

The Future of the Italian Iron and Steel Industry

by

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1. — The iron and steel industry has the task of supplying all the other industries, some of which—particularly the shipbuilding, mechanical and electro-technical industries—must be enabled to export part of their output, which means that they must be able to count on supplies of steel products at prices that make it possible for them to compete with other producing countries on the international export market.

At the present moment there is such a scarcity of steel products that there is urgent demand for them all over the world, so that prices have ceased to be of importance and both steel material and machinery can frequently be sold at twice the competitive price merely because they are ready for prompt delivery. Today for many mechanical products delivery can only be promised after two, three and even five years.

It is not anticipated that there will be any radical change in the market for iron and steel and mechanical products for several years, since the great demand for these materials throughout the world can hardly be satisfied sooner. It may even be that the various countries will reach such a degree of economic and financial prosperity, as a result of an increase in commercial and industrial activity, that consumption will be stabilised at a higher level than it is at present.

There is no doubt, however, that, sooner or later, steel output will return to normality and there may even be a slump resulting in a heavy fall in prices.

The costs of production in the Italian steel industry are high to-day compared with those of other countries and must be rapidly reduced if Italy wishes to be ready when this change in the market takes place.

We have probably got several years in

which to achieve this aim, but if we are to succeed the problem must be faced without delay and action must be taken as decisively and swiftly as possible, for several years will be needed to complete the industrial re-equipment, rationalisation and radical changes in organisation. This is of the greatest importance if one considers that all industrial countries are bringing their steel industries more or less radically up to date. In addition, several countries, which so far depended on foreign imports of steel products, are contemplating setting up an iron and steel industry of their own—even if only on a small scale—to exploit local resources, even if only in the form of scrap, which was formerly sent to the steel works of other countries.

2. — In Italy, steel products have always been expensive, as our country has little iron and no coal that is suitable for the steel industry, but above all because the structure and the working of our plants has never been on a rational basis.

In the past, very little was actually done by our industries to reduce costs and bring them down to the level of other countries, though this would have been possible despite the shortage of raw materials. There is no reason why this shortage should be a systematic cause of economic inferiority for our steel industry, since the iron-ore mines in North Africa, which are Italy's natural supply source, are much nearer to the integrated plants on the Tyrrhenean coast than, for instance, the Lake Superior mines are to the main steel producing centres in the United States. As for the lack of local fuel, which compels us to import coal from Great Britain and the Ruhr, this is offset by the greater value of the coke by-products.

The trouble is that most of our plants are

old and many, which should have been done away with, have to go on working, since otherwise, owing to war damage, our output would be insufficient.

In 1938, the Finsider Group started to solve the problem of Italy's iron and steel production by converting the Bagnoli and Piombino plants and building the Cornigliano works, which were the best in Europe. Unfortunately, it was precisely these most up-to-date plants that were destroyed, not so much by the war itself as by the Germans who carried off all the newest machinery, obviously in order to deprive the Italian steel industry of its best equipment so that it would be unable to stand in the way of Germany's dream of economic dominion over our country.

In 1942 the productive capacity of the Italian iron and steel industry, including that of the new plants, which were by then practically completed, was the following, in metric tons per year:

	Finsider Group	Other Companies	Total
Pig-iron	1,400,000	400,000	1,800,000
Steel:			
converter	1,060,000	140,000	1,200,000
Martin furnace	1,345,000	955,000	2,300,000
electric furnace	265,000	835,000	1,100,000
	2,670,000	1,930,000	4,600,000
Rolled steel	1,700,000	1,700,000	3,400,000

As will be seen from the above table, the plants of the Finsider Group, which include the following companies: Ilva, Terni, Dalmine and Siac, accounted for 78 per cent. of the total Italian pig-iron output, 58 per cent. of the total steel output and 50 per cent. of the total rolled-steel output.

The other steel groups having a productive capacity for raw steel of over 100,000 tons a year, are the following, in order of importance: Falck, Fiat, Cogne, Breda, Magona and Redaelli, besides which there are a few score with a smaller capacity.

As a result of the war damage that has still to be repaired, Italy's present productive capacity is about 750,000 tons of pig-iron a year,

3,900,000 tons of raw steel and 3,340,000 tons of rolled-steel.

Before the war, the man-power employed by the steel industry was estimated at about 70-80,000 workers; this figure has scarcely changed to-day and would be sufficient to carry out the maximum and most up-to-date production envisaged by the new plans.

