

STUDIU DE FEZABILITATE

INDUSTRIAL AND TECHNOLOGICAL DEVELOPMENT PARK

"MOLDOVA NORD"

BOTOȘANI - ROMANIA

1. GENERAL DESCRIPTION

" MOLDOVA NORD " industrial park will be destined for industrial production of construction materials and technologically development of composition materials.

" MOLDOVA NORD " destination will be the industrial production development, transfer and apply of high technology and use the local resources in this domain.

2. General Emplacement

This objective will be emplaced in town Botoșani, in the first side of little town VICTORIA. Botoșani town is emplaced in historical site of Moldova region, North-East of Romania. This town is on border with Ukraine on North Site and with Moldova Republic on the East site. On the West side of Botoșani is another town called Suceava and in South part is Iași town. Administrative and territorial center of this district is emplaced in Botoșani town.

This area is emplaced at 7 km East of Botoșani , on the DN 29 B principal road , just on the entrance of the town.

This terrain has a 47 651 mp surface and conformably to foresight from art.2 by Governmental Order for Industrial Parks, carrying out the next conditions:

- a) Has a direct access to the DN 29 b road, assure a fast connection with the Botoșani town and the nearest border control points on the road on a total lengthwise of 270 m . This area is situated on 176 km distance of the University Center form Iași and at 45 km of the Suceava airport.
- b) Area have 47 651 mp surface
- c) Terrain is a private propriety of S.C. MOLDO CCTP SA by Botoșani
- d) The emplacement is free of any
- e) The area in not involve in any action of the law in litigation domain

3. The necessity and opportunity of the investment

The necessity of building a industrial park in Botoșani district is showed by reduced industrial activity in the area. The old objectives have bin close because lower performance. The destination of existing building have bin change, the most of them has become market places and warehouses. The area can not be developed only in trade domain, it must be start an industrial production.

In the nearest district, Suceava, has bin setting up, a few years ago, three industrial parks, in the processing of milk domain ("LA DORNA" industrial park), textile industry ("BUCOVINA" industrial park) and the "SUCEAVA" industrial park in IT and Media industry. Also, in the central area of Moldova region has bin open the "BACAU" industrial park in Bacău district for IT industry and in the future they will open another industrial park in Buhuși for textile industry.

Also in Romania has bin setting up:

- Industrial and technological park in Timișoara
- Industrial Park "SATU MARE" –still in agreement course
- Industrial Park "VIDRASĂU" - Târgu Mureș – still in agreement
- Industrial Park " Țara Bârsei" in Brașov –almost ready
- Industrial Park " București"

All this objectives begins 5 years ago. If we will compare us only with Hungarian, who have over 80 industrials parks, we will see this kind of investments is just on the beginning in Romania

This kind of investment looks like very necessary and opportune

Like investment domain, constructions especially industrial parks and residences (individuals or blocks) also company headquarters has become the most profitable economic activity.

4. Functional Description

" MOLDOVA NORD" industrial park will have three distinctive functional centers:

❖ ***Industrial production zone*** organized by :

- 5 Halls $15 \times 55 \text{m} = 825 \text{ mp} \times 5 = 4125 \text{ mp}$
- 3 Halls $15 \times 45 \text{ m} = 675 \text{ mp}$
- ***Total surface of production area = 6150 mp***
- 8 store spaces = ***6150 mp***
- Concrete production station CD 51 (45 mc/h) with storehouse on 4 sorts with a total capacity of 12000 mc /sort

Total build surface for industrial production = 6350 mp

Total surface of storehouse spaces = 6150 mp

❖ ***Transfer and development zone***

- Office space, research, laboratory = 3240 mp
- High technology production spaces = 1800 mp

Total surface of technological development = 5040 mp

❖ ***Administrative area***, offices, expositional space.

- Administrative offices, Consulting Center, Expositional Space.

Display build surface = 1780 mp

❖ **Maintenance and utility buildings:**

- Air station , Steam-generation center, maintenance and repair workroom = 675 mp
- Restaurant Canteen for workers.
- Surgery
- Septic fosse for 450 people
- Capacity of parking lot: 100 cars
- Fire fighters headquarter
- Underground supply for weather in fire case= 1800 mc
- Guardians
- Concrete roads and platforms: 29 451 mp
- Perimeter patrol zone for guards.: 2750 mp
- Night lights on the perimeter -870 ml

"MOLDOVA NORD" industrial park is concept for development in next kind of activity

Industrial Production, especially in construction materials domain (high performed prefabricated part of concrete, cell concrete without autoclave use, high performance concrete) ,dry mortar for masonry and, decorative masonry. All this products are made for use the ash of thermal power station (available on large quantity in POWER PLANTS SUCEAVA) also the natural aggregate resources from the area.

