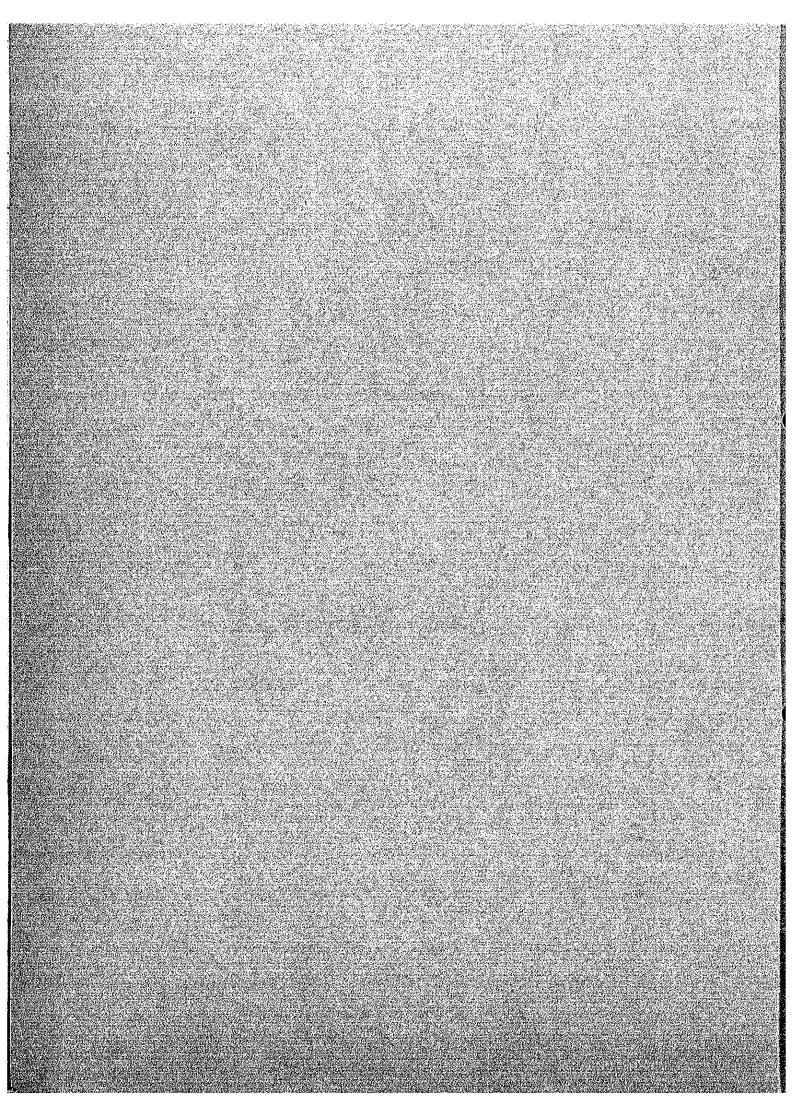
## GENERAL PLANT DESCRIPTION



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#### CHAPTER 6 GENERAL PLANT DESCRIPTION

#### 6-1 Basic concept

The equipment program of the present feasibility study is primarily based on the stage I plan, in which a single blast furnace shall be used, and designed to maintain the basic production balance shown in *Fig. 4-1-1*.

For the stage II plan, in which two blast furnaces shall be used, the capacity and laout of each equipment are also studied considering, the new techniques to be introduced in the future, for maintaining the basic production balance for stage II as shown in *Fig. 4-1-3*. The following are the outline of each facility.

#### (1) Preparation and reclamation of the site.

Reclamation and preparation of the site are the basis for the steelworks construction and, therefore, must be carried out prior to any other works.

The entire area of the steelworks site is approximately 643<sup>ha</sup>; 606<sup>ha</sup> of purchased land, and 37<sup>ha</sup> of land reclaimed from the sea.

Since the positions of bank heads and berths for loading finished products (for stage II) were moved back 100<sup>m</sup>, from the plan of Pre-Feasibility Study, the total area of reclaimed land was reduced by 8<sup>ha</sup> compared with the area reported in the previous study. As the bank head shown in the Pre-Feasibility Study was found to sit on a deep trough, it was decided to avert this.

The total area used for the stage Lis approx. 376<sup>ha</sup>; mostly purchased land, and approx. 23.4<sup>ha</sup> of reclaimed land.

For effective operations of the new steelworks, the ground level of the site must be high enough to prevent the site being submerged by the waves and tide from the sea in front, or by floods from the land behind.

As for the preparation of the site, a balance of earth shall be maintained, as far as possible, by preventing earth from being brought in from outside of the site.

The ground level of the site shall be as follows:

Berth area	M.L.L.W. + 4.0 <sup>m</sup>
Raw material yard (including coke plant area)	M.L.L.W. + 5.0 <sup>m</sup>
Rolling area	M.L.L.W. + 5.5 <sup>m</sup>
Blast furnace and steelmaking area	M.L.L.W. + 6.4 <sup>m</sup>

The main drainage canals shall be open in view of the probable future expansion and construction cost, and drain water from inside and around the site.

However, the drainage canals along the ore yard at the north side shall be constructed with concrete because they are also used to drain the sea water from the power station and, therefore, must be a permanent structure.

(2) Port facilities

For the construction plan of the new integrated steelworks, a large berth (23<sup>m</sup> deep and 351<sup>m</sup> long) was already constructed in Macajalar Bay by the P.S.C and is now in operation to receive the iron ore and limestone for the sintering plant of the P.S.C.

Under these circumstances, the new steelworks shall make use of the P.S.C's berth for receiving the iron ore and, in stage I, the berth for unloading coal, scrap and other raw materials, the dolphin for receiving crude oil, and the berth for loading finished products shall be constructed.

The plan for bank revetment shall be minimized as much as possible and those bank revetments consist of two types: the permanent banks to suit their purposes, and the temporary ones for future use.

For lighterage, a minimum water area in front of the wharfs shall be reserved for easier incoming and outgoing of the vessels which are expected in stage I.

#### (3) Loading and unloading facilities

As raw material unloading equipments, the newly-constructed berth for unloading raw materials shall be provided with two unloaders (capacity: 500<sup>1/hr</sup> each) which are used to unload coal, scrap and miscellaneous raw materials.

Since the port acceptance capacity for large vessels is estimated to be increased in stage II, the existing berth of the P.S.C shall be extended and provided with two additional large unloaders (capacity: 1800<sup>t/hr</sup> each).

As for product loading equipment, the berth for finished products shall have two loaders (lifting capacity: 25<sup>t</sup> each) which are used to load hot coils, slabs, blooms and billets, and also to unload ferro alloy, calcium carbide, refractories, and other materials. In stage II, the berth for finished products shall be extended and provided with two additional loaders.

The roads shall be used for the transporation of the scrap, ferro alloy, refractories and other material, all which are unloaded at the berth, and the transportation of the hot coils, slabs, blooms and billets to be shipped. For these purposes, use of necessary vehicles is being studied. Since the shipment of products and materials and the types of products to be manufactured increase in stage II, the construction of warehouses for finished products is being studied.

#### (4) Raw material handling facilities

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The raw material handling facilities shall include the raw material yard (a stacking/reclaiming system) for acceptance and storage of iron ore, limestone, coal and other raw materials, the sizing plant for sizing (crushing and screening) lump ore and the blending yard for blending sinter materials.

In general, the belt conveyer shall be used for the transportation of those raw materials. Based on the estimation of necessary storage space for each raw material, the storage capacity for each yard is decided as follows:

	)
Raw material yard 900,000	
Blending yard 90,000	

In stage I, the sinter plant for exclusive use with the new integrated steelworks shall not be constructed and, therefore, the production of sinter shall be entrusted to the P.S.C. In Ustage II, the sinter plant exclusively used for the new integrated steelworks shall be built up so as to meet the growing demand for sintered ore.

#### (5) Coke oven plant and by-product plant

A coke oven must have a capacity to produce blast furnace coke (lump coke 746,000<sup>1/y</sup>) by one battery (45 ovens × 2). Furthermore, the use of 6<sup>m</sup> ovens and minimum facilities shall be planned in consideration of production quantity and work efficiency. The by-product plant consists of the equipment to recover coke oven gas (called COG hereafter), tar, light oil and other by-products.

In stage II, the facility for ammonium sulfate shall be constructed with the capacity enough to process increasing COG.

#### (6) Blast furnace plant

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In stage I, a single blast furnace shall produce 1,434,000<sup>t</sup> of pig iron annually. In stage II, the production shall be 2,867,000<sup>t</sup> per year since one more blast furnace will be constructed.

For the achievement of these production levels, the blast furnace shall be the large blast furnace with 2,600<sup>m3</sup> inner volume, 2 iron tapholes, 2 cinder notches and 30 tuyeres. For the achievement of the most stable operation, the blast furnace plant shall employ highly reliable equipment which are excellent in handling and for a long time use.

The blast furnace plant shall be provided with three hot blast stoves (blast temperature: 1,050°C), the gas cleaning equipment for treating blast furnace gas (hereinafter called BFG) and the dry-pit type slag treatment equipment.

For the hot metal handling, when converter and blast furnace production are not balanced,

the casting machine (capacity: 35,000<sup>t/month</sup>) shall be installed to make cold pig production possible.

(7) Lime calcining plant

A calcining furnace with the capacity of 250<sup>1/d</sup> shall be provided for the burning of the limestone which is needed for converter operations.

If an additional converter is constructed in the future, a lime calcining furnace shall be also installed.

The calcining furnace is of the rotary kiln type and quicklime is transported directly from a storage bunker to the flux hoist equipment of a converter plant.

(8) B.O.F plant and ingot-making facilities

The B.O.F plant shall produce 1,569,000<sup>1/y</sup> (molten steel base) in stage I and 3,147,000<sup>1/y</sup> in stage II.

As a prerequisite, the molten steel that is produced in the converter is sent to the continuous casting plant.

For the achievement of the production level mentioned above, the B.O.F plant shall be provided with two converters (160<sup>t/heat</sup>) and, as an operation method, always have one converter in operation and the other well maintained and in working order.

The B.O.F plant is designed to allow the installation of one more converter in the future and, in the final stage, to use an operation method in which two converters are in operation and the other one in operating condition and well maintained always.

For the treatment of converter waste gas, a noncombustion type treatment which recovers the waste gas shall be employed so as to save energy.

Hot metal is transported to the B.O.F plant by a torpedo car, and then poured into the hot metal ladle in the pit of the B.O.F plant.

Some hot metal is desulfurized by the torpedo car desulfurization equipment, which is installed between the blast furnace and the converter.

Flux shall be stored in the underground bunker, which is located outside the converter shop, and be brought up by means of the conveyer belt.

B.O.F slag shall be carried to the slag yard by a slag pot car on the railroad.

The ingot-making facilities shall be constructed to make steel ingots from the hot steel unsuitable for continuous casting (low temperature and insufficiently deoxidized hot steel), and to work as supporting equipment for the starting-up period of continous casters, and for emergency stops of continuous caster operation.

The ingot-making facilities are designed, as a top-pouring type, to have a maximum capacity of 6<sup>heats/d</sup> (approx. 25,000<sup>t/month</sup>).

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In addition to those ingot-making facilities, the molten steel transfer car for returning the hot steel shall be located between the teeming bay and the raw material bay.

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(9) Continuous casting plant

In stage I, the continuous casting plant shall produce 1,200,000<sup>1</sup> (slab base) of slab for hot-rolled coils and plates for a year and 300,000<sup>1</sup> (bloom base) of blooms for billets for a year and some states for a year.

Furthermore, continuous casting shall be applied to all the molten steel which is produced by the converter.

In the stage II, the continuous casting plant shall produce 2,000,000<sup>t</sup> of slabs and 1,000,000<sup>t</sup> of blooms per year. As a continuous caster for slabs, two 1-strand continuous casting machines (single radius curved mold caster) which are easily manipulated shall be installed in addition to the converter facilities.

And one 4-strand continuous casting machine shall be installed as a continuous caster for blooms.

The cast slab and bloom sizes are specified as follows:

Thickness Width Length

Slabs: 200 × (900 to 1,900) × (4,980 to 9,200)<sup>mm</sup>

Cross section Length

Bloom: 200<sup>¢</sup> or 250<sup>¢</sup> × 6,100 (max.)<sup>mm</sup>

A machine scarfer shall be installed so that the surface quality of slabs can be maintained high and stable and the handling of slabs be made more effective.

The slabs for hot rolled coils shall be cast in multiple widths of 6 feet (6).

The secondary cutting and division of these slabs shall be performed at the slab yard. The slabs for plates are planned to be manufactured at a maximum length of 6,100<sup>mm</sup> and their secondary cutting shall be carried out by the plate maker.

In the second stage (three converters installed and two of them in service), two 1-strand continuous casting machines for slabs and one 4-strand continuous casting machine for blooms shall be installed (the installation position is a symmetrical arrangement of that of stage I).

The layout of these machines is so designed that slabs can be supplied in a hot state to the hot strip mill in the future.

(10) Hot strip mill

In stage I, the hot strip mill shall have a capacity of making C.C. slab (200<sup>mm</sup> thick, 600 to 1.300<sup>mm</sup> wide and 9,200<sup>mm</sup> max. in length) into hot coils (1,2 to 12.7<sup>mm</sup> thick, 600

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to 1,250<sup>mm</sup> wide, 760<sup>mm</sup> inner oil diameter, and 1,800<sup>mm</sup>, max outer coil diameter) and produce 1,052,000<sup>t</sup> for a year. The facilities of the hot strip mill shall include two reheating furnaces, one roughing mill, five finishing mills and two down collers to maintain the necessary and economical production level.

