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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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IS LATIN AMERICAN STEEL EXPENSIVE?[1/]

by

A. Gómez,
Chile

1/ The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. The document is presented as submitted by the author, without re-editing.

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Contents

The iron and steel industry in Latin America has developed on an industrial scale since the Second World War, and - naturally enough - has grown at a faster rate in the countries that had wider domestic markets. Thus, between 1942 and 1946, in Mexico, the oldest integrated steel plant in the area - Compania Fundidora de Fierro y Acero de Monterrey - started their second blast furnace; the Altos Hornos de México S.A. plant at Monclova began operating; and Hojalata y Lámina was established in Monterrey.

In Brazil, although Compañía Siderúrgica Belgo Mineira was operating since 1928, the largest steelworks, Volta Redonda, was started in 1946. In the same country USIMINAS and COSIPA began production only in 1963.

Despite the considerable size of the Argentine market, its major integrated plant - SOMISA - though producing pig iron in 1960 was not completed and started until 1961.

In 1950 Chile began producing steel at the Huachipato plant; four years later Belencito, Colombia, was started; in 1958 Chimbote took its place in Peruvian production and the Orinoco plant in Venezuela did so gradually, beginning in 1961.

The starting of these production units in the course of the past twenty years, together with subsequent substitution of foreign steel by domestic products has brought about in all the affected countries considerable public debate that, starting from the price of steel, has even - at times - reached the point of doubting the advisability of starting local production at all.

To assess the price of steel - or of any other commodity - necessarily involves examination of the entire economics of steelmaking. Though to attempt such an examination would be beyond the scope of this paper, we will perforce have to go into specific aspects of production, markets, etc. Steel prices, in any case, bear a certain relationship to those of other industrial products and contribute to make up specific price structures characteristic of the economy of the countries of our region. Therefore a complete examination of the matter would be possible only within a more wide-ranging survey of these nations' economy.

After the foregoing considerations, we may well inquire, in the first place, into the reasons that have led Latin American countries to produce locally a commodity that could be imported from other areas at better prices.

The establishment of this basic industry in fact signified divorce from the classical theory of comparative marginal costs, whereby these countries should concentrate on exporting their foodstuffs and raw materials, which, owing to natural conditions, could be done at a high productivity rate. As a matter of fact, the far-reaching effects of the depression years and the last world war on these countries' foreign trade were reflected in their economic progress and particularly in industrial development. The impossibility to continue foreign currency expenditures at earlier levels, together with the demands of the manufacturers of metal products, whose operations had developed considerably in the course of the war and who needed regular supply of raw materials, made it imperative to consider the feasibility of local steel production.

The Argentine situation is a case in point. There, steel import requirements involved 15% of the total foreign currency expenditure. Even today, in spite of producing 1.3 million tons of steel, Argentina must spend 130 million dollars to meet market demands that have grown together with domestic supply.

It is clear, then, that the basic motive behind the establishment of the steel industry was not so much a question of costs but of the imperative need to substitute quanity imports and become independent from foreign conditions governing supplies.

FACTORS AFFECTING PRICES

Before entering into a comparison of steel prices the factors affecting them should be examined. To simplify the process we will group them as they refer to cost, supply and demand conditions, market organization.

The primary element related to steel cost is the high investment necessary, the steel industry's capital requirements being of the highest. In Latin America specifically, plants do not enjoy the benefits of external economies and have had to spend heavily, as a rule, on infrastructure required for operation. One of the highest items, perhaps, is the construction of ports to receive ore and coal shipments and also serving as outlets for part of the products. The SIDOR case in Venezuela is typical - investments in docks, transport systems, thermal power plant and maintenance shop total over 70 million dollars.

On the other hand, the plants are very often located in uninhabited or even

desert areas, which originates serious problems to the population directly or indirectly connected with the works. The Matanzas plant was thus erected in the Guayana region as a means of bringing that vast and isolated area into the country's economic process. In order to overcome such difficulties companies have had to plan the building of small towns, often of significant size, involving investments comparable to those customary in more highly industrialized countries.

The minimum size of some items of basic steelmaking plant bears no relationship to the volume of our countries' markets. This fact has become aggravated in the last few years because equipment manufacturers have endeavoured to make the best use of savings arising from large-scale production, so integrated plant units have attained mammoth dimensions. Thus, in Japan we find blast furnaces built for over 4,000 t.p.d. capacity, or double what was thought to be maximum size a few years ago.

Latin American producers have had to use such oversize units for their undersize markets, in order to reduce the cost of future expansions, at the price of increasing investments and amortization costs of equipment that will be used only partially for some time.