- ◆ **Development end technological transfer** in high performance of composition material domain. In this kind o activity will be fallow the next objectives.
- ◆ New type of composition material who are included in to some patens. This new materials can be used in especially in aeronautic domain (for fabrication of new type of helicopter blade, from "smart" material type) and in military defens

domain (new type of composition materials for reactive armor). This type of materials can not be produce by now because it whose no money and no specific technology but also nobody want to buy this products (nobody can not use this new generation of materials on 100% capacity). It is not possible to use new the next generation type of materials until the existing (classic) material is not produced and used on full capacity. We want do development the production of this materials for the new armature components (ceramics fiber, amorphous metal and piezoelectric fiber) also the composition (metal and ceramic composition) not just polymeric composition. In the age that has past the cost of composition materials was very high in compare with the classic type. For this reason the performing materials look very expensive, in this moment the situation become similar (from price point of view) with the import materials. Now in many cases we think is better and more advantage to import some raw material in place to take form our country. For the moment this type of materials looks very expensive. In this nobody don't have any reserve in use to the new materials, but all is about money.

- ◆ Apply the new technology from composition material domain. Is about the advanced technology, not just the new technology for Romania but new for all world. Because we don't have enough money and old technology we was obligated to crate our self a totally new gamma of technology who was used to create new kind of materials. The god part of this meter is we developed new technology and new materials, and we now can better understand the importance of this new generation of materials and we can make some progress in technology. In this new technology is abutting the vibration casting or the explosion casing setting of materials and other staff.

These materials will be use for aeronautic, ship construction, telecommunication and military domain. The most part of this production will be exported.

The product obtained from composition materials will be dedicated in big part for construction. The rolled section and the especially plate for roofs will be used in many constructions, like greenhouse and the house construction. Also sandwich panel will be dedicated for compartment and closing of industrial halls. This especially materials will permit cover the halls what have a very big breadth. The receiver marked from composition materials will be very popular also the water pipes and water channel.

Very popular in this region is artificial marble. These materials unite the specific aspect of marble and the distinctive propriety of composition material is more strong compare with natural marble, especially in bad weather case, it can be obtained in any color and it has the thermo isolate propriety of (hot material). These proprieties make this artificial marble more agreeable for interior

5. Endowment and available services

In the "MOLDOVA NORD" Park the industrial and technological development industry has the next follow facilities and services:

- Ensure all necessary utilities: non-stop water (for drinking and industrial)
- Electrical power with meter for any activates department and any consummator
- Drain channel with septic fosse for 450 people
- Access road direct from DN 29 B, possibility to separate de supply cars traffic of technologically flux.
- Parking lot with a capacity of 100 cars
- The truck roan can be separate of normal cars traffic
- Central heating direct from self source
- Communication connection: normal and cell phones, internet connections.
- Office space, commercial headquarters and protocol saloons.
- Space for exposition and commercialization of the products

- Managerial, business and financial consulting offices
- Bank transaction office
- Restaurant place with separated place for each type of people (guest, technical personal, workers). In this place will exist a catering service personal.
- Permanent guard, fire fighters and medical personal on duty.

In the guest rooms space arrangement meter was bin excluded because on a distance of 9 km is the center of Botoșani district so there are the alternatives

The “target clients” of this industrial park will be economic agents (local or not) who wants to make some legal and dynamical activity. The result of this activity will be the industrial development in the area and use the local resources and workers.

After inauguration, this park will be administrated by **"Parcul Industrial MOLDOVA NORD" S.A. Botoșani** which, according to the law, will have the unique activity domain to administrate this industrial.

The economic agents will take the principal production zones on direct rent contract with administrative units. In these contracts will be specified the legal conditions and regulations for industrial activity. In the store of toxic, dangerous or pollutant material on the rent zone mater this will be restricted. The activity that will result toxic and pollutant gases will not be accepted.

In utility tax mater, these will be percept on the price asked by legal provider.

