into the same plants where they were made, but the companies refused to accept this idea. As one local president commented in the Union Survey, "We must gain a significant role in the corporate planning process if we want to assure long-term job security".

When the agreement was signed, it was reasonable to expect that the anticipated labor savings would make a substantial difference to the companies' bottom line, thereby freeing sufficient funds for capital investment. Few expected the industry crisis and company losses to last much longer. Few predicted that prices would fall and imports surge. But as we have seen, the companies took a real beating in 1983 and still showed a loss in 1984.

In effect, labor's substantial sacrifice was overshadowed by the companies' continued deterioration due to declining prices and volume. The money saved, while lessening the losses, failed to reverse the downturn. Looking just at 1983 and 1984, we can see in Table 12 that the relief reduced losses about 37 per cent, from 2.6 to 1.7 G USD.

How were the savings used?

The financial distress under which the companies were operating during this period makes it extremely difficult to determine just how they used these savings. But let's look at the most likely possibilities.

a. The savings helped some of the

most threatened companies, mills and departments get through this difficult period by lowering their losses, which reduced the need to borrow funds or shut down additional operations.

b. The savings probably enabled the companies to lower their prices. In itself, this is not a bad thing if the companies were responding to a real need to retain customers and market share. Neither party intended the savings to be used for price cutting, but in our opinion the price war that erupted in 1982 forced the companies to lower their prices to maintain sales. This in turn indirectly helped the steelworkers by improving operating rates and increasing marginal employment levels.

If the full 975 M USD in labor savings had been applied to price reductions for 1983 and 1984, the companies could have lowered their price for an average ton of steel by only 11.20 USD. As we have seen, prices during this period on

average fell 33.50 USD; therefore only a third of the overall price cuts could have come out of labor savings.

c. What about capital expenditures? First, we know that the over 2 G USD in capital expenditures spent by the steel segments of the participating companies exceeded the total labor cost savings (1.4 G USD). What we do *not* know is if the companies actually increased their expenditures because of the labor savings.

Locker/Abrecht tried to determine whether this was the case, but it proved impossible, given that the agreement lacked a detailed mechanism for tracking the savings. The USWA Survey indicates that almost 62 per cent of those local presidents responding didn't know of any investment cancellations in their plant from 1983 through 1985, while 38 per cent had some knowledge of cancellation.

It is probably safe to assume that the

Table 12

Actual company operating losses and estimated losses assuming no labor savings, 1983—1984
(in M USD)

Total losses before savings	Labor cost savings	Total losses after savings	Savings as % of losses before savings
2 628	975	1 653	37

Source:

Locker/Abrecht Associates analysis.

Table 13

Potential price reductions from labor savings for major producers, 1983—1984

Tons shipped 1983—1984 (Mt)	Amount of labor savings (M USD)	Potential price reduction (USD/t)
87	975	11.20

Source:

Locker/Abrecht Associates analyses.

companies in the deepest financial difficulty went forward with some projects that might have been cancelled if the labor savings were not available. Moreover, by reducing losses, the labor savings gave lenders and investors more confidence in financing a capital project. In other words, in some cases the cost reductions turned certain mills or departments into profitable or at least break-even operations, thereby aiding efforts to secure financing.

One important conclusion we have drawn from analyzing the agreement is that the problems the industry faced were much too large and complex for one party to solve. The fact is one party acting alone could not sacrifice enough to stabilize or reverse the decline of the industry. The companies, banks, government and the union are all part of the solution to the industry's problems and therefore all must make equitable sacrifices to save it.

WHAT CAN WE REASONABLY EXPECT TO HAPPEN?

Nobody really knows exactly how the steel industry will fare in the coming years. While there is a great deal of uncertainty about the future, we can assume the industry is not going back to the good times of the 1970s. In our opinion, there could be an "upside" whereby a strengthening of the economy would benefit the industry, or a "downside", which would lead to a further decline. We therefore present two possible scenarios. At the outset, we would like to make it clear that in our opinion the downside projection is more likely to materialize, barring effective government action to control the forces weakening the integrated producers.