In this way an imbalance is brought about in the capacity of the various plant departments, a common case in Latin America. In 1964, while ingot steel production capacity in the LAFTA countries totalled 9.5 million tons, rolling capacity amounted to 12 million tons.

Another basic element in production costs is input value. Steel cost is closely dependent on the price of its raw materials. The price at which iron ore must be purchased is for the most part comparable to that paid by industrialized countries which, though requiring imports to meet their needs, have the advantage of being able to choose the world's cheapest ores. Thus it is that lately American and Japanese buyers have preferred Australian ores with lower mining and transport costs. The comparability of ore costs is affected by the higher prices that must be paid for local coal, inferior in quality to foreign, thus contributing to increased coke consumption while decreasing blast furnace productivity. In spite of this, the proportion of this domestic material used by steelmakers is increasing, in order to support specific government policies seeking to protect employment levels in coal mines. Thus,

for instance, in Brazil the law provides that 40% domestic coal be used, while in Chile the percentage has risen to 65%. Despite higher prices, the steel companies are constantly seeking to direct purchases toward their own countries, and so refractories, structures, electrical equipment etc., are now purchased locally as a matter of course.

It may be felt that steelmakers in the area have the advantage that labour is cheaper than in more advanced regions. Though this was so in the first years of operation, today the cost of one work-hour is very close to that obtained in countries with longer steelmaking experience. The fact that the wage levels in steel companies are notably higher than the average for the country is easily shown. This circumstance is reflected in the living level of the Latin American steel population which is considerably higher than others. An Argentine survey points out that average income per capita in the industrial Paraná area, where the largest steel concerns as well as a subsidiary industrial complex are situated, is the highest in the country.

An important factor contributing to raise costs arises from the interest that must be paid on operating capital in capital-hungry markets like ours, and the depreciations to which production facilities must be submitted. A survey conducted by Usiminas, Brazil, discloses that while the operating cost of one ton of plates - including manufacturing, administrative and sales costs - barely reached US$90, financing costs are over US$60.

From the foregoing information it is possible to deduce the relative validity of compiling steel production costs in developing countries. For these reasons it has lately become increasingly frequent to take into account the social cost of these basic products, including the industry's contribution by consuming domestic commodities, providing a school for professional training, paying high wages, etc. Although such a study has not been made in the specific case of steel, obviously the overall cost for the country is less than what traditional cost studies might indicate.

Naturally, in addition to conditions affecting cost, there are others acting directly on product prices, among them those connected with supply and demand. In no Latin American country has the fact that steel companies are natural monopolies or oligopolies meant that they have been free to fix their prices at will. On the contrary, this very condition has led governments to

take direct action in the matter so that State agencies, finally, are the ones to set the prices of steel products.

As regards demand, perhaps the most significant fact is that it remains unaffected by the price of steel. In Latin America, notwithstanding this situation, consumption has increased together with product availability. This is natural enough if we consider the stable conditions of internal demand as well as its independence from balance of payment fluctuations.

An important group of price components may be lumped generally under the heading "market organization." One of the most weighty is demand diversification which forces plants to produce a wide variety of commodities in small quantities, consequently affecting costs and prices. Action tending to correct this situation is being taken by various companies that have introduced a degree of simplification. In the case of plates, for instance, a number of "typical" thicknesses are offered with appreciable rebates on the price list. Another interesting point is that of the high distribution costs normally prevailing in our countries as a result of the state of their communications and internal transport systems.

It is often said that high tariffs or other similar measures cause high steel prices because of a degree of inter-relationship. However, it is clear that tariff levels are adjusted to protect local production, therefore they are higher when the difference between local and international prices is greater. There is a further reason for this parallelism - that tariff structure is so designed as to have rates increased in accordance with value added, that is, the more highly-processed a commodity, the higher the rate applied to it. On the other hand, the difference in prices is also emphasized according to the degree of processing, since the local factors mentioned act cumulatively, and their proportion consequently increases.

Difficulties in establishing price comparisons

Whenever an attempt is made to establish international price comparisons the first obstacle encountered is the lack of standard pricing systems in the countries under consideration. In the case of steel this situation also prevails, and final prices are composed of a variety of base prices, extras for size, quality, special requirements, discounts for quantity, payment terms, etc. Such differences are so great that several endeavours have been made in the past,

under United Nations sponsorship, to reach international agreement tending to establish uniform pricing systems.

The situation is further aggravated by the fact that price structures - the relationships that different steel products bear to one another - vary fundamentally from one country to another. These structural differences are based on profound reasons. It is often a question of technical conditions making one plant better suited than others to produce a given commodity. Sometimes the natural wish to replace a competitive product also acts, as in the case of galvanized sheet for roofing against the similar product made of asbestos cement or aluminium; or medium sections against prestressed concrete beams; conduit tubes or water pipes against those made of plastics. Prices set for specific products or sizes, which are mandatory, are rarely found.