Furthermore, it is taken into consideration that the production shall increase to the level of 1,721,000<sup>t/y</sup> in stage II and, for this reason, the installation of an additional reheating furnace, roughing mill and down coller may be needed. In stage II, the hot strip mill shall process 226,000<sup>t</sup> of sheets (1.2 to 6.35<sup>mm</sup> thick, 800 to 1,250<sup>mm</sup> wide and 2 to 6<sup>mm</sup> long) for a year.

The hot coils shall be used for (1) hot rolled sheets and coils, (2) pipes and tubes; (3) cold rolled sheets and coils, (4) G.I sheets and (5) tin plates.

#### (11) Billet mill and medium section mill.

150,000<sup>t</sup> of billet shall be produced per year in stage I and, in stage II, 630,000<sup>t</sup> of billets and 186,000<sup>t</sup> of medium section be manufactured per year.

For the most effective investment in the facilities for stage I, the facilities are so designed that they can be economically rebuilt into the section mill in stage II.

In stage I, the billet mill shall turn the blooms of  $200 \times 200^{\text{mm}}$  into  $150,000^{\text{t/y}}$  of billets measuring  $135 \times 135^{\text{mm}}$  and  $100 \times 100^{\text{mm}}$  (ratio 24:76).

One reheating furnace (capacity: 45<sup>t/hr</sup>) and one billet mill shall be installed.

In stage II, additional continuous finishing mills and finishing equipment shall be installed behind the billet mills, which are constructed in stage I, and this will be converted to medium section mill to produce 186,000<sup>t</sup> of medium sections per year.

Furthermore, the new billet mill shall be constructed to turn the blooms of  $200 \times 200^{mm}$  cross-section into  $630,000^{\circ}$  of billets measuring  $135 \times 135^{mm}$ ,  $100 \times 100^{mm}$ , or  $50 \times 50^{mm}$  per year (ratio of these types of billets is 6:79:15).

The billet length is specified at  $6^m$  for each size and the billets shall not be conditioned.

#### (12) Power plant and B.F. blower plant

The power plant and the blast furnace blower shall be installed in order to make effective use of the BFG. COG and LDG which are generated in the steelworks. The steam for general use of the steel work shall be supplied by means of extraction from turbine for overall efficiency of the steelworks.

For the power plant and the blast furnace blower, two units of turbine-generator-blowers shall be employed and their fuels can be either of those steelworks generated gases or heavy oil.

 11	fuler (d. 1997) Fuler (d. 1997) Altanov (d. 1997)	Turbine output	Generator output	Blower axial input
	No,1 uniț	40,000 kW	25,000 kW	15,000 kW
	No.2 unit	40,000	40,000	
	Total	80,000	65,000	15,000

### Those units provide the following services during normal operation (stage I):

\* denotes a spare blower

One more unit shall be installed in stage II.

#### (13) Power receiving and distribution facilities

The power receiving and distribution facilities include a power receiving unit for overall steelworks (primary power source), a power distribution system, a telephone system and temporary power supply equipment for construction. The receiving power voltage (primary voltage) shall be 138<sup>kV</sup> and the distribution voltage (secondary voltage) shall be 34.5<sup>kV</sup>, taking into account the efficiency of the power consumption in the future. The 138<sup>kV</sup> power receiving equipment is designed on a two circuits base so that the occurence of a complete power failure can be avoided during maintenance, inspection or other troubles. The 34.5<sup>kV</sup> line system is composed of double buses so that the line will be divided into two systems of NPC power and genarating plant in the steelworks.

#### (14) Oxygen plant

The oxygen generators (8,500N<sup>m³/hr</sup>, 2 units) shall be installed to generate and supply oxygen, nitrogen and argon for use in the steelworks.

For a steady supply of oxygen, liquid oxygen equipment shall be provided so that 70% of oxygen generation can be maintained during any time of trouble with one of the oxygen producers or during periodical maintenance (for 14 days).

#### (15) Fuel equipment

The fuel equipment supplies the BFG, COG, LDG, heavy oil and steam to each destination as required, and the fuel distribution center shall be constructed for effective operations. For effective use of these gases, the BFG holder (100,000<sup>m<sup>3</sup></sup>  $\times$  1), the OG holder ((40,000<sup>m<sup>3</sup></sup>  $\times$  1) and the LDG holder (50,000<sup>m<sup>3</sup></sup>  $\times$  1) shall be installed so as to keep a blance between the consumption and production of those gases.

Furthermore, gas discharging stack with combustion device shall be installed respectively to cope with any sudden change of consumption and/or production of these gases. The capacities of the BFG holder and the LDG holder are taken into consideration so that

they can be used in stage II. As for the C gas holder, an additional C gas holder shall be installed in stage II, which might be used as a spare. To the mill plant, mixture of BFG and COG gases shall be supplied for the purpose of effective and economical operations.

#### (16) Utilities piping system

The utilities piping system is the piping system that leads from the utility facilities to each destination of use, and is planned on aerial route.

The capacities of the main route piping are based on the demand in stage II.

#### (17) Water supply equipment

The water supply equipment shall deal with the taking, treating and supplying of seawater, and with the supplying of industrial water from receiving pond.

Receiving poind (90,000<sup>m<sup>3</sup></sup>  $\times$  1 unit) receives 53,000<sup>m<sup>3</sup>/d</sup> of industrial water per day and supply to the destinations via an elevated water tank.

The sea water shall be taken from a deep level of the sea near the coal berth jetty (intake volume: 22,000<sup>m³/hr</sup>) and supplied to the power plant and oxygen plant system, and the coke plant system by pumps. The capacity of the water supply equipment is primarily designed for stage I.

However, the capacities of the industrial water pond and the seawater conduction facilities, are designed to be effective for stage II.

#### (18) Water recirculation facilities

The water recirculation facilities shall be installed independently at eight different points (blast furnace, coke/by-product plant, B.O.F., continuous casters, lime calcining plant, billet mill plant, hot strip mill plant and oxygen gas plant) close to each plant, considering the capacities sufficient for stage I.

The water recirculation facilities shall usually supply the water at 35°C in accordance with volume and qualities necessary for each plant. However, they are also designed to provide the water at 40°C to some equipment as B.O.F. gas recoverying equipment, lance and the dust collectors, etc.

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#### (19) Transportation facilities

The transportation facilities are for handling raw materials, semi-finished products and such wastes as slag, sludge, scale, scrap, dust, and so on.

They shall involve railroad transportation only for such hot and heavy materials as hot metal, B.O.F. slag and ingot, and road transportation for the other products and materials. 320<sup>t</sup> capacity torpedo casrs shall be used for the transportation of hot metal and their rail

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road guage shall be 1,435<sup>mm</sup>, condisdering the use of large-size vehicles.

Road transport vehicles, flat-topped trucks and dump trucks shall haul materials for maintenance and others, respectively.

#### (20) Maintenance shop

The scale of the maintenance shop shall be determined according to the necessity for normal maintenance operations.

As a general rule, special maintenance equipment (high quality or large-sized items) and spare parts shall be purchased.

The maintenance system shall be an independent centralized system, which consists of the central maintenance station and the local maintenance shops. The central maintenance station takes care of repair and maintenance of equipemnt, consisting of the plants for plating, forging; metal formaing and machining, and of the work shop for repairing machinery, vehicles, electrical / instrument equipment and civil, water facilities.

The local maintenance shops shall be established in eight different areas of main plants, to take care of inspections and maintenance.

#### (21) Testing and analysis equipment

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- The testing and analysis equipment shall be necessary items as follows:
  - (1) The testing and analysis equipment for raw material shall be installed for the purpose of managing the blast furnace operation, and for the by-product inspections (check and analysis of such semifinished products as ingots, slabs and billets; and the acceptance test and quality control of raw materials).

They shall be installed by the blast furnace plant.

- (2) In front of the converter, the quick analysis equipment shall be installed for the purpose of inspection and quality control of finished products.
- (3) In the hot strip mill, the mechanical testing machines necessary for the inspection before the products shipment and for the quality control shall be installed.

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#### 6-2 General layout

#### 6-2-1 Space

The general layout of the greenfield steelworks shall be studied on the basis of approx. 643<sup>ha</sup> of the area in Tagoloan Villanueva. Mindanao Island, which was offered by the Philippine Authorities. In the vicinity of this area, the sinter plant of P.S.C is already in operation and the sea berth are already constructed to receive raw materials. The general layout up to the production capacity of 3.0 million ton per year in satage II was mainly studied considering the reservation of space for future use.

#### 6-2-2 General arrangement

As mentioned before, the sinter plant is already established and there is a usable coastline only in one direction at the present. Those conditions limit possible plans for the overall layout. The raw material yard shall be constructed near the P.S.C yard so as to smoothen the flow of the process starting with acceptance of raw materials and ending with shipment of finished products.

Location of main production facilities is arranged around the center of the steelworks site to shorten transportation distances. The energy supply system shall be constructed at the center of the steelworks site for effective operation and maintenance of each production facility. The plants for raw materials, coke oven, blast furnace, steelmaking, hot strip mill and billet mill are laid out for efficient operation.

#### 6-2-3 Features of the layout

Figure 6-2-1 shows the general layout of the steelworks with the following features:

#### (1) Raw material

Iron ore shall be delivered mainly from the P.S.C berth by means of conveyer belts. The raw material yard shall be constructed close to and parallel to the P.S.C yard. Furthermore, the raw material berth (13<sup>m</sup> deep and 270<sup>m</sup> long) shall be constructed at the northwest of the yard to unload coal, scrap, limestone and others raw materials. In the layout preparation, the raw material yard uses common-yard method for minimum construction costs and for effective use of yard areas. The established P.S.C berth and the new raw material berth are so designed as to reserve equivalent area of space which shall be necessary for future extention of the berth.

#### (2) Coke oven

The coke oven shall be installed compactly between the raw material yard and the blast furnace, simplifying the transportation routes of coal and coke.

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The coke oven is so designed as to allow new installations (CDQ or desulfurization of COG) in the future.

#### (3) Blast furnace

The No. 1 blast furnace shall be installed close to the B.O.F plant so that hot metal can be transported directly to the converter by torpedo cars, without the shunting of locomotive. In stage II; the No. 2 blast furnace shall be newly installed next to the No. 1 blast furnace at a distance of 220<sup>m</sup>. Each facility and set of equipment is arranged in the steelworks site compactly so that construction cost can be minimized and the daily operation be made more effective and the construction and repair works made easier.

#### (4) B.O.F plant and continuous casting facilities

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The torpedo car desulfurization equipment, which is to be installed between the blast furnace and the converter, shall be able to handle a large amount of hot metal. The locations of the B.O.F, the continuous casting plant and the lime calcining plant are arranged effectively in the steelmaking area so that quicklime can be delivered directly. The layout takes it into consideration that the continuous casting plant can be coupled with the hot strip mill by means of roller tables in the future. The ingot making yard shall use carpouring method. The ingot storage yard shall be outside the B.O.F plant facility: a railroad transport serves up to the ingot storage yard and the trailers shall be used for the transportation between the ingot storage yard and the berth. The B.O.F slag shall be transported by the railroad, and the slabs and blooms shall be carried by trailer.

#### (5) Hot strip mill

The hot strip mill shall be installed as close to the steelmaking plant as possible, so that the steelmaking plant can supply hot slabs to the hot-strip mill easily in future. When the slab yard and the product finishing yard are extended in stage II, the arrangement of these facilities is designed so as to prevent the flow of the processing from becoming more complicated.

#### (6) Billet mill and medium section mill

The billet mill shall be installed parallel to the hot-strip mill. In stage II, the billet mill shall be reorganized to become a medium section mill by installing continuous finishing mills and finishing equipment behind the billet mill.

Since the new billet mill is to be installed parallel to the medium section mill, this arrangement shall make use of the rolling area more effectively, and make the balance of the overall facility arrangement better and let the roads run straight.

Since the bar mill etc. are estimated to be installed in future, the layout allows for as large a site behind the billet mill as possible.

(7) Auxiliary equipment

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 The power station serves both as a primary substation and is to be situated at the center of the steelworks, i.e. central to working loads.

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- 2) The main roads are designed to smoothen the shipment of finished products. The product berth shall be constructed behind the raw material berth.
- The railroad transportation is designed to be as small as possible and, therefore, the total length of the railroad shall be minimum.
- 4) Each plant shall have its own water recirculation system.

5) On consultation with the Philippine side, the central maintenance shop shall be built in the vicinity of the steelworks, not inside the site.

