

STATEMENT

THE FERROALLOY INDUSTRY--A NORTH AMERICAN VIEW

Factor #1 - INEVITABLE INTERVENTION OF MINE AND SMELTER

The belief that manganese alloys will inevitably be produced in those countries having manganese mines is discredited based on the logistics of moving a ton of alloy to mid-America. It can clearly be shown that there is no logistic advantage to smelting in the country of ore origin.

Import penetration of silicon products into the U.S. market is clearly not mineral related and even the lowest cost sources in the world have been unable to justify their investments for U.S. export.

One-smelter intervention is not an irresistible force in determining world supply patterns.

Factor #2 - GOVERNMENT INTERVENTION

The intervention of government has contributed immensely to distortions in the industry without regard to fundamental economics. Government intervention through loan guarantees and subtle subsidies has been an important factor in creating industry instability.

Expansion programs based on the assumption of heavy debt financing, equally contributory to problems, together with unrealistic financing institutions and policies some reflection in the future to creation of unwarranted overcapacity in the industry.

Factor #3 - CURRENCY EXCHANGE RATES

Ferroalloy managers can take little credit for growth where it has occurred or for developing the present industry structure. The overwhelming influence has been the strong dollar during the past two years, an anomaly since the advent of floating currencies in 1971. Artificiality of exchange rates must, and probably will be, corrected in the future. A correction of only part of the change will have profound effects on future supply patterns.

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ABSTRACT

This paper projects a North American view of the world ferroalloy industry in which the industry is depicted as increasingly influenced by governmental intervention at the expense of basic economic efficiency. As a result the industry has lost a large degree of control over its own economic destiny.

Several major factors have had a severe impact on the supply patterns of the world and on the United States industry in particular. Five of these factors are discussed for proper perspective.

FACTOR #1 - INEVITABLE INTEGRATION OF MINE AND SMELTER

The belief that manganese alloys will inevitably be produced in those countries having manganese ore mines is discredited based on the logistics of moving either ore or alloy to mid-America. It can clearly be shown that there is no logistic advantage to smelting in the country of ore origin.

Import penetration of silicon products into the U.S. market is clearly not mineral related and even the lowest cost power sources in the world have been unable to justify their investments for U.S. export.

Ore-smelter integration is not an irresistible force in determining world supply patterns.

FACTOR #2 - GOVERNMENT INTERVENTION

The intervention of government has contributed immensely to distortions in the industry without regard to fundamental economics. Government intervention through both blatant and subtle subsidies has been an important factor in creating an industry instability.

Expansion projects based on erroneous growth assumptions have been equally contributory to poor economic results. Heavy debt financing, together with unrealistic forecasts, have placed stresses on the financing institutions that presages some correction in the future to creation of unwarranted overcapacity in the industry.

FACTOR #3 - CURRENCY EXCHANGE RATES

Ferroalloy managers can take little credit for growth where it has occurred or for developing the present industry structure. The overwhelming influence has been the strong dollar during the past two years, an anomaly since the advent of floating currencies in 1971. Artificiality of exchange rates must, and probably will be, corrected in the future. A correction of only part of the change will have profound effects on future supply patterns.

An unprecedented portion of ferroalloys is now being sold through agents, traders and brokers, who do not have the same interests as invested producers. The responsibility for the inevitable market consequences must be borne by the ferroalloy producers. Ultimate economic success of the international ferroalloy industry will depend in large degree on the participation of invested management in first-hand market intelligence.

FACTOR #5 - ROLE OF THE U.S. INDUSTRY

The same forces that create rumors of the demise of the U.S. ferroalloy industry must also be recognized as forces creating a smaller U.S. market for ferroalloys.

The U.S. is, and will remain, the least protected market in the world. Testing of U.S. trade laws for unfair trade practices will continue. Greater efforts will be made to remove protectionist policies in other areas of the world.

Some U.S. industry rationalization will occur and the remaining industry will emerge with a greater degree of economic competence.

INTRODUCTION

The world ferroalloy industry is in the midst of another economic downturn that has been characteristic of the industry for the last decade or more. Only this one is so severe that the doomsayers have been out in force predicting a dire future for the industry.

Many of these predictions are based on the "inevitable forces" in the industry. Yet many of these so-called inevitable forces are strictly fallacies with little basis in fact. Belief in these fallacies, however, often leads to bad judgements, distortions in the industry structure, and uneconomic conditions throughout the industry.