However, the major obstacle to comparing Latin American prices among themselves is that most of our economies are affected by historical inflation resulting in unreliable rates of exchange. In order to obviate this difficulty it has sometimes been sought to set more actual values for these currencies by calculating "parity bases," based on the price that a given batch of products would have in the various countries under comparison. Although such a step might be useful for comparing productivity or costs, avoiding deformation resulting from monetary policies in the countries affected, we feel that it is not valid for price comparison which must perforce include the influence of monetary conditions and other contingencies affecting the respective markets. In other words, while it is sound to construct technical or virtual costs, to make up "virtual prices" is pointless.

Lastly, the term steel, embraces a very wide range of products - a comparison should be made between those on which there is reliable information.

In order partly to counter the above difficulties, a comparison of prevailing Latin American and U.S. prices will be attempted, based on a couple of products that may be said to be representative of the sector - concrete reinforcing bars and wire rod. The former was chosen as typical by the Economic Commission for Europe Steel Committee, because its price is an indicator of the sector's trends. Furthermore, both products are made in all Latin American steelmaking countries, each affecting clearly - defined economic sectors - respectively construction and wire-drawing. There is another fundamental reason for selecting these two products: both are relatively primary products,

consequently their costs, as we said before, are less affected by conditions in the rest of the economy. Besides, for the same reason, the differences in the pricing systems will also be less influential.

To avoid the distortion that would arise from using prices current in a given country, because of necessarily arbitrary selection, we constructed theoretical Latin American prices composed of the prices at which all the bars and wire rod produced in the region have been sold. For this purpose the quotation for these commodities in each country on 31 August 1967 were weighted according to the amounts produced in 1966.

This "weighted average price" contributes partly to correct the consequences of over or undervalued exchange rates, since it is highly improbable that all Latin American currencies will be simultaneously in either position, at a given time.

To reduce the effect of varying sales terms, the ILAFA (Instituto Latinoamericano del Fierro y el Acero) statistics are based on current prices in major cities of each Latin American country, for 20 tons of clearly specified product paid in cash. So, in the case of reinforcing bars, the product selected is merchant quality, 7 to 12 m long, 10 and 20 mm diameter (the prices obtained for both sizes were averaged).

The comparison was made with prices in the United States, by averaging those current at the same date in the East, West, South and North and published in the September 1967 issue of "The Iron Age."

The result of the above process is a weighted average price of US$167.68 per ton of bars and US$172.35 per ton of wire rod. In the United States the figures were respectively US$133.10 and US$141.35.

It will be seen then that the higher average price paid by Latin American builders for reinforcing bars is 26% higher than that paid by U.S. builders, while wire rod purchased in the region is 22% more expensive than in the United States.

What does this difference in prices mean? In the cases studied, it is very close equivalent of the cost of freight from U.S. to South American ports. The cost of carrying one ton of bars from the United States to Chilean ports is US$31.90.

Despite this fact, the true significance of the higher price is the contribution made by the population to the region's economic progress, since, as we said before, a considerable part of this price is returned to the community in the form of domestic purchases, infrastructure, social development, etc.

It is sometimes stated that the higher price that Latin American metal-working must pay has a decisive influence on the final product price and that this implies a considerable obstacle, for example, to export possibilities. The fact is, however, that the higher cost of steel is diluted among the other components of such final prices when the respective products are submitted to a certain degree of processing. Thus, in Chile, in a study carried out in mid-1967, it was found that the influence of steel on machinetool production costs was less than 4.7%, in the case of lathes as low as 1.4%, at no point higher than 4.4% for electrical equipment, such as motors and transformers. It is clear that the influence of higher priced domestic steel on these commodities lacks all significance.