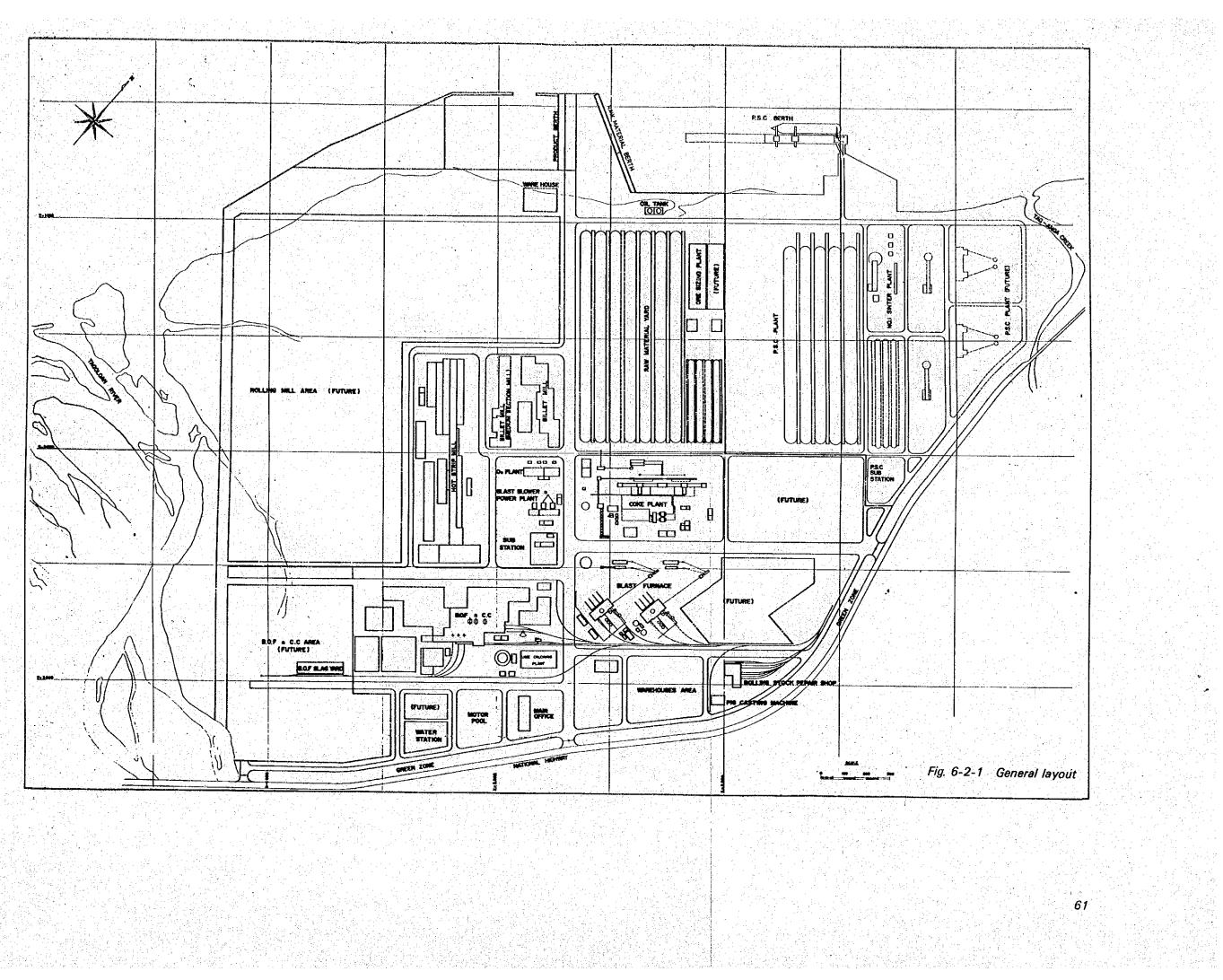
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· 是由在自己的问题,在这些问题,我们就是我们的问题,我们就是我们能够能够。"

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#### 6-3 Main specifications

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Table 6-3-1 shows the main specifications of the individual equipment and facilities, which shall be installed or constructed in stage I and stage II.

Stage 1	Quantity Specifications Specifications		606 ha 233.9 ha reserved for future use	376.5 ha 353.1 ha for land 23.4 ha for reclaimed land	1 set Dpen drainage canal Length: 18,250 m		1 set. 13 m depth x. 270 m length (use for ships of 50,000 D/W)	1 set 7 m depth x 330 m length (designed for 1 set 7 m depth x 250 m length (designed for ships of 5,000 D/W)	1 set 5 <sup>m</sup> depth x 30 <sup>m</sup> length (designed for ships of 2,000 D/W)	1 set Frontal revetment, 5 m depth x 150 m length Attached revetment, 3 m depth x 330 m length Masonry revetment, 510 m length		2 units 500 t/hr Horizontal luffing crane 2 units 1,800 t/hr Rope trolley type crane	2 units	30 units Tractor x 5, Trailer x 13 and others 23 units Tractor x 4, Trailer x 12 and others	1 set Floor area 15,000 m <sup>2</sup> Crane attached to celling	1 set Yard area: 135,000 m <sup>2</sup> 2.2.2.1 Yard area: 45,000 m <sup>2</sup>
Eautomost and facility		1. Preparation and reclamation of land		Prepared and reclaimed land	Construction of drainage canal	2. Port facilities	Raw material berth	Product berth	Crude oil berth-	Bevetment	<ol> <li>Loading and unloading facilities</li> </ol>	Unloader	Loader	Transportation	Product warehouse	

	Specifications	1 unit 3 units and others	sher 2 units								Final cooler Processing capacity: Benzen scrubber 52,000 Nm <sup>3</sup> /hr	Ammonium suifate making equipment 35 t/d			
Stage II	S	Stacker Reclaimer	Hydrocorn crusher	Same as left		Same as left	Same as left		Same as left	Same as left Same as left	Final cooler Benzen scrubbe	Ammonium sul			Same as left
	Quantity		1 Set	e.		1 set	90 chambers		1 system	1 unit 4 units	1 system	1 set			r T
	ations	3 units 3 units and others	2 units 2 units and others	12,000 m <sup>2</sup> 90,000 t 1 unit 1 unit		300 t/bin × 16 bins and others	e mm (W) × 15,800 mm (L)	36.0 m <sup>3</sup> /oven	180 t/hr	52,000 Nm <sup>3</sup> /hr 17,500 Nm <sup>3</sup> /hr cooler	Processing capacity: 52,000 Nm <sup>3</sup> /hr		1,100 m <sup>3</sup> /d		2,600 m <sup>3</sup> 11,200 mm Free standing type otch x 2, Tuyere x 30
Stage 1	Specifications	Stacker Reclaimer	Gyratory crusher Hydrocorn crusher	Yard area: Storage capacity: Stacker Reclaimer		Coal blending bin 30	Coke chamber volume 6,000 mm (H) x 430 mi	Effective inner volume	Conveyor belt capacity	Gas exhaust equipment Primary gas cooler	Final cooler Ammonia scrubber Benzen scrubber		Capacity:		Inner volume: 2,600 m <sup>3</sup> -Hearth diameter: 11,200 mm Furnace support: Free standing type Iron taphole x 2, Slag notch x 2, Tuyere x 30
	Quantity		1 set	tes .		1 set	90 chambers		1 system	2 units 4 units	1 system		1 set		<b>1</b> nuft
	Equipment and facility		Sizing equipment	Blending yard	5. Coke/by-product plant	Coal selection equipment	Coke oven		Coke transportation equipment	Gas exhaust equipment	Gas refining equipment		Biological treatment facilities	6. Blæt furnace equipment	Blast fumace

	Specifications																over the furnace		
Stage 11	Sp	Same as left	Came as left		Same as left	Same as left			Same as left	Same as left			Same as left	Same as left	Same as left	Same as left	Equipment level over the furnace	Same as left	Same as left
	Quantity	3 units	• • •	2 U U U U	H H H	1 unit			1 unit	1 unit			1 unit	1 unit	i S T	1 unit	1 set	1 Linit	8 units
Stage 1	Specifications	Å	Blast temperature: Traation cas volume: 241 000 Nm <sup>2</sup> /hr	Secondary venturi type wetgas cleaner	Öre bunker x 8 bins Coke bunker x 6 bins, Screen x 11 Charging conveyor	Slag pit x 3	Fixed roller type Capacity 35,000 t/month		Storage capacity: 1,050 t	Type: Rotary kiln Capacity, 350 t/d Fuel: COG	Volume 2,7001		Capacity 160 t/heat	Quick change type Oxygen delivery capacity: Max. 40,000 Nm <sup>3</sup> /hr	Type: Noncombustion type Amount of waste gas: Approx, 100,000 Nm <sup>3</sup> /hr	Automatic probe attachment type	Underground bunker, Belt conveyor system	CaC <sub>2</sub> , upward blowing method	Capacity: 360 t
	Quantity	3 units	1ite	3	HUN L	t unit	E S		1 unit	tin 1	1 set		2 units	2 units	2 units	2 units	1 set	t U J	15 units
	Equipment and facility	Hot blast stove	Gas clasmino actument		Trans cortation of furnace raw material	Slag treatment equipment	rig casung machine	Lime calcining plant	Limestone storage silo	Calcining furnace	Prosuct bunker	B.O.F plant	Converter	Lance and lance hoist rigs	Waste gas processing <sup>+</sup> equipment	Sub-lance equipment	F'uxes handling equipment	Torpedo car desulturiza- tion equipment	Steel ladle

Stage II	Specifications		Hot metal charging crane 270 t440t runit and others								
0		Same as left	Hot meta					Same as left	Same as left	Same as left	Same as left
	Quantity	1 unit	2 units					2 units	1 mut	3 units	1 set
Stage 1	Specifications	Capacity: 240 t Motor-driven self travelling type	Hot metal charging crane 270 t x 40 t x 1 unit Scrap charging crane 90 t x 75 t x 1 unit	Steel ladie service crane 240 V40t x 1 units Stripper crane 35 V1 unit and others	Capacity: 250 t (Purchase in transportation facilities)	500 m <sup>2</sup>		Type: Low-head cruved mold type Number of strands: 1 Slab dimentions: Thickness 200 mm Width 900 ~ 1,900 mm Length 4,980~9,200 mm Casting speed: Max. 1.5 m/min.	Type: Eow-head curved mold type Number of strands: 4 Bloom dimensions: 200 x 6,100 mm (L) 250 x 250 x 6,100 mm (L)	Capacity: 240 t.1 r.p.m.	18 t Tundish x 23 units and others
an a	Quantity	2 units	15 units		8 units	1 set		2 units	<b>tiu</b>	3 units	1 set
(i) A statistical st statistical statistical statistical statistical statistical statistical statistical statistical statistical st statistical statistical st statistical statistical statistica statistical statistical statistica statistical statistical statistical statistical statistical statistical statistical statistical statistical statistical st	Equipment and facility	Steel ladle car	Crane	Ingot making facilities	Teeming car	Mold cooling bed	<ol> <li>Continuous casting plant</li> <li>&amp; ingot making facilities</li> <li>(1)Continuous casting plant</li> </ol>	Continuous stab caster	Continuous bloom caster Motten steel handling	equipment Ladie turret	Tundish and tundish car

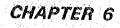
	Specifications										Reversing 4-high mill DC 4,000 kW × 1 unit	Front edger type DC 1,000 kW x 1 unit				
			Same as left		Same as left	Same as left	Same as left		Same as left		Type: Motor:	Type: Motor:				
Stage II	Quantity		1 set		2 units	4 units	26 nuits		tiun [		1 unit	1 unit				
	Specifications		For slab: 2 units For bloom: 4 units	Flor slab: 15.1 x 2 units For bloom: 75.1 x 2 units	Capacity: 45 <sup>-t</sup> (for slabs)	For slabs: 20 m x 75 m x 2 units For bloom: 5 m x 10 m x 2 units	Continuous caster service crane 120 1/40 1 x 1 unit Slab delivery tong crane 45 f x 2 units Slab delivery lifting magnet crane 30 t x 2 units Bloom delivery lifting magnet crane 15 t x 1 unit and others		Type: Working beam type Capacity: 140 t/hr	Motor: AC 1,000 kW × 1 unit			Type: Reversing 4-high type Motor: DC 5,500 kW x 1 unit			the second s
Stage 1	Quantity		1 set	4 units	2 units	4 units	29 units		2 units	1 unit		1	t unit	1 unit		6 units
	בקטוף ודנו מזט ומכווונץ	Cast slab/bloom delivery requipment	Roller table	Pusher	Piler	Cooling bed	Crane	10. Hot strip mill	Reheating furnace Routher	.VSB	lim K		R, mill	<b>1</b>	Finishing rolling mill equipment	Finishing mill

Stage P	Spécifications			Same as left	Capacity: $1.2 \div 6.35 \text{ mm}$ thickness $2 \sim 6 \text{ m}$ length	Material yard crane $90 \pm 2$ units				Capacity: Improved to 45 t/hr			Type: Continuous 2-high mill Motor: DC 500 kW × 10 units		Type: Motor-driven crank method	
	Quantity			nuit 1	, unit	10 units							10 units		1 unit	
Stage 1	Specifications	Motore: Dr 26 for kW v 6 truite		Lype: 3 W rapper roll type Coil inner diameter: 760 mm Coil outer diameter: Max. 1,800 mm		Material yard crane 90 t x 4 units	Rolling yard crane 125 1/30 t x 1 unit and others			Type: Pusher type Cápacity: 30 t/hr Fuel: Mix. gas, Crude oil (for emergency		Type: Reversing 3-high mill Motor: AC 2,000 kW x 1 unit		Type: Motor-driven down cut Capacity: Max, 135 x 135 mm		Cooling bed: Pusher type 6 m x 15 m x 1 unit Binding machine: Automatic wire binding machine x 1 unit
	Quantity		c	sjun z		17 units				l Tunit		l L		1 unit		Ë F
	Equipment and facility			004	Shear	Crane		11. Biilet mill (Stage I)	(Stage 11)	Reheating furnace	Rolling mill equipment	Rougher	Finishing mill	Steel shear	Frying shear	Cooling equipment (for billet mill)