One factor that has distorted the current world ferroalloy picture is the advent of government intervention and politics in many portions of the industry. This government intervention has created a ferroalloy manufacturing and supply pattern that is no longer based on economic efficiency.

Governments often meddle in economic affairs for a variety of reasons not related to the economics of a business--to generate foreign currency or jobs, for foreign-relations reasons, or to accomplish a variety of other social issues. To further these goals, governments will often subsidize exports or subsidize the operation of otherwise uneconomic facilities. This type of thing is common throughout the world ferroalloy industry today. As a result, the world ferroalloy scene is so grossly distorted by noneconomic factors that it no longer functions in solely economic terms. The industry can no longer attract investment, even in the most economic areas. In a nutshell, the industry is no longer in charge of its own economic destiny.

A look at the overall world ferroalloy-manufacturing capacity and the markets it serves shows three basic segments:

1. Competitive capacity based on power, raw materials, market proximity, and modern equipment.
2. Marginally competitive capacity surviving through governmental assistance. Most of this capacity was competitive when it was built but is now maturing toward obsolescence in the world ferroalloy scene today.
3. New capacity artificially injected into the world supply pattern through governmental intervention but lacking a distinct natural economic advantage.

A precise breakdown of how much capacity is in each group is subject to individual judgement and can be debated. However, any objective analysis will reveal that a surprisingly large amount of world capacity--including much recent capacity--has no basic economic advantage justifying its existence.

This ongoing change in the world ferroalloy picture is having a devastating effect on investors everywhere. In the past under more normal economic times, investors in competitive capacity could confidently weather business cycles. They could also plan for future growth confident that it had a natural economic position in the world marketplace.

The growth of marginally competitive capacity and artificial new capacity clouds this picture. Investors can no longer plan for the future in an unpredictable industry so heavily influenced by factors

other than basic economics.

This situation has had a severe impact on the U.S. ferroalloy industry. Foreign imports have now taken 65 percent of the U.S. market, with imports of some products--like standard ferromanganese--approaching 95 percent. As a result, many observers are widely speculating on the future of the U.S. ferroalloy industry, citing factors that impact on the industry today. I would like to comment on some of these factors as viewed by an American producer.

FACTOR #1 - INEVITABLE INTEGRATION OF MINE AND SMELTER

Many industry observers feel that ferroalloy smelting will inevitably move to countries having mineral resources. This belief has obviously been nurtured by those nations whose interests are best served by this premise. We believe that this idea is a myth.

The situation in manganese alloys is a good example of this myth. South Africa, Australia, Mexico, and France/Gabon are often cited as being the "inevitable" manganese producers because of their mineral position. Yet a careful analysis of the logistics of moving a manganese unit from the ground to a customer in the heart of the U.S. steel market shows no freight advantage for moving alloy in place of ore.

It is certainly true that 2.2 to 2.3 tons of ore must be shipped to produce one ton of ferromanganese--a fact used to lend credence to the inevitability myth. However, two important facts are often overlooked. First, freight and handling charges for moving alloy are much higher than charges for moving ore. Second, in truly integrated countries like South Africa and Australia, there are vast distances between mines and smelter--and/or between smelter and shipping port. In other countries the economic penalty is more severe. For example, in the Gabonese/French connection, there is a substantial ocean haul for ore from Gabon to France plus a transatlantic crossing for ferromanganese to reach the U.S. market. In Mexico, substantial imports of foreign ore are needed for blending because Mexican ores are not suitable to make exportable ferromanganese by themselves.

Thus, in any of the world's major manganese systems today, the logistics of integrating the mine and smelter has no economic advantage over shipping manganese ore to mid-America and smelting it there. The following table illustrates typical shipping costs for supplying standard ferromanganese to the U.S. market at East Liverpool, Ohio:

TABLE 1

MANGANESE FREIGHT AND DUTY TO EAST LIVERPOOL, OHIO

<u>Ore Source</u>	<u>Smelter</u>	<u>U.S. Duty</u>	<u>Metric Ton of Standard Ferromanganese</u>	<u>Advantage for U.S. Smelting</u>
S. Africa	S. Africa	\$5.60	\$98.96	
S. Africa	Ohio	-	90.82	\$ 8.14
Gabon	France	-	\$72.67	
Gabon	Ohio	-	52.27	\$20.40