At the present time, the function of the whole Italian iron and steel industry is particularly difficult owing to the scarcity and irregularity of supplies, the deficiency of electric power, workers' strikes and a consequent low productivity of the manpower employed.

The fact that no worker may be dismissed, that ex-servicemen and deported persons who have been repatriated, as well as men disabled by the war, have to be given jobs in the factories, in compliance with a number of laws and as a result of the local pressure exercised by the Labour Exchanges, the Prefects and various organisations, has filled the factories with incapable workers and has considerably reduced the productivity of the workers.

All these factors cannot but affect the cost of production, giving rise to problems on the solution of which the future of the iron and steel industry depends.

In any case, the ultimate solution of the problems facing this industry is closely connected with a general plan of reconstruction and modernisation reflected in the Marshall Plan, which can be fully carried out in a period of four to five years. The Finsider Group will play a most important part in this plan, as it owns all the integrated plants on which the modern mass production of our national industry will be based.

3. — The steel production plan submitted by Italy to the Committee of Co-operation of the Conference of European Economic Co-operation set up in July 1947 to prepare a Report for the ERP had to meet this precise question: what is the maximum production in each sector of the iron and steel industry, on the assumption that all raw materials, fuel, machinery and financial requirements are guaranteed?

The Italian reply was accompanied by a general explanatory note which we give here in full:

Italy is a very much over-populated country, whose resources are not such as to provide for its inhabitants a standard of living that can bear comparison with that of other richer European countries. In accordance with the new international political situation, the solution to this problem will have to be found principally in emigration to countries where manpower is scarce. Given the present conditions in Italy, however, it would be foolish to expect emigration alone to solve this problem finally. Consequently it is indispensable for Italy to exploit all her resources with the greatest care. Regarding Italy's agricultural resources, geographical conditions unfortunately form unsurmountable barriers which certainly do not help to improve our country's precarious situation. Our only hope, therefore, lies in a greater degree of industrialisation, bearing in mind that, in view of our surplus manpower and our limited local resources of raw materials and fuel, this industrialisation will have to be based principally on the processing of imported raw materials.

A typical case is our iron and steel industry, which has always been, and will presumably continue to be; largely dependent on foreign countries, especially for the proper kind of fuel which is completely lacking in our country and also for ferrous raw materials such as minerals and scrap. These conditions make it impossible for Italy to develop a steel industry comparable with those of other Eu-

ropean countries; there is no reason, however, why she should not have a small and economic steel industry as eminent Italian and foreign experts have repeatedly recognised. The existence of this small steel industry, moreover, may be considered indispensable in order to achieve an economic balance, as stated above.

It is obvious from the following figures for iron consumption per head in the mixed agricultural and industrial economy of 1938, that there is room for a greater industrialisation in Italy:

Italy	59.7 kilograms per head per year
France	123.2 " " " " " "
U.S.A.	221.5 " " " " " "
U. K.	277.3 " " " " " "
Germany	311.0 " " " " " "

These figures show clearly that, if a European economic unit is to come into being, with a high standard of living for the peoples of all the countries composing it, Italy must make every possible effort to attain a higher degree of industrialisation in as short a time as possible, developing the very promising possibilities of her mechanical industry. It is equally obvious that a sound mechanical industry cannot prosper without the co-operation of an adequate iron and steel industry closely connected with it.

Tables I, II and III give the figures for the production, consumption, imports and exports

IRON ORE AND MANGANESE ORE (a)
(in thousands of metric tons)

TABLE I

ITEMS	Years								
	1938	1945	1946	1947	1948	1949	1950	1951	Following years
A. Iron Ore:									
Quantity available from home production (b)	1250	115	275	620	800	1000	1200	1400	1400
Home consumption (loaded tons) (b)	1602	115	275	625	1290	1800	2390	3000	3450
Imports (c)	386	0	0	5	490	800	1190	1600	2050
B. Manganese Ore:									
Quantity available from home production (d)	64	?	30	50	60	70	80	90	100
Home consumption (loaded tons)	122	?	49	80	113	134	154	176	200
Imports (e)	58	?	19	30	53	64	74	86	100

(a) For 1947 and the years following, the figures are estimates only; (b) Iron content 50% for the ore and 50% for the pyrite ashes, home production; (c) From the Mediterranean basin; (d) 20% of Manganese; (e) 50% of Manganese.