Heavy oil (for emergency) Motor-driven crank type Binding machine: Automatic wire binding machine x Vertical type x 3 sets Horizontal type x 3 sets DC 500 kW x 6 sets Automatic wire binding type One-hand carry type, multi-roll leveler x 1 unit Motor driven down cut Max. dimension 165₽ Motor driven horizontal type Continuous 2-high mill Max. dimension 1009 Skew roller method 12 m x 90 m x 1 unit Medium section rolling-yard crane  $7.5 \pm x.3$  units Reversing 2-high mill DC 2,500 kW Motor-driven crank method x 1 unit and others. Specifications 4 units Pusher type 75 t/hr Mixture gas Stage II (New billet mill) Cooling bed: Type: Capacity: Fuel: Type: Capacity: Capacity Leveler: Motor: Shear: Motor: Type: Type: Type: Type: Type: 6 units 6 units 2 units 2 units Quantity 1 unit 1 unit 1 unit 1 unit Bloom delivery lifting magnet crane  $5 t \times 2$  units Rolling yard crane  $35 t/5 t \times 1$  unit Rolling yard crane 35 1/5 1 x 1 Billet delivery lifting magnet crane 5 1 x 1 unit and others Bloom receiving lifting magnet crane  $5 t \times 2$  units Specifications Stage 1 8 units Quantity Cooling finishing equipment (for medium-section mill) New billet mill (Stage II) Equipment and facility Reheating furnace Binding machine Bloom shear Frying shear Billet mill Rougher Hot saw Crane 70

CHAPTER 6

Cable length: Approx. 7,775 m 70 MVA 138 kV/34.5 kV and others 120 lines Bloom receiving lifting magnet crane 10 t × 4 sets Specifications Product yard beam crane 7.5 t x 4 sets 60,000 kW 60,000 kW Capacity: 255 t/hr Automatic exchange Main transformer Stage II Same as left 34.5 kV Output: Output; 2 units 2 units 2 units 1 unit 1 unit 1 unit 1 set 1 unit Quantity 1 unit 1 unit. 1 unit 11 sets 13 sets 1 set 1 set 1 set Cable length: Approx. 22,550 m Cable length: Approx. 4,310 m 50 MVA 138 kV/34.5 kV 8,300 Nm<sup>3</sup> /hr × 30,5 kg/cm<sup>2</sup> compressor 6,700 Nm<sup>3</sup>/hr  $\times$  9,5 kg/cm<sup>2</sup> compressor 51,500  $Nm^3/hr \times 2$  units  $8,300 \text{ Nm}^3/\text{hr} \times 7 \text{ kg/cm}^2 \text{ compressor}$ 500 lines 30 t/hr Output: Max 21,000 kW Normal blowing capacity Specifications Circuit breaker equipment Output: 40,000 kW Capacity: 60 Nm<sup>3</sup> /hr 40,000 kW 185 t/hr Automatic exchange Steam volume: Main transformer Stage 1 34.5 kV 3.3 kV Capacity: Capacity: Output: 2 units 29 sets 2 units 2 units 3 units 2 units 2 units 2 units 2 units 2 units 2 sets Quantity 1 set 1 set 1 set Air separation equipment Nitrogen gas compressor Compressed oxygen gas delivery equipment Equipment and facility Power generator B.F. Power receiving/ distribution facilities Telephone exchange blower equipment Power distribution Extracted steam Power receiving facilities Argon rectifier Steam turbine Oxygen plant equipment Boiler equipment Generator Crane Blower 12 4 m



Stage II	Specifications	Same as left			30,000 m <sup>3</sup> holder	Same as left			Same as left	Same as left				Quantity of water received 93,000 $m^3/d$	Amount of water treated Industrial water 3,900 m <sup>3</sup> /hr Potable water 210 m <sup>3</sup> /hr		
	Quantity	<b>1</b> set			1 unit	2 units			1 unit	1 unit	1			1			
Stage 1 Stage 1	Specifications	1,000 t liquid oxygen storage tank 3,320 Nm <sup>3</sup> /hr liquid oxygen pump x 1 unit		100,000 m <sup>3</sup> holder	40,000 m <sup>3</sup> holder	6,500 Nm <sup>3</sup> /hr blower	35,000 Nm <sup>3</sup> /hr blower	50,000 m <sup>3</sup> holder	20,000 Nm <sup>3</sup> /hr blower	6,000 t heavy oil tank	Capacity: 7.Whr	<ul> <li>B.F.G. piping: 3,600 mm\$\$\phi\$\$ x 1,200 m</li> <li>C.O.G. piping: 200 ~ 1,700 mm\$\$\phi\$\$ x 3,900 m</li> <li>Mixture gas piping: 600 ~ 2,300 mm\$\$\phi\$\$ x</li> <li>Mixture gas piping: 1,600 m</li> <li>L.D.G. piping: 1,600 mm\$\$\$ x</li> <li>Blast furnace blower piping:</li> <li>1,700 mm\$\$\$\$ x 800 m</li> </ul>	1.	Volume: 90,000 m <sup>3</sup> /d Quantity of water received 53,000 m <sup>3</sup> /d	Amount of water treated Industrial water 2,200 $m^3/hr$ Potable water 130 $m^3/hr$	Amount of intake: 22,000 m <sup>3</sup> /hr	Amount of faad water
	Quantity	1 set		unit	1 unit	4 units	3 units	1 unit	2 units	1 unit	1 unit	itiga n		1 pond	1 set	1 set	1 svstem
		Liquid oxygen equipment	15. Fuel equipment	B.F.G. equipment	C.O.G. equipment		Mixture gas equipment	L.D.G. equipment		Heavy oil equipment	General use boilter	16. Main piping equipment	Vialudinha Aiddne Lavera VI	Water receiving pond	Potable water and industrial water equipment	Seawater equipment	18. Water recirculation facilities Coke/bv-broduct water

Stage 1	Specifications	Amount of feed water Amount of feed water Approx, 9,400 m <sup>3</sup> /hr	Amount of feed water Approx 5,139 m <sup>3</sup> /hr	1 system	Amount of feed water Amount of feed water Approx, 490 m <sup>3</sup> /hr	Amount of water conveyed Amount of water conversed Amount of Amount of Water conversed	Amount of water conveyed in Amount of water conveyed hr Approx: 17,500 m <sup>3</sup> /hr	Amount of feed water Approx. 830 m <sup>3</sup> /hr	化过程 化过程分子 计分子分子 化分子 化合金合金 化合金合金合金合金合金合金合金合金合金合金合金合金合金合金合金合金	320 t torpedo car × 12 20 t slag pot car × 6 20 t slag pot car × 6	200 tereming car 60 t diesel locomotive x 4 25 t diesel locomotive x 2 Railroad length x 10,000 m	Flat body truck x 3, Dump truck x 26 and otehrs and others and others and others (Paved area: approx. 17,810 m <sup>2</sup> ) (Paved area: approx. 33,150 m <sup>2</sup> )	计输送 化二乙基乙烯 网络麦瓜科人名英瓜尔 建一丁基乙烯基基乙基乙烯基乙烯基乙烯 计数字数 计数字数 计分子数 化分子分子 法法律的 化分子分子 法法律法律 化合合体 化乙基乙烯乙基乙烯乙烯乙烯乙烯乙烯乙烯乙烯乙烯乙烯乙烯乙烯乙烯乙烯		Building area (19,600 m <sup>2</sup> )		Building area were 3,600 m <sup>2</sup> merer and a second area of the se
	Quantity	1 system A	T system	1 system	1 system A	1 system	1 system A	1 system		1 set	978 97 97 97 97 97	¥a ⊥ st ,		1 set Bu	1 set	1 set Bu	1 set
		Blast furnace water recirculation	B.O.F. water recirculation	Continuous casting water recirculation	Lime calcining water recirculation	Billet mill water ecirculation	Hot strip mill water recirculation	Oxygen plant water recirculation	19. Transportation facilities	Railroad transportation		Road transportation equipment	20. Maintenance facilities	Central office	Mechanical repair shop	Machine shop	Structural shop

Stage 1 Stage 1	Specifications	Building area 4,500 m <sup>2</sup>	(Building: on the mechanical repair shop site)	Building area $5,400 \text{ m}^2$ $5,400 \text{ m}^2$ building (1,000 m <sup>2</sup> ) shall be added	Building area 2,200 m²/a shop 1,000 m²/a shop 1 shop 1 shop 1 shop 1,000 m²/a shop	arehouse 6,000 m <sup>2</sup> Spare parts wareho	Oil and grease warehouse $500 \text{ m}^2$ Refractories warehouse $500 \text{ m}^2$ Refractories warehouse $7,500 \text{ m}^2$ General material warehouse $2,000 \text{ m}^2$ and general material warehouse shall be added		Building area 1,204 m <sup>2</sup> Sample preparation device x1 set Testing analysis device x1 set	Building area 200 m <sup>2</sup> Sample preparation device x 1 set x 1 set x 1 set Analyzer x 1 set	Building area 1,076 $m^2$ 1 set Building (360 $m^2$ ) shall be added Sample preparation device x.1 set Same as left Same as left Same as left	Main office 10,000 m <sup>2</sup> Plant security office and gate x 3, fence 4,000 m
	Quantity	1 set	1 set	1 set	8 shops	4 sets			8.	1 set	set	8
	Equipment and lacinty	Electric and instrumenta- tion repair shop	Civil/construction/ waterworks repair shop	Rolling stock repair shop	Local maintenance shop	Warehouse		21. Testing and analysis facilities	Raw material testing and analysis equipment	Analysis equipment	Machine testing shop	22 Office



#### 6-4 Summary of consumption and generation

*Table 6-4-1* shows the unit and annual consumption of raw materials, utilities and by-products in the main plants at the stage I.

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Table 6-4-1       Summary of consumption and generation	Raw materials
Table 6-4-1       Summary of consumption and generation	Raw materials