These facts conflict with the inevitable integration theory so completely that further detail is desirable for explanation. The following table displays the freight buildup for a typical South African option of shipping ore versus alloy, prior to the recent inland freight rate increases in South Africa:

TABLE 2

SOUTH AFRICAN LOGISTICS - ALLOY VS ORE

	\$ Freight/MT Std FeMn	
	<u>Ferromanganese</u>	<u>Manganese Ore</u>
	<u>S. Africa to Ohio, U.S.A.</u>	<u>S. Africa to Ohio, U.S.A.</u>
S. African ore to smelter	\$36.50	
S. African ore to port		\$27.19
Port outloading ore		5.59
S. African alloy to port	16.97	
Port outloading - Alloy	5.37	
Ocean freight	19.75	27.26
U.S. port unloading - Alloy	6.50	
Barge ore to Ohio smelter		12.31
Unload ore - smelter		7.66
Barge to East Liverpool, Ohio	8.27	5.50
U.S. duty	5.60	
Total	\$98.96	\$ 90.82

*2.35 MT ore = 1 MT Std FeMn

Clearly any advantage to mine-smelter integration as it now exists in the world does not stem from the often quoted advantage of shipping alloy versus ore.

Elkem Metals Company's plant in Ohio has its own power source and fuel source, with energy costs competitive with those of integrated manganese producing countries. Moreover, it is the only metallurgically integrated manganese plant in the world industry, producing

high-carbon ferromanganese, silicomanganese, medium carbon ferromanganese and electrolytic manganese in a highly efficient metallurgical cycle. It also has access to the best ores of the world for optimum blending, and indeed, our metallurgists would feel considerably disadvantaged if it were necessary to depend on the use of ores from only one country.

With these facts in hand, one may still wonder why imports of ferromanganese to the United States have achieved such a large share of the market. It can be clearly and unequivocally stated that it is not due to inherent economic advantages of integrated ore-smelter systems. Indeed, Japan, with neither ore nor cheap power, has managed to supply its world competitive steel industry from domestic ferromanganese smelters, again denying the inevitability of movement to the ore sources.

The world manganese system of Elkem a/s in Oslo, Norway, and including the Elkem Metals Company's facilities in the U.S. represents probably the largest single system for producing standard ferromanganese now in existence. Moreover, the Norwegian facilities enjoy the low-cost hydroelectric power renowned throughout the world. They also have the economic ability to export to foreign markets.

One last advantage often credited to ore-smelter integrated companies is their ability to place artificial values on the ore charged to their smelters. It must be acknowledged that any company in this position is free to pass profits back and forth between mining and smelting as they see fit. However, they can never ignore the inherent economic fact that the ore has a market value that inescapably measures their investment in mining. The failure to acknowledge that fact has generally resulted in a declining quality of business as the price for expansion under this pretense.

The silicon product field can also be used to discount the inevitability of ore-smelter integration. The United States, blessed with some of the finest high purity quartzite and metallurgical coal in the world, has experienced a growing import penetration, now at 25 percent of the market, and increasing. Since this increase is clearly not mineral related, it is then frequently explained as due to cheaper power sources in other countries. However, new capacity in areas such as South America, without power advantage or market proximity, has created an overcapacity and depressed prices to levels that even those nations with the lowest cost hydroelectric power cannot justify their investments in silicon product facilities.

The myth of ore-smelter integration as an irrevocable force in the industry should be laid to rest.

FACTOR #2 - GOVERNMENT INTERVENTION

Any pragmatic businessman must accept the fact that political forces play an important role in the world ferroalloy industry. In so doing, these factors contribute immensely to distort the economic parameters guiding the conduct of the business.

Government roles take many forms in different parts of the world, ranging from outright industry nationalization to extremely subtle forms of subsidization. Basic subsidies in the form of export incentives, internal freight rebates, artificially constructed power

rates, tax concessions, financing methods, material price concessions, labor subsidies, currency exchange rates and many others, have all contributed to a shifting pattern of ferroalloy production without regard to fundamental economics.

As much as these subsidization practices contribute to the unpredictability of the industry, they are by no means the only important causes. It is a well-known fact that in the past decade world steel projections led many so-called developing countries into large debt financing of new steel mills. As the steel demand projections proved to be too optimistic, the drive for export business in the major industrial markets increased, with the normal economic results of low prices and poor profits. Concurrently with this, the same erroneous projections resulted in an enthusiasm for creating ferroalloy capacity in new producing areas, also aimed at export markets. These two trends proved incompatible as growing ferroalloy capacity faced shrinking industrial nation steel production, exemplified by the 1982 North American steel rates.