Let's look at how the local presidents viewed future. Each president was asked to project the trend in shipments over the next three years at their plant. Of those who responded, 41.5 per cent were optimistic and believed that shipments

would increase; 43.1 per cent were more pessimistic and agreed with our estimate of flat to down; and 15.3 per cent believed that trends would be mixed.

By providing two possible outlooks for the industry, we offer the USWA a useful framework for designing a response to the industry's crisis. The union must prepare for the downside by considering concessions for desperate companies; it also must make sure its members will benefit from possible improvements.

Under our downside projections the companies probably will breakeven. This could cause bankruptcies if companies are unable to generate or borrow enough cash to pay their mounting debt and modernize. In the upside scenario, the major producers would have a better chance of making profits.

While preparing our analysis we took a careful look at other experts to determine their reliability. We found few *accurate* projections by these analysts. Most were overly optimistic, so we became more sensitive to certain factors, especially the impact of government policies.

We therefore have based our own projections on conservative, but in our opinion, realistic assumptions. Our estimates assume that the Reagan Administration will continue to oppose assistance to the industry and that management performance will not improve. In addition, our estimates assume no additional shocks to the economy (i.e. a severe recession or additional surges in imports).

There may be short periods of rising shipments and prices, but these should be viewed as temporary phenomena. Even if these price hikes are initially realized, we feel they will not be sustained because of continued foreign and domestic competition.

Base case: downside scenario

Below, we present our downside scenario through 1989. Keep in mind it

does not represent a *worst case*, which would result from an unanticipated severe recession.

Our base case is more gloomy than some other analysts, primarily because the Reagan Administration's policies will continue to negatively impact the industry. We see the government maintaining a trade policy which keeps the domestic industry at a competitive disadvantage with foreign producers. In addition, we believe indirect imports will continue to grow, thereby reducing steel demand for several key markets.

We assume a mild recession in the second half of 1986, lasting through the first half of 1987. The dollar falls, but not enough to significantly reduce indirect imports. As shown by Table 14, the industry's performance is not expected to recover from the depressed 1982-85 period. In fact, the only reason why the average apparent consumption and shipments are a bit lower than the projected years is because 1982 was an exceptionally poor year, with only 76 Mt in apparent consumption.

Price remains flat, with a slight rise in 1988 because of improved demand and less pressure from imports.

Employment in the next four years is projected to fall by 32 000 workers. These reductions are due to the lower level of shipments and the further decline in man hours per ton as new equipment is brought on line.

Upside scenario

Our optimistic scenario assumes a milder dip in the economy in 1987 and a strengthening beginning in 1988. We also assume a more rapid fall in the value of the dollar which should reduce direct and indirect imports.

This upside offers several benefits to the industry. Demand would improve, bringing apparent consumption to an average 95 Mt per year for the 1986-1989 period. This would have a positive effect on prices, allowing a 10 per cent increase by 1989. Capacity would fall at

a slower rate as companies maintain some of their less efficient plants to make profits.

Finally, even in the more optimistic scenario, there will be extensive job

losses totalling 31 000 workers. This is because we project a sharper fall in man hour per ton levels which offsets most of the employment gain expected from higher shipments.

Reasons why downside is most likely

Our downside case projects a continued decline in apparent consumption due to:

- Slow economic growth
- Increasing indirect imports
- Material substitution and downsizing
- Continuing shift in federal government expenditures away from infrastructure development.