Outling         Unit:         Unit:           material         10 <sup>3</sup> V/V         Name         Unit:           material         10 <sup>3</sup> V/V         10 <sup>3</sup> V/V         1.35 t/t: coke           / by-products         Cole         Coal         1.35 t/t: coke           / by-products         Cole         Saft         953 kg/t-pig           / by-products         Pig iron         Sinter ore         953 kg/t-pig           / table         Doke         Doke         233 kg/t-pig           / table         Coke         233 kg/t-pig         234 kg/t-pig           / table         Doke         Line stone         235 kg/t-pig           / table         Doke         Doke         23 kg/t         23           / table         Doke         Doke         5 kg/t         24           / table         Dok	Outpentin, Totality, Instantial instantialinstantialinstantial instantial instantial instantial instantial in	Orginal material 320 Nm <sup>3</sup> /r - coal 11,1 %/r - coal 35 %/r - coal	
Manualish (by protocols)         Cols         1351:1-coles         1351:1-coles         1351:1-coles         1351:1-coles         351:17 (by m)         Col         351:17 (by m)         251:17 (by m) <t< th=""><th>Truential         Electric prover         —         9.8 x 10<sup>4</sup> KWH           Industrial wears         Cola         1.35 x 10<sup>4</sup> t         Electric prover         56.8 x 10<sup>4</sup> km<sup>3</sup>           / Pwynodouct         Cola         1.35 x 10<sup>4</sup> t         C. G. G.         9.8 x 10<sup>4</sup> km<sup>3</sup>           / Pwynodouct         Cola         1.35 x 10<sup>4</sup> t         C. G. G.         9.8 x 10<sup>4</sup> km<sup>3</sup>           / Pwynodouct         Cola         1.35 x 10<sup>4</sup> t         C. G. G.         9.8 x 10<sup>4</sup> km<sup>3</sup>           / Remote         21.288 x 10<sup>4</sup> t         C. G. G.         9.8 x 10<sup>4</sup> km<sup>3</sup>         2.8 x 10<sup>4</sup> km<sup>3</sup>           / Remote         21.288 x 10<sup>4</sup> t         C. G. G.         1.35 x 10<sup>4</sup> t         2.8 x 10<sup>4</sup> km<sup>3</sup>           / Remote         9.8 x 10<sup>4</sup> t         Kincore         9.8 x 10<sup>4</sup> t         2.9 x 10<sup>4</sup> t           / Remote         9.8 x 10<sup>4</sup> t         Belowing at         1.2 80 km<sup>3</sup> km<sup>3</sup> t         1.3 5 x 10<sup>4</sup> t           / Remote         9.8 x 10<sup>4</sup> t         Belowing at         1.2 80 km<sup>3</sup> km<sup>3</sup> t         2.8 x 10<sup>4</sup> km<sup>3</sup> t           / Remote         9.8 x 10<sup>4</sup> t         Belowing at         1.2 80 km<sup>3</sup> km<sup>3</sup> t         1.2 80 km<sup>3</sup> t           / Remote         9.8 x 10<sup>4</sup> t         Belowing at         1.2 80 km<sup>3</sup> km<sup>3</sup> t         2.8 x 10<sup>4</sup> km<sup>3</sup> t           / R</th><th></th><th>Annual</th></t<>	Truential         Electric prover         —         9.8 x 10 <sup>4</sup> KWH           Industrial wears         Cola         1.35 x 10 <sup>4</sup> t         Electric prover         56.8 x 10 <sup>4</sup> km <sup>3</sup> / Pwynodouct         Cola         1.35 x 10 <sup>4</sup> t         C. G. G.         9.8 x 10 <sup>4</sup> km <sup>3</sup> / Pwynodouct         Cola         1.35 x 10 <sup>4</sup> t         C. G. G.         9.8 x 10 <sup>4</sup> km <sup>3</sup> / Pwynodouct         Cola         1.35 x 10 <sup>4</sup> t         C. G. G.         9.8 x 10 <sup>4</sup> km <sup>3</sup> / Remote         21.288 x 10 <sup>4</sup> t         C. G. G.         9.8 x 10 <sup>4</sup> km <sup>3</sup> 2.8 x 10 <sup>4</sup> km <sup>3</sup> / Remote         21.288 x 10 <sup>4</sup> t         C. G. G.         1.35 x 10 <sup>4</sup> t         2.8 x 10 <sup>4</sup> km <sup>3</sup> / Remote         9.8 x 10 <sup>4</sup> t         Kincore         9.8 x 10 <sup>4</sup> t         2.9 x 10 <sup>4</sup> t           / Remote         9.8 x 10 <sup>4</sup> t         Belowing at         1.2 80 km <sup>3</sup> km <sup>3</sup> t         1.3 5 x 10 <sup>4</sup> t           / Remote         9.8 x 10 <sup>4</sup> t         Belowing at         1.2 80 km <sup>3</sup> km <sup>3</sup> t         2.8 x 10 <sup>4</sup> km <sup>3</sup> t           / Remote         9.8 x 10 <sup>4</sup> t         Belowing at         1.2 80 km <sup>3</sup> km <sup>3</sup> t         1.2 80 km <sup>3</sup> t           / Remote         9.8 x 10 <sup>4</sup> t         Belowing at         1.2 80 km <sup>3</sup> km <sup>3</sup> t         2.8 x 10 <sup>4</sup> km <sup>3</sup> t           / R		Annual
	Ing         Indurral week         Indurral week         Indurral week         288 x 10 <sup>3</sup> m²         288 m²         <	320 (Mm <sup>2</sup> /r. coal 11.1 %/r. coal 3.5 %/r. coal	
Newmonder         Cale         135 k1 from         135 k1 from         135 k1 from         135 k1 from         330 km/hcold         330 km/h	Newpondurat         Cole         1.35 r/t cole         1.288 x 10 <sup>4</sup> nm <sup>3</sup> /t cole         1.68 x 10 <sup>6</sup> nm <sup>3</sup> /t cole         1.68 x 10 <sup>6</sup> nm <sup>3</sup> Damin         877         872 nm <sup>3</sup> /t cole         852 nm <sup>3</sup> /t cole         813 x 10 <sup>6</sup> nm <sup>3</sup> Umase plant         Pig icin         813 x 10 <sup>6</sup> nm <sup>3</sup> /t cole         813 x 10 <sup>6</sup> nm <sup>3</sup> Umase plant         Pig icin         51 net ore         953 kg/t roli         1337 x 10 <sup>7</sup> t         813 x 10 <sup>6</sup> m <sup>3</sup> Umase plant         Pig icin         51 net ore         923 kg/t roli         1337 x 10 <sup>7</sup> t         814 x 10 <sup>6</sup> m <sup>3</sup> Umase plant         Pig icin         51 net ore         923 kg/t roli         1337 x 10 <sup>7</sup> t         814 x 10 <sup>6</sup> m <sup>3</sup> 1 A34         Fileus         325 kg/t roli         1337 x 10 <sup>7</sup> t         816 x 10 <sup>7</sup> t         814 x 10 <sup>6</sup> m <sup>3</sup> 1 A34         Fileus         325 kg/t roli         1337 x 10 <sup>7</sup> t         816 x 10 <sup>7</sup> t         814 x 10 <sup>6</sup> m <sup>3</sup> 1 A34         Fileus         325 kg/t roli         1337 x 10 <sup>7</sup> t         816 x 10 <sup>7</sup> m <sup>3</sup> 213 x 10 <sup>7</sup> m <sup>3</sup> 1 A34         Fileus         325 kg/t roli         86 x 10 <sup>7</sup> t         816 m <sup>3</sup> /t roli         213 x 10 <sup>7</sup> m <sup>3</sup> 1 A4         Fileus         325 kg/t roli         85 kg/t roli <td< td=""><td>320 Nm<sup>3</sup> /f - coal 11.1 %/f - coal 3.5 %/f - coal</td><td></td></td<>	320 Nm <sup>3</sup> /f - coal 11.1 %/f - coal 3.5 %/f - coal	
mmt         271 <td>Mixture gas         BSZ Mn<sup>1</sup>/r. cole         273. r0<sup>4</sup> km<sup>3</sup>           Vinace plant         293. kg/r. cole         1.337. r0<sup>4</sup> km<sup>3</sup>           Vinace plant         293. kg/r. cole         1.337. r0<sup>4</sup> km<sup>3</sup>           Vinace plant         293. kg/r. cole         1.337. r0<sup>4</sup> km<sup>3</sup>           Vinace plant         293. kg/r. cole         23. r0<sup>4</sup> km<sup>3</sup>           Vinace plant         29. kg/r. cole         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Sinter ore         325. kg/r. cig         400. kg/r. cole         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Fileus         325. kg/r. cig         400. r0<sup>4</sup> r. cole         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Fileus         325. kg/r. cig         400. r0<sup>4</sup> r. cole         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Fileus         325. kg/r. cig         400. r0<sup>4</sup> r. cole         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Fileus         325. kg/r. cig         25. r0<sup>4</sup> km<sup>3</sup>         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Fileus         325. kg/r. cig         23. r0<sup>4</sup> km<sup>3</sup>         23. r0<sup>4</sup> km<sup>3</sup>           1,434         Fileus         23. r0<sup>4</sup> r. cole         23. r0<sup>4</sup> km<sup>3</sup>         23. r0<sup>4</sup> km<sup>3</sup>           1,464         Fileus         23. r0<sup>4</sup> r. cole         23. r0<sup>4</sup> km<sup>3</sup>         23. r0<sup>4</sup> km<sup>3</sup></td> <td>11.1 %/t · coal 3.5 %/t - coal</td> <td>380 × 10° Nm<sup>3</sup></td>	Mixture gas         BSZ Mn <sup>1</sup> /r. cole         273. r0 <sup>4</sup> km <sup>3</sup> Vinace plant         293. kg/r. cole         1.337. r0 <sup>4</sup> km <sup>3</sup> Vinace plant         293. kg/r. cole         1.337. r0 <sup>4</sup> km <sup>3</sup> Vinace plant         293. kg/r. cole         1.337. r0 <sup>4</sup> km <sup>3</sup> Vinace plant         293. kg/r. cole         23. r0 <sup>4</sup> km <sup>3</sup> Vinace plant         29. kg/r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Sinter ore         325. kg/r. cig         400. kg/r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Fileus         325. kg/r. cig         400. r0 <sup>4</sup> r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Fileus         325. kg/r. cig         400. r0 <sup>4</sup> r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Fileus         325. kg/r. cig         400. r0 <sup>4</sup> r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Fileus         325. kg/r. cig         25. r0 <sup>4</sup> km <sup>3</sup> 23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Fileus         325. kg/r. cig         23. r0 <sup>4</sup> km <sup>3</sup> 23. r0 <sup>4</sup> km <sup>3</sup> 1,434         Fileus         23. r0 <sup>4</sup> r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 23. r0 <sup>4</sup> km <sup>3</sup> 1,464         Fileus         23. r0 <sup>4</sup> r. cole         23. r0 <sup>4</sup> km <sup>3</sup> 23. r0 <sup>4</sup> km <sup>3</sup>	11.1 %/t · coal 3.5 %/t - coal	380 × 10° Nm <sup>3</sup>
Remut         Span         Span <t< td=""><td>Steam         Steam         Steam         St.4 kg/t-coree         St.3 kg/t-core         S</td><td>3:5 %/1 - coal</td><td>131 × 10<sup>3</sup> t</td></t<>	Steam         Steam         Steam         St.4 kg/t-coree         St.3 kg/t-core         S	3:5 %/1 - coal	131 × 10 <sup>3</sup> t
Mindee filter         Reference         Caractive	Nitrogen         ~         Minitioan         Minitioa		42 × 10 <sup>3</sup> t
Numerabent         Ray of no.         State of state	Matrix         Control         Stander         ALX	<u>.</u>	11 × 10 <sup>3</sup> :
Industrial value         Industrial value<	Production         Production         Proving all function		39.4 × 10 <sup>3</sup> t
True one 1,134         Situe one 2,32,40,01         Situe one 2,34,7,99         Situe one 2,34,7,79         Situe one 2,34,77         Situe one 2,34,77         Situe one 2,33,4,70         Situe one 2,33,4,70         Situ	Protable water 1,434         Protable water Fig icon         Sinter ore 1,434         Sinter ore Files         SS3 kg/r. pig 325 kg/r. pig Files         Polable water 322 kg/r. pig 490 x 10 <sup>3</sup> t         Polable water Heavy oil         0.07 m²/r; code 496 x 10 <sup>3</sup> t         Bit Mm²/r; pig 490 x 10 <sup>3</sup> t         Bit Mm²/r; pig 496 x 10 <sup>3</sup> t         Bit Mm²/r; pig 436 x 10 <sup>3</sup> t         Bit Mm²/r; pig 438 x 10 <sup>4</sup> m²/r         Bit M²/r		
Winses Dent         Rg rön         Sinter ore         SG tg/r og         1,800 mm/r, ng         1,360 mm/r, ng         360 mm/r	Vimaces plant         Pig icon         Sinter cree         953 kg/r. pig         1,357 x 10 <sup>3</sup> t         Elowing air         1,360 Mm <sup>3</sup> /r. pig         1,351 x 10 <sup>6</sup> Mm <sup>3</sup> 1,434         Filee         322 kg/r. pig         496 x 10 <sup>3</sup> t         Heavy cili         40 kg/r. pig         57 x x 10 <sup>4</sup> t         1,351 x 10 <sup>6</sup> Mm <sup>3</sup> 1,434         Filee         325 kg/r. pig         496 x 10 <sup>3</sup> t         Elowing air         1,360 Nm <sup>3</sup> /r. pig         57 x 10 <sup>4</sup> t         946 x 10 <sup>4</sup> t         345 x 10 <sup>6</sup> km <sup>3</sup> Relets         325 kg/r. pig         13 x 10 <sup>4</sup> t         Stam         15 kg/r. pig         25 x 10 <sup>4</sup> m <sup>3</sup> 25 x 10 <sup>6</sup> km <sup>3</sup> Lime stone         40 kg/r. pig         15 x 10 <sup>4</sup> t         Stam         15 kg/r. pig         215 x 10 <sup>4</sup> t         215 x 10 <sup>4</sup> t           Colet         520 kg/r. pig         746 x 10 <sup>4</sup> t         Stam         15 kg/r. pig         215 x 10 <sup>4</sup> m <sup>3</sup> Colet         520 kg/r. pig         74 x 10 <sup>4</sup> km <sup>3</sup> 23 km <sup>3</sup> /r. pig         23 x 10 <sup>4</sup> m <sup>3</sup> Action         Duck time         Lime stone         23 km <sup>3</sup> /r. pig         33 x 10 <sup>4</sup> m <sup>3</sup> 33 x 10 <sup>4</sup> m <sup>3</sup> Stone         Duck time         Lime stone         23 km <sup>3</sup> /r. pig         33 x 10 <sup>4</sup> m <sup>3</sup> 33 x 10 <sup>4</sup> m <sup>3</sup> 33 x 10 <sup>4</sup> m <sup>3</sup> <td></td> <td></td>		