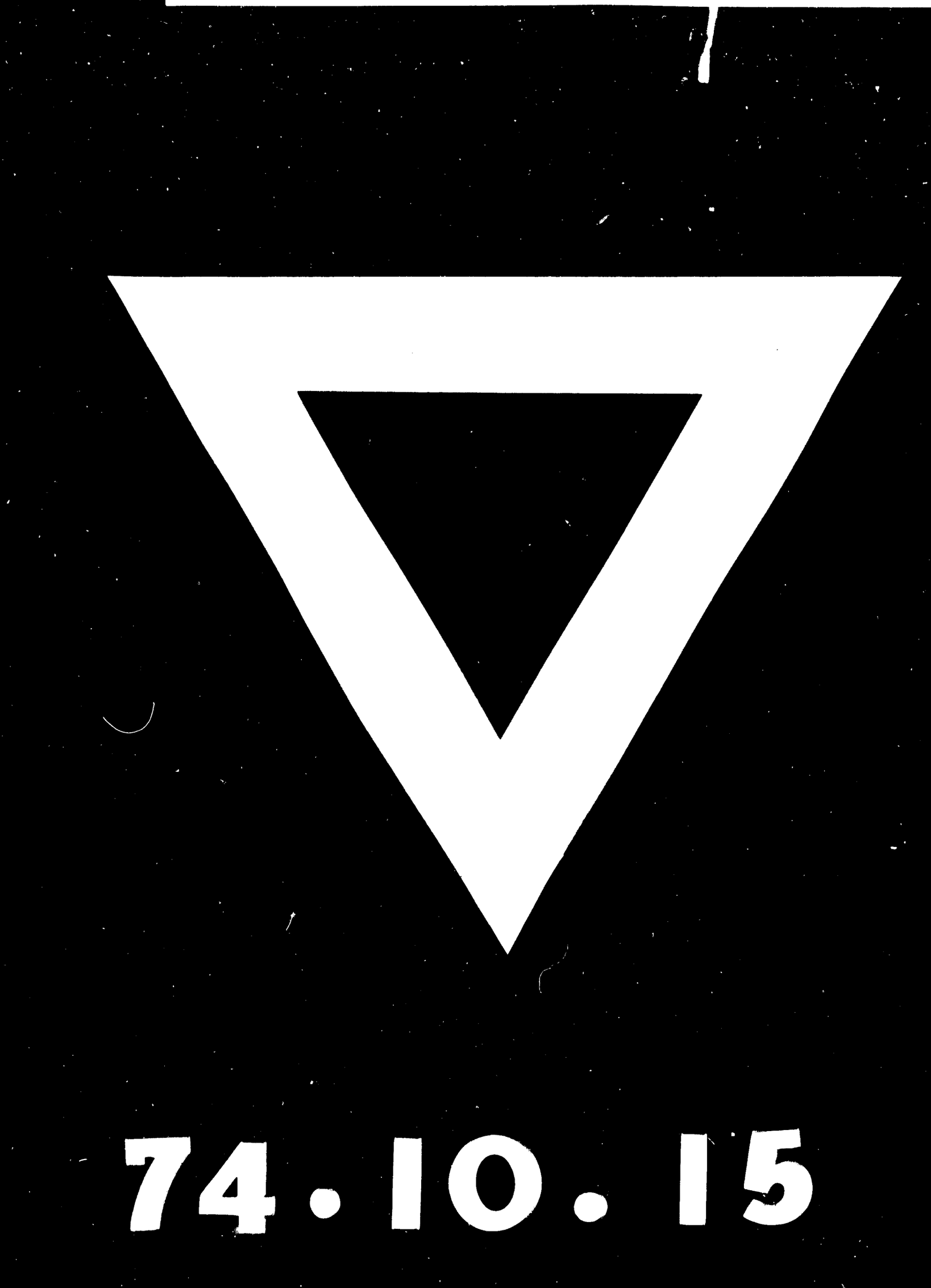
Until a few years ago the quality of Latin American steel was open to objection. At present, users recognise that the characteristics of our products are similar to those made in regions with the highest technological development. This recognition, of course, is based on actual facts, such as the existence of Pan American Standards for the most widely used steel products, that have been accepted by both U.S. and Latin American producers. After examining the minimum requirements to be met by reinforcing bars, structural plates or steel tubes, the standards were accepted not only by producers but also by representatives of users of such products and experts unconnected with any of the interested parties.

Dumping in steel prices

The years that have elapsed of the second half of this century have witnessed outstanding progress in the technology of all phases of steel production, and the major steelmaking countries have rushed to adopt developments that help to reduce manufacturing costs. As a result, productive capacity in those countries has increased considerably, far beyond their consumption possibilities. On the other hand, the full employment policy prevalent in those countries, together with the high fixed costs of the industry, force manufacturers to

maintain employment levels and, in certain cases, to export production surpluses at prices lower than those current in their own domestic markets. This double pricing system which has been operating for many years now has originated at various times differences of such magnitude that they bear no comparison with any other product on the international market, as a United Nations agency recently recognized.

Comparisons have sometimes been made between Latin American internal prices with these dumping prices, with the results that may be imagined. Nevertheless, no country that has not yet started domestic steel production would dare to consider the possibility of dispensing with it merely because of this fact. Such a procedure would mean delivering their markets up to the ups and downs of these abnormal export prices that rise above domestic levels when their own markets are expanding or international crises arise, bringing about unstable conditions that prevent the development of consumer industries.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