PIG IRON, FERRO-MANGANESE AND SCRAP
(in thousands of metric tons)

TABLE II

ITEMS	Years								
	1938	1945	1946	1947	1948	1949	1950	1951	Following years
A. Pig Iron and Spiegeleis:									
Output	884	65	189	330	680	950	1250	1570	1800
Consumption:									
a) for steel manufacture	840	46	153	300	690	800	935	1240	1440
b) for other purposes	114	?	61	140	290	300	385	330	360
c) Total (a) + (b)	954	?	214	440	980	1100	1250	1570	1800
Imports	70	?	25	110	300	150	0	0	0
B. Ferro-Manganese:									
Output (b)	23	4	11	16	25	27	28	30	35
Consumption:									
a) for steel manufacture	23	4	11	16	25	27	28	30	35
b) for other purposes	0	0	0	0	0	0	0	0	0
c) Total (a) + (b)	23	4	11	16	25	27	28	30	35
C. Scrap for Blast Furnaces and Steel works:									
Domestic supply:									
a) Steel works scrap	593	125	250	406	500	515	565	600	700
b) Other scrap of local origin	581	?	?	620	725	685	590	500	525
c) Total home production (a) + (b)	1174	?	?	1026	1225	1220	1155	1100	1225
Consumption:									
a) Blast furnaces	0	0	0	0	0	0	0	0	0
b) Steel plants	1801	375	606	1350	1925	2000	2025	1910	2225
Imports	627	?	?	330	700	780	870	810	1000

(a) For 1947 and the years following, the figures are estimates only.

(b) Including: Fe-Si-Mn.

N. B. - For two years before the war imports of scrap exceeded the figure of 900,000 tons a year.

of the main raw materials and semi-finished steel products as they are given in the answers to the Marshall Plan questionnaire, for the year 1938 and for the years from 1945 to 1951 and "after" — this latter heading applies to an indeterminate period when the maximum level of home production and consumption shall be attained.

The outstanding feature of this Plan is that a rise in steel consumption is anticipated in the future, from 2.35 million tons of raw steel in 1938 to 3.2 million tons in 1948 and 4.3 million tons in 1951.

As will be seen from Table III, this consumption should be covered in part by home steel production, which will rise progressively from 2.5 million tons in 1948 to 3 million tons in 1951, and in part by imports of semi-

finished steel which should reach a maximum of 1,300,000 tons in 1951.

Exports should rise progressively from 150 thousand tons in 1948 to 225,000 tons in 1951.

From a technical standpoint, Tables I and II stress the progressive conversion of the productive system; there is a considerable increase in imports of rich iron ores from the Mediterranean basin and a far smaller increase in imports of scrap iron, of which there will continue to be a world-wide shortage for many years to come.

A study of the quantities of raw steel produced by the various methods of manufacture (see Table III) shows clearly the great increase in steel produced with liquid charge system.

The need for converting steel production systems had already been recognised before the

war, for our industry had anticipated the difficulty both of obtaining supplies of ferrous raw materials, mainly through imports of scrap, and of being able by this means to reduce costs so as to ensure production at international prices, at least in regard to mass products.

During the years immediately before the war, therefore, the conversion of two integrated plants was started and almost completed, and a third brand-new integrated plant was built. These works were to be followed by the modernising of the plants for processing steel into semi-finished steel and finished mass products and into flat steel products, these being the least efficient production sectors, equipped with the most out-of-date machinery.

The war not only put an end to this programme but destroyed just the most up-to-date plants fitted with blast furnaces.

The Marshall Plan provides for the reconstruction of the plants that were damaged or looted by the Germans (43,000 tons of machi-

nery were carried off from Cornigliano, of which about 30,000 have recently been located in various parts of Germany), and the complete fulfilment of the original programme, with such improvements as are called for by scientific progress. Further, provision is made for the development of plants for secondary steel processing; this development will be in keeping with greater consumption requirements and, particularly, with the need to find work for the manpower employed by the iron and steel industry, which will become available as the various plants are rationalised.

The necessity of placing the Italian iron and steel industry on the basis of a reasonable proportion of integrated production was fully recognised during the conversations which took place at the Conference of European Economic Co-operation, when it was clearly seen that in view of the deficiency of scrap it would be necessary for all steel industries to count only on the natural proportion of scrap from their own zone of economic influence.