1,434         Pallets         325 kg/t r bjr         496 x 10' t         496 x 10' t         514 x 10' t         312 x 10' t         300 x 10' t bjr         312 x 10' t         300 x 10' t bjr         312 x 10' t         200 x 10' t bjr         312 x 10' t         200 x 10' t bjr         312 x 10' t bjr         1 1 1 1 x 1 x 10' t bjr <t< td=""><td>1,434         Pellets         32 kg/t - pig         450 x 10<sup>3</sup> t         Heavy oil         40 kg/t - pig         57 x x 10<sup>4</sup> t           Fine ore         325 kg/t - pig         57 x 10<sup>4</sup> t         8. f. G.         660 Nm<sup>3</sup>/t - pig         57 x x 10<sup>4</sup> t           Nanganese         9 kg/t - pig         57 x 10<sup>4</sup> t         51 x 10<sup>2</sup> t         2 x m<sup>3</sup>/t - pig         215 x 10<sup>4</sup> t           Lime stone         40 kg/t - pig         57 x 10<sup>4</sup> t         5 team         15 kg/t - pig         215 x 10<sup>4</sup> t           Lime stone         40 kg/t - pig         57 x 10<sup>4</sup> t         5 team         15 kg/t - pig         215 x 10<sup>4</sup> t           Coke         520 kg/t - pig         745 x 10<sup>4</sup> t         5 team         3 x 10<sup>4</sup> t         9 teg/t - pig         2 x 10<sup>4</sup> m<sup>3</sup>           Doke         520 kg/t - pig         745 x 10<sup>4</sup> t         5 team         3 x 10<sup>4</sup> m<sup>3</sup>         3 x 10<sup>4</sup> m<sup>3</sup>           Lime stone         Lime stone         2 33 t/t         2 16 k x 10<sup>4</sup> t         2 c. G. G.         3 2 x 10<sup>4</sup> m<sup>3</sup>           Addition         Lime stone         2 33 t/t         2 16 k x 10<sup>4</sup> t         2 c. G. G.         3 1 k 10<sup>4</sup> m<sup>3</sup>           Addition         Lime stone         2 33 t/t         2 16 k x 10<sup>4</sup> t         2 c. G. G.         3 2 x 10<sup>4</sup> m<sup>3</sup>           Addition</td><td></td><td>239 × 10° Nm<sup>3</sup></td></t<>	1,434         Pellets         32 kg/t - pig         450 x 10 <sup>3</sup> t         Heavy oil         40 kg/t - pig         57 x x 10 <sup>4</sup> t           Fine ore         325 kg/t - pig         57 x 10 <sup>4</sup> t         8. f. G.         660 Nm <sup>3</sup> /t - pig         57 x x 10 <sup>4</sup> t           Nanganese         9 kg/t - pig         57 x 10 <sup>4</sup> t         51 x 10 <sup>2</sup> t         2 x m <sup>3</sup> /t - pig         215 x 10 <sup>4</sup> t           Lime stone         40 kg/t - pig         57 x 10 <sup>4</sup> t         5 team         15 kg/t - pig         215 x 10 <sup>4</sup> t           Lime stone         40 kg/t - pig         57 x 10 <sup>4</sup> t         5 team         15 kg/t - pig         215 x 10 <sup>4</sup> t           Coke         520 kg/t - pig         745 x 10 <sup>4</sup> t         5 team         3 x 10 <sup>4</sup> t         9 teg/t - pig         2 x 10 <sup>4</sup> m <sup>3</sup> Doke         520 kg/t - pig         745 x 10 <sup>4</sup> t         5 team         3 x 10 <sup>4</sup> m <sup>3</sup> 3 x 10 <sup>4</sup> m <sup>3</sup> Lime stone         Lime stone         2 33 t/t         2 16 k x 10 <sup>4</sup> t         2 c. G. G.         3 2 x 10 <sup>4</sup> m <sup>3</sup> Addition         Lime stone         2 33 t/t         2 16 k x 10 <sup>4</sup> t         2 c. G. G.         3 1 k 10 <sup>4</sup> m <sup>3</sup> Addition         Lime stone         2 33 t/t         2 16 k x 10 <sup>4</sup> t         2 c. G. G.         3 2 x 10 <sup>4</sup> m <sup>3</sup> Addition		239 × 10° Nm <sup>3</sup>
Fine cree         325 kg/r big         466 x 10 <sup>3</sup> t         8.4.5         6.5. kg0 km²/r big         35 x 10 <sup>3</sup> km²         8.4.1         3 kg1 - 20           Nanganese         9 kg1 - 50         13 x 10 <sup>3</sup> t         C. O. G.         2 Nm³/r - 50         2 S x 10 <sup>3</sup> km³         Dars         2 km³/r - 50           Lime store         50 kg1 - 50         13 x 10 <sup>3</sup> t         C. O. G.         2 Nm³/r - 50         2 S x 10 <sup>3</sup> km³         Dars         2 kg1 - 50           Color         500 kg1 - 50         7 K 10 <sup>3</sup> t         S color         2 S x 10 <sup>3</sup> km³         Dars         2 kg1 - 50           Color         500 kg1 - 50         7 K 10 <sup>3</sup> t         S color         2 S x 10 <sup>3</sup> km³         Dars         2 S kg1 - 50           Color         500 kg1 - 50         7 K 10 <sup>4</sup> t         S color         2 S kg1 - 50         2 S kg1	Fine ore         225 kg/r pig         466 x 10 <sup>3</sup> (r         B. F. G.         650 Nm <sup>3</sup> (r         946.6 x 10 <sup>4</sup> (r         946.7 r         947.1 (r         94.1 x 10 <sup>4</sup> (r <td>•••</td> <td>430 × 10<sup>3</sup> t</td>	•••	430 × 10 <sup>3</sup> t
Manganese         9 (sy1-raig)         13 x 10 <sup>2</sup> t         C.O.G.         2 Nm <sup>3</sup> /L raig         2 23 x 10 <sup>3</sup> Nm <sup>3</sup> Dust         20 kg/t-raig           Lime stone         9 (sy1-raig)         57 x 10 <sup>3</sup> t         5 x 10 <sup>3</sup> t         5 x 10 <sup>3</sup> t         5 x 10 <sup>3</sup> t         2 15 x 10 <sup>3</sup> t         2 15 x 10 <sup>3</sup> t         2 0 kg/t-raig           Cole         520 kg/t-raig         57 x 10 <sup>3</sup> t         5 x 10 <sup>3</sup> t         5 x 10 <sup>3</sup> t         5 x 10 <sup>3</sup> t         2 15 x 10 <sup>3</sup> t         2	Manganeet         9 kg/r pig         13 x 10 <sup>2</sup> r         C.O. G.         2 Nm <sup>3</sup> (t - pig         2 2 x 10 <sup>4</sup> (t - pig         2 x 10 <sup>4</sup> (t - pig <th2 10<sup="" x="">4 (t - pig</th2>		4.3 × 10 <sup>3</sup> t
Lime store         40 kg/r, c)g         57 x 10 <sup>4</sup> r         Stem         15 kg/r - big         215 x 10 <sup>4</sup> r         1           Action         520 kg/r         57 x 10 <sup>4</sup> r         5 cm         15 kg/r         1 m <sup>3</sup> /r         23 x 10 <sup>4</sup> km <sup>3</sup> 23 x 10 <sup>4</sup> km <sup>3</sup> Action         20 kg/r         1 m <sup>3</sup> /r         23 x 10 <sup>4</sup> km <sup>3</sup> 23 x 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> Action         23 x 10 <sup>4</sup> km <sup>3</sup> 3 km <sup>3</sup> /r         3 km <sup>3</sup> /r         30 x 10 <sup>4</sup> km <sup>3</sup> 33 s 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> Action         23 x 10 <sup>4</sup> km <sup>3</sup> 23 km <sup>3</sup> /r         30 x 10 <sup>4</sup> km <sup>3</sup> 30 x 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> 23 s 10 <sup>4</sup> km <sup>3</sup> Action Store         23 km <sup>3</sup> /r         23 km <sup>3</sup> /r         30 x 10 <sup>4</sup> km <sup>3</sup> 30 x 10 <sup>4</sup> km <sup>3</sup> 20 x 10 <sup>4</sup> km <sup>3</sup> 20 x 10 <sup>4</sup> km <sup>3</sup> Action Store         23 km <sup>3</sup> /r         23 km <sup>3</sup> /r         33 x 10 <sup>4</sup> km <sup>3</sup> 21 km <sup>4</sup> km <sup>3</sup> 20 x 10 <sup>4</sup> km <sup>3</sup> 20 x 10 <sup>4</sup> km <sup>3</sup> Action Store         23 km <sup>3</sup> /r         20 x 10 <sup>4</sup> km <sup>3</sup> 23 km <sup>3</sup> /r         21 km <sup>3</sup> /r         20 x 10 <sup>4</sup> km <sup>3</sup> 20	Lime stone         40 kg/t - pig         57 x 10 <sup>2</sup> t         Steam         15 kg/t - pig         21.5 x 10 <sup>2</sup> t           Coke         520 kg/t - pig         57 x 10 <sup>2</sup> t         Electric power         20 KWH/t - pig         29.5 x 10 <sup>2</sup> t           Coke         520 kg/t - pig         746 x 10 <sup>2</sup> t         Electric power         20 KWH/t - pig         29.5 x 10 <sup>2</sup> m <sup>3</sup> Coke         520 kg/t - pig         746 x 10 <sup>2</sup> t         Electric power         20 KWH/t - pig         29.5 x 10 <sup>4</sup> m <sup>3</sup> All         Coke         52.0 kg/t - pig         7.1 m <sup>3</sup> /t - pig         3.3 x 10 <sup>4</sup> m <sup>3</sup> All         Coke         2.33 t/t         2.96 x 10 <sup>4</sup> t         0.000         3.3 x 10 <sup>4</sup> m <sup>3</sup> All         Coke         2.33 t/t         2.96 x 10 <sup>4</sup> t         C. O. G.         32.2 km <sup>3</sup> /t - pig         3.3 x 10 <sup>4</sup> m <sup>3</sup> Stone         Quick lime         Lime stone         2.33 t/t         2.96 k 10 <sup>4</sup> t         3.3 x 10 <sup>4</sup> m <sup>3</sup> 3.3 x 10 <sup>4</sup> m <sup>3</sup> Stone         Molton steel         Hot metal         892.5 kg/t         1.4 x 10 <sup>4</sup> t         C. O. G         2.0 2 M <sup>4</sup> t         5.2 x 10 <sup>5</sup> m <sup>3</sup> 3.3 x 10 <sup>4</sup> m <sup>3</sup> Datatie water         1.5580         Mold pig iron         2.1 5 kg/t         3.1 x 10 <sup>4</sup> t         C. O. G		28.7 × 10 <sup>3</sup> f
Core         SAD kg/r, pig         Z6X kUM-r, pig         Z6X kUM-r, pig         Z6X r(0* KOM-r)           alcining         Lime store         2.33 k10* KOM-r         3.64 k10* r         3.64 k10* r         3.64 k10* r           alcining         Curk lime         Lime store         2.33 k10* KOM-r         3.64 k10* r         3.64 k10* r         3.64 k10* r         3.64 k10* r           Alcining         Curk lime         Lime store         2.33 k10* KOM-r         3.64 k10* r         3.32 k10* r         3.33 k10* r         3.64 k11* r         3.64 k1* r         3.6	Code         246 × 10* 1         Electric power         20 KWH/r. pig         28.7 × 10* KWH           Industrial water         4.1 m <sup>3</sup> /r. pig         29. × 10* m <sup>3</sup> 23.2 × 10* km <sup>3</sup> 23.2 × 10* km <sup>3</sup> alcining         Outck lime         Lime stone         2.33 ± 11         2.19.6 × 10* t         2.0.6         23.2 × 10* km <sup>3</sup> stone         Unick lime         Lime stone         2.33 ± 11         2.19.6 × 10* t         2.0.6         32.2 × 10* km <sup>3</sup> stone         94         Notick lime         Lime stone         2.33 ± 11         2.0.6         32.2 × 10* km <sup>3</sup> stone         94         Notor stone         2.0.6         32.2 × 10* km <sup>3</sup> 33.3 ± 10* km <sup>3</sup> stone         94         Hot metal         292.5 kg/t         1.4 × 10* t         2.0.2 & 11         3.3 ± 10* km <sup>3</sup> Allowiton steel         Hot metal         892.5 kg/t         1.4 × 10* t         C.0.6         2.0 × 10* m <sup>3</sup> Allowiton steel         Hot metal         892.5 kg/t         1.4 × 10* t         C.0.6         2.0 × 10* m <sup>3</sup> Allowiton steel         Hot metal         892.5 kg/t         1.4 × 10* t         C.0.6         2.0 × 10* m <sup>3</sup> Allowiton steel         Hot metal         892.5 kg/t		
All metriel         Box 10 <sup>6</sup> m²         Box 10 <sup>6</sup> m² </td <td>All molectrial water         All molectrial water         All molectrial water         All molectrial molectrial water         Bis All of molectial molectrial mater           alcining         Outick lime         Lime stone         2.33 t/t         219.6 × 10<sup>5</sup> t         3.3 × 10<sup>6</sup> mm<sup>3</sup>/t         2.35 × 10<sup>6</sup> mm<sup>3</sup>/t         2.35 × 10<sup>6</sup> mm<sup>3</sup>/t         2.35 × 10<sup>6</sup> mm<sup>3</sup>/t         2.35 × 10<sup>6</sup> mm<sup>3</sup>/t         2.33 × 10<sup>6</sup> mm<sup>3</sup>/t         2.32 × 10<sup>6</sup> mm<sup>3</sup>/t         2.32 × 10<sup>6</sup> mm<sup>3</sup>/t         2.33 × 10<sup>6</sup> mm<sup>3</sup>/t         2.32 × 10<sup>6</sup> mm<sup>3</sup>/t         2.2 × 10<sup>5</sup> m<sup>3</sup>/t         2.2 × 10<sup>5</sup> m<sup>3</sup>/t</td> <td></td> <td></td>	All molectrial water         All molectrial water         All molectrial water         All molectrial molectrial water         Bis All of molectial molectrial mater           alcining         Outick lime         Lime stone         2.33 t/t         219.6 × 10 <sup>5</sup> t         3.3 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.35 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.33 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.32 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.32 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.33 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.32 × 10 <sup>6</sup> mm <sup>3</sup> /t         2.2 × 10 <sup>5</sup> m <sup>3</sup> /t		
Amil Ar- pig         Sum <sup>2</sup> Ar- pig         4.3 × 10 <sup>6</sup> Nm <sup>2</sup> Sam <sup>2</sup> Ar- pig         4.3 × 10 <sup>6</sup> Nm <sup>2</sup> alcining         Duick time         Lime stone         2.33 tr/         2.39 km <sup>2</sup> Ar- big         33 × 10 <sup>6</sup> Nm <sup>2</sup> stone         2.33 tr/         2.33 tr/         2.30 km <sup>2</sup> Ar- big         33 × 10 <sup>6</sup> Nm <sup>2</sup> 33 × 10 <sup>6</sup> Nm <sup>2</sup> stone         2.33 tr/         2.33 tr/         2.30 km <sup>2</sup> Ar- big         33 × 10 <sup>6</sup> Nm <sup>2</sup> 53 × 10 <sup>6</sup> Nm <sup>2</sup> stone         2.30 km <sup>2</sup> Ar- big         33 × 10 <sup>6</sup> Nm <sup>2</sup> 51 × 10 <sup>6</sup> Nm <sup>2</sup> 51 × 10 <sup>6</sup> Nm <sup>2</sup> 94         Mold pig iron         2.15 kg/1         3.37 × 10 <sup>6</sup> 1         3.5 m <sup>2</sup> /A         3.1 × 10 <sup>6</sup> m <sup>2</sup> 2.0 kg/1           01ant         Molton steel         Hot metai         32.5 x 10 <sup>6</sup> tr         3.1 × 10 <sup>6</sup> m <sup>2</sup> 2.1 × 10 <sup>6</sup> m <sup>2</sup> 2.0 kg/1           01abit         Molton steel         Hot metai         32.5 m <sup>2</sup> /A         3.1 × 10 <sup>6</sup> m <sup>2</sup> 2.1 × 10 <sup>6</sup> m <sup>2</sup> 2.0 kg/1           01abit         Molton steel         2.5 kg/1         3.1 × 10 <sup>6</sup> m <sup>2</sup> 1.4 × 10 <sup>6</sup> m <sup>2</sup> 2.0 kg/1           01abit         T = 2.5 kg/1         3.1 × 10 <sup>6</sup> tr         2.0 km <sup>2</sup> /Ar         3.1 × 10 <sup>6</sup> m <sup>2</sup> 2.0 kg/1           01abit	Cocycen         3 Nm <sup>2</sup> /r         pig         4,3 × 10 <sup>6</sup> Nm <sup>3</sup> alcining         Quick lime         Lime stone         2.33 t/r         219.6 × 10 <sup>5</sup> t         32.2 Nm <sup>3</sup> /r         90         33 × 10 <sup>6</sup> Nm <sup>3</sup> stone         2.33 t/r         2.0 G         32.2 Nm <sup>3</sup> /r         90         33 × 10 <sup>6</sup> Nm <sup>3</sup> stone         2.33 t/r         2.19.6 × 10 <sup>5</sup> t         C. O. G         32.2 Nm <sup>3</sup> /r         90         30.3 × 10 <sup>6</sup> Nm <sup>3</sup> stone         94         Electric power         5.2 × 10 <sup>6</sup> Km <sup>1</sup> 2.0 Km <sup>1</sup> /r         30.3 × 10 <sup>6</sup> m <sup>3</sup> 31.1 × 10 <sup>6</sup> m <sup>3</sup> 0fant         Molton steel         Hot metal         892.5 kg/r         1.4 × 10 <sup>6</sup> t         2.0 G         2.0 m <sup>3</sup> /r         31.1 × 10 <sup>6</sup> m <sup>3</sup> 0fant         1.563         Mold pig iron         21.5 kg/r         1.4 × 10 <sup>6</sup> t         C. O. G         2.0 m <sup>3</sup> /r         31.1 × 10 <sup>6</sup> m <sup>3</sup> 0fant         1.563         Mold pig iron         21.5 kg/r         1.4 × 10 <sup>6</sup> t         6.0 m <sup>3</sup> /r         1.4.1 × 10 <sup>6</sup> km <sup>3</sup> 0fant         1.563         Wold pig iron         21.5 kg/r         31.4 × 10 <sup>7</sup> t         6.0 m <sup>3</sup> /r         9.1 × 10 <sup>7</sup> t         1.4.1 × 10 <sup>6</sup> km <sup>3</sup> 0/r         2.0 kg/r         9.1 × 10 <sup>7</sup> t         6.		