Unfortunately for the world ferroalloy industry, much of the additional capacity thus created did not have the basic economic advantage that should be required for these investments, but instead was structured on social need, job creation and hard currency generation requiring subsidies to exist.

More realistic and less optimistic forecasts for steel and ferroalloys have been adopted during the past year throughout the world. Moreover, the heavy debt financing of many governments has placed publicly acknowledged stresses on the world banking system as inability to meet their obligations is demonstrated. These facts therefore suggest that the next few years will see a lessening of the artificial distortions that were created in the past decade and that true economic factors will again prevail to a greater degree.

It can also be anticipated that the depressed conditions of 1982 will result in an ongoing distress reaction to find solutions to the industry's problems. These reactions will undoubtedly take a variety of forms but will include tendencies to form national federations of producers, mergers of companies into larger groups, rationalizations of truly inefficient capacity and more serious governmental interfaces on international trade relations.

FACTOR #3 - CURRENCY EXCHANGE RATES

In the search for underlying factors responsible for the major changes occurring in the ferroalloy industry, the vagaries of currency exchange rates cannot be ignored, particularly for an American producer. It is not by chance that much of the restructuring of the world ferroalloy industry has occurred in the period since the abandonment in 1971 of the Bretton Woods international monetary agreements and the advent of floating currency values. In the past two years, the U.S. dollar has risen 41 percent against the weighted average of ten major foreign currencies, giving ferroalloy importers a leverage in the U.S. market not enjoyed by U.S. producers.

The major reason generally acknowledged for the strength of the dollar is the high real interest rate as measured by the difference in the prime lending rate and the inflation rate. What is not so

frequently admitted, however, is individual government intervention in keeping currencies undervalued by restricting foreign investment, stimulating private capital outflows and other measures at the disposal of government.

Under these conditions, the managers of the world's ferroalloy industry can take little credit for growth where it has occurred or for the development of the existing industry structure. Indeed, despite these unusually large advantages, they must accept some responsibility for the generally deteriorating economic results experienced on a worldwide basis. As advantage has naturally been taken of weak currency and strong government intervention, the results have become such that a reconsideration of these advantages seems appropriate. The ferroalloy manager as well as the financing institution could well review the accuracy of industry forecasts on need for expansion, the basic economic position of new projects in the industry, the weakening markets for the ferroalloy products intended for export, and the failures to anticipate reaction effects to the actions taken on new projects designed for export.

Currency exchange rates will certainly continue to be a significant factor in the forward planning of the ferroalloy business. It represents, however, an uncertain factor and should not exclude other important factors, either on the part of the producer or of the consumer. There is a growing recognition that the artificiality of exchange rates against the U.S. dollar must be corrected in international commerce. A correction of only part of the 41 percent strengthening of the dollar will have profound effects on the ferroalloy industry supply pattern.

FACTOR #4 - MARKET INTELLIGENCE

The antitrust laws of the United States are very explicit on what is allowable conduct on the part of an American businessman. Price and share of market agreements are not allowable nor necessary in a truly free enterprise environment. The conduct of business under these economic competitive conditions makes it mandatory for an American producer to have a strong marketing organization, good and timely market intelligence on competitive actions, a sense of the market value of his products to the customer, and an intuitive feel for the economics necessary to achieve a reasonable investment return over the long term by any producer whom he competes.

The United States market, up until the past ten years or so, was supplied by a relatively few domestic producers. The universe of intelligence gathering was relatively simple, the bulk of the salesmen represented companies with an invested base in the industry and prices were published and generally held within the normal competitive reactions to variations in the economy. Brokers and traders played a role but of relatively minor importance.

With imports now at an all time high in the United States, we are experiencing an unprecedented portion of the ferroalloys being sold through agents, traders and brokers. As a general statement, their commitment is to demonstrate their value to the producer through market penetration and turnover. Their concerns are not ones of return on sunk investment, nor product value to the customer.

Generally an invested producer would expect that a new entry into a market would require an entry fee in the form of customer concessions necessary to establish his market position. He would not, however, enter a market on the premise that his entry would collapse the market below an acceptable level and would assume a certain self-discipline to prevent this result. This does not happen with the agent/broker. Within the past two years, the U.S. market has been aggravated by new country importers, not on a normal entry basis, but almost immediately shipping at the rate of 100 percent of the U.S. market.