Table 14

Summary of downside steel industry forecast, 1986—1989 (in Mt)

	1985e	1986e	1987e	1988e	1989e	Avg. 1982/ 1985e	Avg. 1986/ 1989e
Apparent consumption	97	91	89	91	94	89	91
US mill shipments	74	70	67	70	72	69	70
Big 7 shipments	45	41	40	41	42	43	41
Imports	24	22	21	22	23	21	22
Capacity	133	128	—	—	120	—	—
Actual domestic price (USD)	464	464	464	478	478	485	471
Man hours/t	5.8	5.7	5.4	5.2	5.0	—	—
Employment (000)	204	189	172	174	172	—	—

Note:

Capacity reduction for Aliquippa shutdown is assumed in 1986 estimate.

Source:

Locker/Abrecht Associates analysis.

Table 15

Summary of upside steel industry forecast, 1986—1989 (in Mt)

	1985e	1986e	1987e	1988e	1989e	Avg. 1982/ 1985e	Avg. 1986/ 1989e
Apparent consumption	97	94	93	95	98	89	95
US mills shipments	74	72	71	73	75	69	73
Big 7 shipments	46	44	44	45	46	43	45
Imports	24	23	23	23	24	21	23
Capacity	133	128	—	—	122	—	—
Actual domestic price	467	481	476	505	515	485	482
Man hours/ton	5.8	5.5	5.2	5.0	4.8	—	—
Employment (000)	204	191	176	174	173	—	—

Notes:

Capacity reduction for Aliquippa shutdown is assumed in 1986 estimate.

Source:

Locker/Abrecht Associates analysis.

High import penetration level

We have concluded that without considerable pressure put on the Reagan Administration, the VRAs will not meet their stated objective of 20.3 per cent. At the 24.5 per cent penetration level, between 1986 and 1989, we project imports will continue to take on average 21.9 Mt per year of US apparent consumption.

Prices will not go up

As we have seen, prices are central to the financial viability of the companies. In part, because the VRAs have already had a limited impact, prices have probably reached bottom. Nevertheless, our most likely forecast calls for actual domestic prices to remain relatively flat over the next four years.

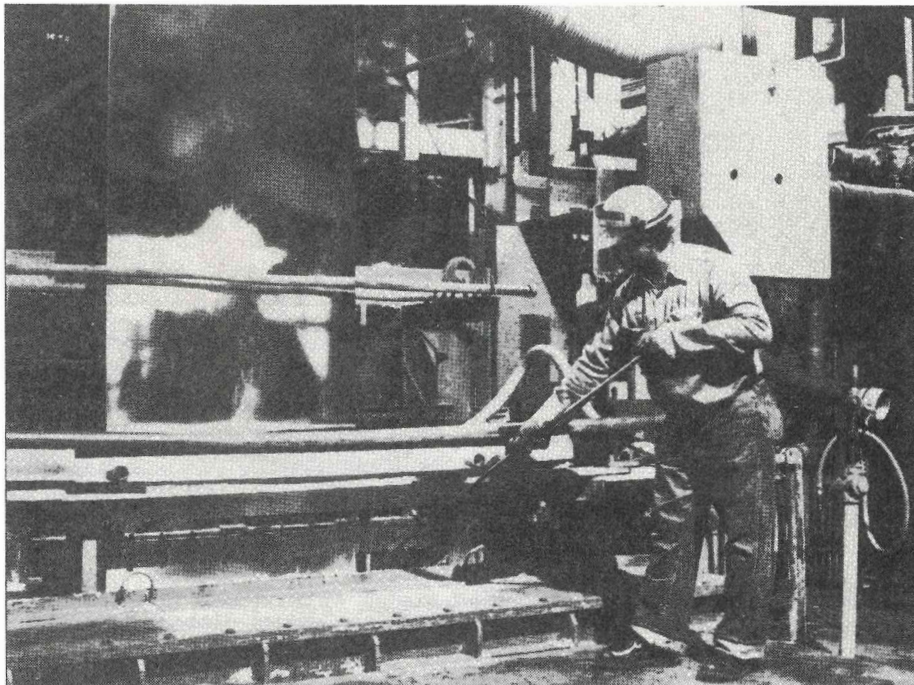
Responses from the Survey of Local Unions seem to support our analysis. Of those locals which responded, 41.6 per cent believed that prices would remain the same through 1986. 36 per cent saw prices going down and two per cent believed prices would fluctuate.