Mitrogen         23 Mm <sup>3</sup> /r         Mm <sup>3</sup> /r         Sax 10 <sup>6</sup> Mm <sup>3</sup> Fine lime store         233 t/t         219.6 x 10 <sup>7</sup> t         C. O. G.         30.3 x 10 <sup>6</sup> Mm <sup>3</sup> Fine lime store         233 kpl         Molton ster         301 kpl         Fine lime store         233 kpl         Molton ster         301 kpl	Aliciping         Outsk time         Lime store         2.33 ± 10 <sup>6</sup> Nm <sup>3</sup> 33 × 10 <sup>6</sup> Nm <sup>3</sup> 33 × 10 <sup>6</sup> Nm <sup>3</sup> storie         Lime store         2.33 ± 10 <sup>6</sup> Nm <sup>3</sup> 23 × 10 <sup>6</sup> Nm <sup>3</sup> 30.3 × 10 <sup>6</sup> Nm <sup>3</sup> 30.3 × 10 <sup>6</sup> Nm <sup>3</sup> storie         Lime store         2.33 ± 10 <sup>6</sup> Nm <sup>3</sup> 23 × 10 <sup>6</sup> Nm <sup>3</sup> 30.3 × 10 <sup>6</sup> Nm <sup>3</sup> 30.3 × 10 <sup>6</sup> Nm <sup>3</sup> storie         Storie         S.5 × 10 <sup>6</sup> V         C. O.G.         32.2 × 10 <sup>6</sup> Nm <sup>3</sup> 30.3 × 10 <sup>6</sup> Nm <sup>3</sup> 94         Notion steel         Hot metal         B92.5 × 9/1         1.4 × 10 <sup>6</sup> t         C. O.G         2.02 £ V         31.3 × 10 <sup>6</sup> Mm <sup>3</sup> 0         Notion steel         Hot metal         B92.5 × 9/1         1.4 × 10 <sup>6</sup> t         C. O.G         2.00 M <sup>3</sup> /1         31.3 × 10 <sup>6</sup> Nm <sup>3</sup> 0         Vision         21.5 × 9/1         1.4 × 10 <sup>6</sup> t         C. O.G         2.0 Mm <sup>3</sup> /1         41.1 × 10 <sup>6</sup> Nm <sup>3</sup> 0         Orice         20.3 × 10 <sup>7</sup> t         Nitrogen         5.0 Nm <sup>3</sup> /1         41.1 × 10 <sup>6</sup> Nm <sup>3</sup> 0         Core         20.4 M <sup>3</sup> /1         Nitrogen         5.0 Nm <sup>3</sup> /1         41.1 × 10 <sup>6</sup> Nm <sup>3</sup> 0         Core         20.4 M <sup>3</sup> /1         1.1.1 × 10 <sup>7</sup> t         Electric power         3		
lime         Lime score         2.33 t/t         219.6 × 10 <sup>4</sup> t.         C. O. G.         322.2 M/h /r         Fine lime score         233 lg/t           94         55 KWH/r         55 KWH/r         5.2 × 10 <sup>6</sup> KWH         5.2 × 10 <sup>6</sup> KWH         7.0 × 10 <sup>6</sup> KWH         7.0 × 10 <sup>6</sup> KWH         2.5 × 10 <sup>6</sup> KWH	alcining         Quick lime         Lime stone         2.33 t/t         219.6 × 10 <sup>4</sup> t         C. O. G.         32.22 Nm <sup>3</sup> /t         30.3 × 10 <sup>6</sup> Nm <sup>3</sup> stone         stone         2.33 t/t         219.6 × 10 <sup>4</sup> t         C. O. G.         32.2 Nm <sup>3</sup> /t         30.3 × 10 <sup>6</sup> Nm <sup>3</sup> stone         stone         2.33 t/t         219.6 × 10 <sup>4</sup> t         C. O. G.         32.2 k/mH/f         5.2 × 10 <sup>5</sup> K/mH           94         Potable water         20.2 &t         1.9 × 10 <sup>6</sup> m <sup>2</sup> 20.2 &t         1.9 × 10 <sup>6</sup> m <sup>2</sup> 94         Notion steel         Hor metal         392.5 kg/r         1.4 × 10 <sup>6</sup> t         C. O. G         2.0 Mm <sup>3</sup> /r         331 × 10 <sup>3</sup> m <sup>3</sup> 1.568         Mold pig iron         21.5 kg/r         1.4 × 10 <sup>6</sup> t         C. O. G         2.0 Mm <sup>3</sup> /r         31.1 × 10 <sup>6</sup> Mm <sup>3</sup> 0.16         20.4 × 10 <sup>2</sup> t         1.1 × 10 <sup>9</sup> t         Nitroen         3.5 × 10 <sup>6</sup> km <sup>3</sup> 4.1 × 10 <sup>6</sup> t         4.1 × 10 <sup>6</sup> km <sup>3</sup> 0.16         20.4 × 10 <sup>2</sup> t         Bilant         Nitroen         2.0 × 10 <sup>3</sup> t         1.1 × 10 <sup>6</sup> km <sup>3</sup> 0.16         2.1 × 10 <sup>2</sup> t         Nitroen         2.0 × 10 <sup>3</sup> t         1.1 × 10 <sup>6</sup> km <sup>3</sup> 0.16         2.1 × 10 <sup>2</sup> t         1.1 × 10 <sup>2</sup> t         1.1 × 10 <sup>2</sup> t		
store         Siz x 10 <sup>6</sup> KWH         Fine quick line         25 x 10 <sup>6</sup> KWH         Fine quick line         25 x 41           94         Potable water         20.2 kH         1.9 x 10 <sup>6</sup> m <sup>3</sup> Studge         40 kg/h           Potable water         20.2 kH         1.9 x 10 <sup>6</sup> m <sup>3</sup> Studge         40 kg/h           Potable water         20.2 kH         1.9 x 10 <sup>6</sup> m <sup>3</sup> Studge         40 kg/h           Potable water         20.2 kH         1.4 x 10 <sup>6</sup> t         2.0 kg/h         Studge         40 kg/h           Notion steel         Hot metal         B92.5 kg/h         1.4 x 10 <sup>6</sup> t         2.0 kg/h         3.1 x 10 <sup>6</sup> m <sup>3</sup> Studge         40 kg/h           Notion steel         Hot metal         B92.5 kg/h         1.4 x 10 <sup>6</sup> t         2.0 kg/h         3.1 x 10 <sup>6</sup> m <sup>3</sup> Studge         40 kg/h           Ore         2.1 5 kg/t         3.1 x 10 <sup>6</sup> t         0.0 kg/h         14.1 x 10 <sup>6</sup> km <sup>3</sup> 10 kg/h         1.2 kg/h         12 kg/h           Cuick time         5 kg/t         1.4 x 10 <sup>7</sup> t         14.1 x 10 <sup>6</sup> km <sup>3</sup> 10 kg/h         1.2 kg/h         12 kg/h           Line store         5 kg/t         1.4 x 10 <sup>7</sup> km/h         4.7 x 10 <sup>6</sup> km/h         1.0 kg/h         1.2 kg/h         1.2 kg/h	Stone         State         55 kWH/it         52 x 10 <sup>6</sup> kWH           94         50 x 10 <sup>6</sup> kWH         52 x 10 <sup>6</sup> kWH         52 x 10 <sup>6</sup> kWH           94         20 x 8/1         19 x 10 <sup>6</sup> m <sup>3</sup> 19 x 10 <sup>6</sup> m <sup>3</sup> 91         Molton steel         Hor metal         892.5 kg/r         1 x x 10 <sup>6</sup> t         2.0.4         3.1 x 10 <sup>6</sup> m <sup>3</sup> 1.558         Mold pig ircn         21.5 kg/r         1.4 x 10 <sup>6</sup> t         C. O. G         2.0 m <sup>3</sup> /r         3.1 x 10 <sup>6</sup> m <sup>3</sup> 0         0         2.0.5 kg/r         1.4 x 10 <sup>6</sup> t         C. O. G         2.0 m <sup>3</sup> /r         3.1 x 10 <sup>6</sup> m <sup>3</sup> 0         0         2.0 kg/r         3.1 4 x 10 <sup>9</sup> t         Norspen         9.0 m <sup>3</sup> /r         14.1 x 10 <sup>6</sup> m <sup>3</sup> 0         0         2.0 kg/r         9.1 x 10 <sup>9</sup> t         Norspen         9.0 m <sup>3</sup> /r         4.1 x 10 <sup>6</sup> kM <sup>3</sup> 1         1         2.0 kg/r         9.1 x 10 <sup>9</sup> t         Norspen         3.0 kWH         4.1 x 10 <sup>6</sup> kM <sup>3</sup>	<u></u>	21.9×10 <sup>-1</sup>
94         Pouble water         20.2 &r (1)         1.9 × 10 <sup>6</sup> m <sup>3</sup> Studge         40 tagh           Molton steel         Hot metal         892.5 kg/r         1.4 × 10 <sup>6</sup> t         2.0.5 m <sup>3</sup> /r         35 m <sup>3</sup> /r         331 × 10 <sup>6</sup> m <sup>3</sup> 20 tagh           Molton steel         Hot metal         892.5 kg/r         1.4 × 10 <sup>6</sup> t         C.O.G         2 Nm <sup>3</sup> /r         331 × 10 <sup>6</sup> m <sup>3</sup> 8.0. F, stag         120 kg/r           Mold pig icon         21.5 kg/r         33.7 × 10 <sup>6</sup> t         C.O.G         2 Nm <sup>3</sup> /r         3.1 × 10 <sup>6</sup> m <sup>3</sup> 8.0. F, stag         120 kg/r           Orie         20 kg/r         91.4 × 10 <sup>7</sup> t         Nicogen         9 Nm <sup>3</sup> /r         14.1 × 10 <sup>6</sup> m <sup>3</sup> 20 kg/r           Quick time         50 kg/r         91.4 × 10 <sup>7</sup> t         Nicogen         30 kW/Hr         47 × 10 <sup>6</sup> KWH         17 kg/r           Lime stone         5 kg/r         7.8 × 10 <sup>7</sup> t         Potable water         0.05 m <sup>3</sup> /r         80 × 10 <sup>7</sup> m <sup>3</sup> 20 kg/r           Scrap         23 kg/r         4.7 × 10 <sup>6</sup> KWH         20 kg/r         20 kg/r         70 Nm <sup>3</sup> /r	94         Potable water         20.2 &r         1.9 × 10 <sup>4</sup> m <sup>3</sup> Molton steel         Hor metal         892.5 kg/r         1.4 × 10 <sup>4</sup> t         2.0.6         3.5 m <sup>3</sup> /r         331 × 10 <sup>3</sup> m <sup>3</sup> Molton steel         Hor metal         892.5 kg/r         1.4 × 10 <sup>4</sup> t         C. 0.6         2.0 m <sup>3</sup> /r         3.1 × 10 <sup>5</sup> m <sup>3</sup> 1.568         Mold pig iron         21.5 kg/r         3.1 × 10 <sup>5</sup> t         C. 0.6         5.0 m <sup>3</sup> /r         3.1 × 10 <sup>5</sup> m <sup>3</sup> 0.ee         22.5 kg/r         31.4 × 10 <sup>5</sup> t         Nitrogen         9.0 m <sup>3</sup> /r         86.3 × 10 <sup>6</sup> m <sup>3</sup> 0.uck time         50 kg/r         34.1 0 <sup>5</sup> t         Betric power         3.0 KWHr         47.1 0 <sup>6</sup> KWH           1 inne errors         5.0 kg/r         7.4 × 10 <sup>5</sup> t         Electric power         3.0 KWHr         47.1 0 <sup>6</sup> KWH		2.51 × 10 <sup>3</sup> f
Moliton steel         Hor metal         892.5 kg/r         1.4 × 10 <sup>6</sup> t.         C. O. G         2.1 × 10 <sup>6</sup> m <sup>3</sup> /r         3.1 × 10 <sup>6</sup> m <sup>3</sup> /r         3.1 × 10 <sup>6</sup> m <sup>3</sup> /r         3.1 × 10 <sup>6</sup> m <sup>3</sup> /r         8. O. F. stag         120 kg/r           1.558         Mold pig iron         21.5 kg/r         3.3 × 10 <sup>6</sup> t         C. O. G         2 m <sup>3</sup> /r         3.1 × 10 <sup>6</sup> m <sup>3</sup> /r         8. O. F. stag         120 kg/r           0re         22.5 kg/r         3.1 × 10 <sup>6</sup> t         C. V. gen         56 m <sup>3</sup> /r         8. O. F. stag         20 kg/r           0re         22.8 g/r         3.1 × 10 <sup>6</sup> t         Nitrogen         5 m <sup>3</sup> /r         14.1 × 10 <sup>6</sup> m <sup>3</sup> 8. O. F. stag         20 kg/r           0uck time         50 kg/r         94.1 × 10 <sup>2</sup> t         Electric power         30 kWH/r         47 × 10 <sup>6</sup> m <sup>3</sup> 20 kg/r           161.3 kg/r         7.8 × 10 <sup>2</sup> t         Potable weter         0.05 m <sup>3</sup> /r         80 × 10 <sup>7</sup> m <sup>3</sup> 2crap         20 kg/r           Fluorite         3 kg/r         4.7 × 10 <sup>7</sup> t         Potable weter         0.05 m <sup>3</sup> /r         10. G. G.         70 hm <sup>3</sup> /r	Moltan steel         Higt metal         892.5 kg/t         1.4 × 10 <sup>4</sup> t         C. O. G         2.0m <sup>3</sup> /t         3.1 × 10 <sup>6</sup> Nm <sup>3</sup> Noid pig iran         21.5 kg/t         33.7 × 10 <sup>4</sup> t         C. O. G         2.0m <sup>3</sup> /t         3.1 × 10 <sup>6</sup> Nm <sup>3</sup> Noid pig iran         21.5 kg/t         33.7 × 10 <sup>4</sup> t         C. O. G         2.0 × gin         3.1 × 10 <sup>6</sup> Nm <sup>3</sup> Ore         20.8 g/t         33.7 × 10 <sup>2</sup> t         Electric power         5.0 × gin         14.1 × 10 <sup>6</sup> Nm <sup>3</sup> Ore         20.8 g/t         31.4 × 10 <sup>2</sup> t         Electric power         5.0 × gin         14.1 × 10 <sup>6</sup> Nm <sup>3</sup> Ore         20.8 g/t         34.1 × 10 <sup>2</sup> t         Electric power         3.0 × m <sup>3</sup> /t         4.1 × 10 <sup>6</sup> Km <sup>4</sup> Iconserve         5.0 × g/t         3.1 × 10 <sup>2</sup> t         Electric power         3.0 × m <sup>3</sup> /t         4.1 × 10 <sup>6</sup> Km <sup>4</sup>		4.5 × 10 <sup>3</sup> ;
Motion teel         120 kg/t         120 kg/t <th12 kg="" t<="" th=""> <th12 kg="" t<="" th="">         1</th12></th12>	Molion steel         Hori metal         BB/2.2 KG/t         1,4 × 10 <sup>-1</sup> t         C. U. G         2 Mm <sup>2</sup> /t         3,1 × 10 <sup>6</sup> Nm <sup>2</sup> Mold pig iren         21,5 kg/t         33,7 × 10 <sup>2</sup> t         C. U. G         2 Mm <sup>2</sup> /t         3,1 × 10 <sup>4</sup> Nm <sup>2</sup> Nodd pig iren         21,5 kg/t         33,7 × 10 <sup>2</sup> t         C. V. G         56 Nm <sup>2</sup> /t         86.3 × 10 <sup>6</sup> Nm <sup>2</sup> Ore         20 kg/t         31,4 × 10 <sup>2</sup> t         Nitrogen         9 Nm <sup>3</sup> /t         14.1 × 10 <sup>6</sup> Nm <sup>3</sup> Ore         20 kg/t         31,4 × 10 <sup>2</sup> t         Electric power         30 Nm <sup>3</sup> /t         47 × 10 <sup>6</sup> Nm <sup>3</sup> Increase         50 kg/t         7 × 10 <sup>2</sup> t         Electric power         30 Nm <sup>3</sup> /t         47 × 10 <sup>6</sup> Nm <sup>3</sup>		
Ore         20 kg/t         31 á x 10 <sup>5</sup> t         Nitrogen         9 Nm <sup>3</sup> /t         14.1 x 10 <sup>6</sup> Nm <sup>3</sup> 20 kg/t         12 kg/t           Outck lime         50 kg/t         34.1 x 10 <sup>3</sup> t         Electric power         3 Nm <sup>3</sup> /t         14.1 x 10 <sup>6</sup> Nm <sup>3</sup> 7 opedo car dag         12 kg/t           Quick lime         50 kg/t         34.1 x 10 <sup>3</sup> t         Electric power         30 k WH/t         47 x 10 <sup>6</sup> KWH         7 x 10 <sup>6</sup> KWH           Lime stone         5 kg/t         7.8 x 10 <sup>3</sup> t         Industrial water         0.25 m <sup>4</sup> 350 x 10 <sup>6</sup> m <sup>3</sup> 20 kg/t           Scrap         161.3 kg/t         23.3 x 10 <sup>3</sup> t         Industrial water         0.05 m <sup>3</sup> /t         80 x 10 <sup>6</sup> m <sup>3</sup> L. D. G.         70 Nm <sup>3</sup> /t	Ore         20 kg/L         30 kg/L         31 k k k/L         41 k k k/L         41 k k k/L           Outskilme         50 kg/L         30 kg/L         30 kg/L         41 k k k/L         41 k k k/L           Imate root         50 kg/L         7 k k k/L         7 k k k/L         20 kg/L         41 k k k/L		88.3 × 10 <sup>3</sup> t
me         56 kg/t         94.1 × 10 <sup>2</sup> t.         Electric power         30 KWH/r         47 × 10 <sup>4</sup> KWH         00 currange         12 × 50 × 10 <sup>3</sup> KWH           one         5 kg/t         7.8 × 10 <sup>3</sup> t.         Industrial water         0.25 m <sup>3</sup> / N         390 × 10 <sup>3</sup> m <sup>3</sup> KWH         2531 × 10 <sup>3</sup> t.         20 kg/f	Little 50 kg/t 34.1 × 10 <sup>2</sup> t Electric power 30 KWH/t 47.× 10 <sup>6</sup> KWH cross 5 ko/t 7.8 × 10 <sup>2</sup> t Indunsiai user 0.05 cm <sup>3</sup>		31.4 × 10 <sup>°</sup> t
one         5 kg/t         7.8 × 10 <sup>3</sup> t         Industrial water         0.25 m <sup>3</sup> 390 × 10 <sup>3</sup> m <sup>3</sup> 20 kg/t         2	5 kolt 7 2 k 10 <sup>3</sup> + 1 contractión univert 0.26 colt 3 m <sup>2</sup> m <sup>2</sup>		84 x 6 1
161.3 kg/ 253.1 x 10 <sup>3</sup> t Potable water 0.05 m <sup>3</sup> // 86 x 10 <sup>3</sup> m <sup>3</sup> L. D. G. 3 kg/ 4.7 x 10 <sup>3</sup> t 70 hm <sup>3</sup> //			31.4 × 10 <sup>3</sup> t
	161.3 kg/i 253.1 x 10 <sup>3</sup> t Potable water 0.05 m <sup>3</sup> /i 80 x 10 <sup>3</sup> m <sup>3</sup>	ų	19.8 × 10° Nm
	4,7 × 10 <sup>3</sup> to 1 ×		
	6.8 ×9/t		