STEEL (a)
(in thousands of metric tons)

TABLE III

ITEMS	Years								
	1938	1945	1946	1947	1948	1949	1950	1951	Following years
A. Crude Steel:									
Home production:									
a) Convertors	66	21	42	50	60	300	330	750	1000
b) Martin furnaces	1684	123	561	1050	1890	1770	1850	1550	1750
c) Electric furnaces	578	251	550	500	550	600	650	700	750
d) Total (a) + (b) + (c)	2328	395	1153	1600	2500	2670	2830	3000	3500
Imports:									
a) Ingots	0	?	?	0	0	0	0	0	0
b) Semi-finished steel (expressed as crude steel)	17	?	?	172	700	910	1080	1300	850
c) Total imports (a) + (b)	17	?	?	172	700	910	1080	1300	850
Home consumption of crude steel and of semi-finished steel for further processing	2345	?	?	1772	3200	3580	3910	4300	4350
B. Finished Steel:									
Home production:									
a) from crude steel	1672	288	888	1330	2400	2690	2940	3230	3270
b) directly from scrap (b)	76	?	16	30	50	50	50	50	50
c) Total (a) + (b)	1748	293	904	1360	2450	2740	2990	3280	3320
Home consumption	1800	?	?	1490	2300	2565	2795	3055	3055
Imports	268	?	?	200	0	0	0	0	0
Exports	76	?	?	70	150	175	195	225	265

(a) For 1947 and the years following, the figures are estimates only.

(b) Ferro-pacchetto.

Italy, as has been already stated, will always depend on foreign countries for a considerable quantity of scrap-iron and semifinished steel. However, with the domestic output of crude steel now planned, at least the basic needs of our other principal industries will be ensured, particularly those of the ship-building, mechanical and electrical industries, which must be able to count on a domestic steel industry capable of supplying them with steel at a moderate price, so that they in turn may export at international prices.

4. — If our steel industry is to be established on a proper basis, two problems of fundamental importance have to be solved: first, to obtain the necessary coal at a reasonable price; second, to obtain the loans necessary for the rehabilitation and modernisation of the above-mentioned plants.

Before the war, Italy imported coal from the Ruhr and from Great Britain at European market prices, so that she had merely to bear the extra burden—as compared with other more favoured countries—of the extra transport from the mining areas to Italy. Our steel industry can bear this burden as it can compensate for it by other advantages: the quality of the coal which, since it has all to be imported, can be selected so as to be the most suitable type for each specific use, and the higher value of the by-products obtained from the coal distillation, which would otherwise have to be imported as well.

To this should be added the low consumption of coke in our blast furnaces, resulting from the excellent quality of the minerals available at a relatively short distance from the centres where it is used in our integrated plants, and also the lower cost of labour in general.

At the present moment, however, most of our coal is imported from the U.S.A. at high prices which reflect the long distance it has to be transported. Such coal as comes from Europe is supplied not at the European price, but at approximately the American price.

Obviously coal supplies at the actual prices

of the European market are essential if the Italian steel industry is to compete with foreign steel industries, once the plants are rehabilitated and the productivity of the manpower returns to normal.

It appears that from next June onward it will be possible to obtain coal supplies from Great Britain once more. But the fundamental Italian problem, not only for the steel industry but for all our industrial production, remains that of obtaining large supplies of coal from the Ruhr. This is an essential point in our economic life, as German coal can be paid for with our vegetable and fruit produce and, therefore, would not be an extra burden on our extremely critical foreign exchange situation.

With regard to the loans necessary for the rehabilitation plan of the Italian steel industry, and taking into account what has already been done and the loans already assured, we consider that the remaining sum required would be about 50-60 billion lire. This figure, which corresponds approximately to the total war damage suffered by Italian steel works, is not enormous if considered in relation to the importance of this industrial sector. Further, the fairly rapid repayment of these loans is amply ensured by the sinking funds the concerns are able to put up.

It must be remarked that the present deep depression of the Italian Stock Exchange renders inadvisable the issue of new shares and capital increase transactions. However, the situation is bound to change and there is no doubt that a suitable revision of the laws now in force would contribute in considerable measure to an upward trend in the Stock Exchange market.

In any case, until the end of this undoubtedly transitory situation, whose duration is hard to determine, the remaining loans will have to be obtained from other sources, chief among which might be the allocation to the iron and steel industry of part of the funds the Government will have at its disposal, as a result of the dollar assistance provided by "Interim Aid" and the Marshall Plan.