How the trader and the producer reconcile their objectives is a matter between the individual parties. However, the inevitable market consequences of such an action are so elementary that the ferroalloy producer must bear the responsibility for allowing its occurrence and must be credited either with lack of knowledge of market impacts, or with objectives of an entirely noneconomic character. Under no presently known circumstances can a true economic advantage justify such marketing actions.

The ultimate successful internationalization of the ferroalloy industry will depend in large degree upon a greater participation of the invested management in the gathering of market intelligence on a first-hand basis, direct control over their individual marketing methods and a much greater recognition of interaction between the major world markets.

FACTOR #5 - ROLE OF THE U.S. INDUSTRY

The question arises as to what role the United States will take in future years in the ferroalloy industry. A leading consideration is the general worldwide belief that the U.S. economy is the locomotive moving the Western World economics and recovery must start there.

At least for the "smokestack" industries segment of the U.S. economy, the world might well ask whether this remains true. Consider the steel industry in 1982.

TABLE 3

RAW STEEL PRODUCTION (11 Months - 1982)

	<u>% Change from 1981</u>	<u>Steel Produced MM Metric Tons</u>
U.S.	-39	62
Canada	-18	11
EEC	-10	103
Japan	-1.5	102
Taiwan	+29	
Turkey	+16	
Argentina	+15	
Venezuela	+13	
S. Korea	+ 9	

Both Europe and Japan were significantly stronger in steel production during 1982, and it is not unreasonable to think that industry recovery in the United States will at least in part be influenced by their actions in 1983. These steel facts translate into markets for ferroalloys and it is worth emphasizing that the United States was not the largest market in the world. This market size shift should be prominent in the thinking of ferroalloy managers planning future growth prospects. Belief that U.S. ferroalloy manufacturers will be driven out of business to make room for further imports is a questionable premise. Those who believe it should, however, at least recognize that it will not happen due to greater efficiency or basic economics elsewhere, but will be governed by less predictable issues such as currency exchange. If this is correct, then it must further be presumed that the same factors will continue to shrink the market for ferroalloys. In either event, it is a doubtful environment for planning export expansion.

In the past year, there has been increasing publicity on growing American protectionism. The United States government policy for many years has been one of promoting free trade and that remains the posture today. Indeed, the U.S. is the least protected market in the world.

It is true that both the steel industry and the ferroalloy industry have tested and will continue to test various U.S. laws concerning unfair trade practices in an environment in which they feel that international trade policies are being abused. While limited success has been achieved with government, a growing awareness on the part of the public will have a longer term effect on the attitudes of elected officials and future international trade policy positions.

Speaking for the United States industry, I believe it is fair to say that we recognize that international trade is essential to the Western World economies. We therefore do not seek protectionism for the United States, but we will pursue the removal of protectionism in all other producing and market areas. When this is accomplished, basic economics will again become the determining factor in the world ferroalloy structure. Failing the removal of protectionist policies amongst the nations exporting to the U.S., the most equitable fallback solution will be equivalent trade policies.

It is certainly recognized that the ferroalloy industry today is totally international in its character, and as such, that international politics play as large a determining role as do basic economics. The American ferroalloy manager must therefore adapt to this condition and play his proper political role to an unprecedented degree.

Speaking in behalf of Elkem Metals Company in the United States and as a representative of the worldwide Elkem a/s ferroalloy system, we are international in our character and wish to promote responsible international trade in ferroalloys. Because of our multinational sourcing capabilities, we are especially well positioned to utilize all of the factors working on the industry including currency exchange leverage. It is thus within our capability to wax and wane production sourcing for different markets depending on the pressures of various noneconomic political factors, and indeed have a greater flexibility for adaptation than do most other ferroalloy systems.

The rumors of the demise of the U.S. ferroalloy industry, stemming from the current depression, need to be put into perspective. There is unquestionably some rationalization in both the U.S. ferroalloy and steel industries. Some of it was needed. The remaining industry will

emerge with higher productivity, a better labor/management relationship and a higher degree of basic economic competence. It therefore seems appropriate to conclude with the words of a famous American writer, Mark Twain, who said, "The reports of our death have been greatly exaggerated."