	Anonia	generation	49.2 × 10 <sup>3</sup> 1 19.8 × 10 <sup>3</sup> 1				15.9 × 10 <sup>3</sup> t 2.1 × 10 <sup>3</sup> t				3×10 <sup>4</sup> : 3×10 <sup>4</sup> :			15 × 10 <sup>3</sup> t	12 × 10 <sup>3</sup> i														
Sub-oroduiets	Octopat	material	41 kg/t 16.5 kg/t				53 kg/t 7 kg/t				20 kg/t - bloom 20 kg/t - bloom																		
		Name	Scrap Scale				Scrap Scale				Scrap Scale			Scrap	Scale														
	Δημιαί	consumption	7.2 × 10° Nm <sup>3</sup> 18 × 10° Nm <sup>3</sup>	300 x 10 <sup>3</sup> Nm <sup>3</sup> 1 596 t	34.8 × 10° t KWH	2.1 × 10 m 52.6 × 10 <sup>3</sup> m <sup>3</sup>	1.8 × 10° Nm <sup>3</sup> 0.75 × 10° Nm <sup>3</sup>	_75 x 10 <sup>3</sup> Nm <sup>3</sup> 142 t	8.7 × 10° KWH 0.55 × 10° m <sup>3</sup>	15.8 × 10 <sup>3</sup> m <sup>3</sup>	3U X 10° KWH	114 × 10° m <sup>5</sup> 300 × 10° m <sup>3</sup>	6 × 10 <sup>5</sup> Nm <sup>3</sup>	210 x 10° Nm <sup>3</sup>	116 × 10° KWH	12.6 × 10 <sup>3</sup> t	210 × 10 <sup>3</sup> m <sup>3</sup> 3 270 +	109.8 × 10° Nm <sup>3</sup>	972.7 × 10° Nm <sup>3</sup> 173.6 × 10° Nm <sup>3</sup>	42.75 × 10° KWH 140 8 × 10° m3	250× 10 <sup>3</sup> m <sup>3</sup>	96.65 × 10° t. 96.65 × 10° KWH	15.23 × 10° m <sup>3</sup> 0.5 × 10° m <sup>3</sup>	0.72 × 10° KWH	For sea water	21.95 x 10° KWH For water	4.04 × 10 <sup>6</sup> KWH		
Utility		Guit	6 Nm <sup>3</sup> /t 15 Nm <sup>3</sup> /t	0.25 Nm <sup>3</sup> /t 1.33 ka/t	29 KWH/1	44 8/t	6 Nm <sup>3</sup> /r 2.5 Nm <sup>3</sup> /r	0.25 Nm <sup>3</sup> /t 0.475 kg/t	29 КWH/1 1.8 m <sup>3</sup> /1	53 8/t	75 KWH/r	0./5 m /t 2 m³/t	0.04 Nm <sup>3</sup> /t	200 Nm <sup>3</sup> /1	110 KWH/t 4 m <sup>3</sup> /t	12 kg/t	0.2 m²/t					11	 	0.5 KWH/t					
		Name	C, O, G, Oxygen	Argon L. P. G.	Electric power	Potable water	C. O. G. Oxygen	Argon L. P. G.	Electric power Industrial water	Potable water	Electric power	Potable water Industrial water	L P.G.	Mixture gas	Electric power Industrial water	Steam	Potable water Heavy oil	L D G	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Electric power Sea water	Pure water	Steam Electric power	Sea water Industrial water	Electric power	Electric power			-	· ·
	Annual	consumption	1 201 x 62.1				319 × 10 <sup>3</sup> t							1,079×10° t							<u></u> 	<u> </u>			•				• <u>:</u> •
Raw materials		CHIL																		••••••••••••••••••••••••••••••••••••••			• • •						-
		5					Moltan steel			Bioom				Slab															
Freduction	amount	10 <sup>-</sup> t/y	1,200				300 300			Billet	<b>3</b> 5	· · ·		Hot coil	yen't	- <u>2</u>													
	Equipment		slab caster				Continuous bloom, caster			Billet mill plant				Hot strip mili niant				er nlaat	and B, F,	Digwer plant			ueid ueix	Product/raw material facilities		Water supply equipment			