Our projection of flat prices over the next four years is based on the following factors:

a. Foreign producers ease price pressure

It is unlikely that foreign competitors will continue to push prices in the US down to the level of the cheaper imports. In the past, this practice allowed foreign producers to gain market share. Because the VRAs are expected to put a

Despite an increasing use of galvanized and electro-zinc coated steel in the auto industry, the steel industry is worried that it may be installing an excess capacity, which could threaten the entire integrated industry. Photo shows Galvalume leaving the coating pot. Below is exploded view of Ford's Lincoln model.



cap on most foreign producers' market share, they no longer have an incentive to expand sales by cutting prices. Finally, any strengthening of the VRAs would definitely firm-up and possibly raise domestic prices.

b. Demand will drive prices

The level of domestic steel demand will be the driving force affecting the *direction* of US prices. An increase will allow steel companies to maintain prices while a reduction will give steel buyers power to push prices lower. Import prices however, will continue to play an important role in setting the *level* of actual domestic prices.

c. Excess product capacity could threaten price levels

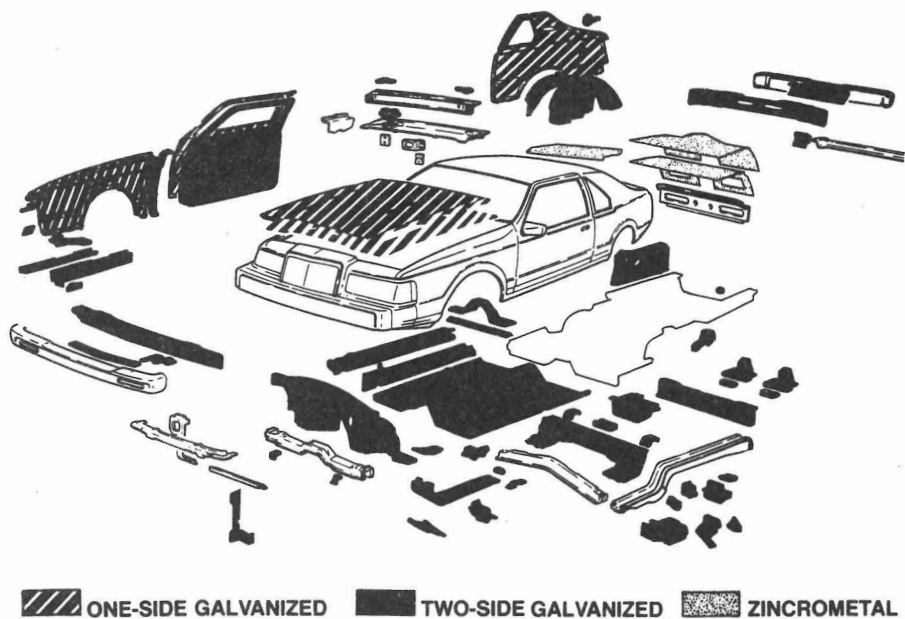
Another factor which can affect prices is changes in product mix. In the past, companies have all rushed into a single lucrative product line, creating too much capacity and cut-throat competition. This forces a sharp lowering of prices in an attempt to gain market share and increase operating rates. A surge of imports into the same market compounds this problem. In a short time, all these factors turn the once lucrative product line into a costly loser.

This occurred in the late 1970s when excess capacity was built in the pipe and tube market. Since the bottom fell out of the market during the past few years, many pipe and tube facilities have been closed and even world class mills are operating at 50 per cent capacity.

Today, the problem of building excess capacity threatens several producers now entering the electrogalvanized sheet market. Moreover, because the profitability of most companies generally hinges on their flat rolled products, there is the danger that overcapacity could develop in this market and threaten the viability of the entire domestic integrated industry.

d. Gradual fall of the dollar

We expect a continued gradual fall in the



value of the dollar which could push import prices slightly higher. However, there may be a lag of a year or more before this has any impact on domestic prices.

**Near term prospects:
announced price increase**

Recently US Steel led other major producers in announcing a seven to ten per cent price increase for several product lines in 1986.

However, our base case price projections (as do those of several other analysts) take the position that the January 1986 price hike will not hold for

more than the first six months of the year. This is because domestic producers will undercut the higher prices in an attempt to buy market share.

**Steelmaking capacity reduction
will continue to decline**

According to the trade journal, *33 metals producing*, in the past seven years, the number of blast furnaces in the United States has fallen from 200 to 92 and only 46 are currently operating. This reflects the extensive restructuring and concentration of operations in the industry.

With today's lower level of shipments,

blast furnace departments have been forced to operate with less maintenance, delayed relines and at lower production levels. While there have been remarkable adjustments to these adverse conditions, the driving force of low shipments and operating rates has led management to close hot ends and centralize production at key plants which are operated at close to capacity levels.

Virtually all steel analysts believe a further reduction in US steelmaking

capacity is inevitable. Most analysts project that steelmaking capacity will decline by more than 10 per cent from 1984 to 1990, reaching a level of 120 Mt by 1990. One particularly gloomy analyst projects that 20 to 30 Mt of capacity must be shut down to make the industry profitable.

The facilities which are most threatened with shutdowns are open hearths and other hot ends without casters which have blast furnaces due for major

relines. In addition, facilities may be shut down due to product mix, geographical location, quality problems and aging finishing facilities.

Not all of the finishing facilities attached to closed hot ends will necessarily be idled. Management may decide to operate these finishing ends by either installing electric furnaces, supplying them with raw steel from other facilities or attempting to purchase imported semifinished or hot bands.

Table 16

Analysts' capacity projections, 1985—1989 (in Mt)

Analyst	1985e	1986e	1987e	1988e	1989e
World Steel Dynamics	134	129	124	122	120
Data Resources Inc	133	128	127	122	120
Kidder Peabody	130	125	na	na	na

Note:

World Steel Dynamics' 1988 and 1989 figures are estimates based on their 1990 projections. na — not available.

Sources:

World Steel Dynamics, *Steel Strategist*, No 11 (September 1985); Data Resources Inc, *Steel Industry Review*, 3rd Quarter, 1985; Kidder, Peabody and Company, *Industry Follow-Up*, (August 1985).

Table 17

Projected impact of effective government support on steel shipments and employment, 1985—1989

Year	Domestic shipments (Mt)		Total employment (thousands)	
	Without government support	With government support	Without government support	With government support
1985e	74	84	204	232
1986e	70	80	189	216
1987e	67	77	172	197
1988e	70	80	174	198
1989e	72	82	172	196

Source:

Locker/Abrecht Associates analysis.

More optimistic scenarios?

Is it possible that the steel industry has a brighter future than we portray? In our opinion, a more optimistic view depends largely on changes in government policy toward steel. The government must intervene and neutralize some of the decline in steel's apparent consumption. A strong VRA program would increase domestic shipments and strengthen prices; restrictions on indirect imports would also boost demand; and a public investment program to refurbish bridges, tunnels, railroads, etc, would generate additional demand. While it will be difficult to pass these programs and they may take several years to implement, they would ensure a much brighter future for domestic steel.

As we showed in the first part of this article, strong enforcement of VRAs, restrictions on indirect imports and an infrastructure development program would go a long way toward raising domestic shipments, operating rates, prices, profits and employment. Table 17 shows the difference these programs would make for domestic shipments and total employment if they were in place for the five year period.

With effective government support, shipments would increase by 10 Mt each year. This means that in 1985, employment levels could have actually increased by 28 000 workers. Through the period, however, employment will fall because shipments and man hours per ton decline. ■