By the authorization of opening this park, the economic agents will benefice of the next fiscal facilities:

- Deduction of 20% par from imposable profit for the invested make in to the industrial park.
 - Possibility to pay add-on value tax until on 25 day on the next month for unfinished investment of objective reason

- reduction of imposed agreed by district town hall for the immobile objects and terrains form the park

(Agree with precaution by art.7 by Low nr. 409 of 11 July 2002 for approbation of Governmental Order nr 65/2001 for construction and function of industrial parks.

6. Utilities connections

"MOLDOVA NORD" industrial park will have the next utilities:

- ◆ **Water**– the necessary of drink water is ensuring by the district water system. INDUSTRIAL WATER and FIRE REZERV will be ensuring by self source true the pomp station. Permanent source of water will be made by the 750m distance lake. The pump station building is all ready finish. The adduction pipe and pumps replacement is necessary also the electrical connection revision. The underground water for fire will be constructed on 3m deep and 650 mp surface. The water tank will be realize by armed concrete and it will by impermeable
- ◆ **Collector Ditch:** will be realize by construction of a pipe system. The ditch will be connected in to a septic fosse to purify enough for 450 people. The purify water will be dropped in lake zone and it will have the rain water characteristics. The total length of collector ditch will be 900m.
- ◆ **ELECTRICAL POWER** –is realize by the 110 KVA stations who is near the emplacement. The total electrical connection length is 270m. On this length will add a 750m for pump station electrical connection.
- ◆ Office and anther places heating will be ensure by the self generator, emplaced in administrative building. The production space will be heating by the heating aggregates with hot air and will be use the conventional fuel. The heating station will also function on conventional fuel and the result ash will be use to production.
- ◆ The light inside and outside of the area will be made by 500W lamps. In side of halls the light will be provide by NEON tubs.
- ◆ The anti fire protection will be made by a self fire fighter division.

- ◆ The protection and medical personal of the objective will be ensure by contracts with company in to the domain.

The construct master of "MOLDOVA NORD" industrial park will be Societatea Comercială "MOLDO CCTP S.A. " din Botoșani .

Construction time will be 15 months (starting with investment fond ensuring)

7. Necessary investment evaluation

1. Administrative buildings, offices, expositional space

Developed surface = 1780 + 3240 + 120 + 120 + 1800 = 7060 mp

7060 mp x 285 €/mp = **2 012 100 €**

2. Industrial halls:

Developed surface = 5 x 825mp + 4 x 675mp = 6825 mp

6825 mp x 170 €/mp = **1 160 250 €**

3 Concrete platforms and road:

(29 456 mp x 321 310 lei/mp) / 36 480 lei/ € = **259 444 €**

4. WATER SYSTEM:

(900 m x 949 802 lei/m) / 36 480 lei/ € = **23 433 €**

Fire water reserved

650 mp x 165 €/mp = **107 250 €**

5. Collector ditch system

(900 m x 1 252 720 lei/m) / 36 480 lei/ € = **30 906 €**

Septic Fosse

172 mp x 165 €/mp = **28 380 €**

6. Telephone connections

(550 m x 913 782 lei/m) / 36 480 lei/ € = **13 777 €**

7. Electrical Power:

(270 + 750 x 1 910 598 lei/m) / 36 480 lei/ € = **54 993 €**

Moonfaced electrical power and inside light:

$(1210 \text{ m} + 360 + 5 \times 3 \times 55 + 4 \times 3 \times 45 + 785) \times 1054685 \text{ lei/m}) / 36480 \text{ lei/€} = 107550 \text{ €}$

8. Another costs

- a) Topographic study = 185 €
- b) Geographical study = 200 €
- c) Advisements, agreements authorizations cost:
 - ◆ Urban certify = 75 €
 - ◆ Building authorization = 585 €
 - ◆ Advisements for utility connections of public system = 800 €
 - ◆ Advisements for workers protection agreements = 75 €
 - ◆ Another advisements = 200 €

d) Business plan study = $3\,784\,306 \times 2,2\% = 3\,784\,306 \times 2,2\% = 83\,255 \text{ €}$

e) Designer = $3\,784\,306 \times 5,4\% = 204\,353 \text{ €}$

f) Organize building site = $3\,784\,306 \times 11\% = 416\,274 \text{ €}$

g) IGSIC tax = $3\,784\,306 \times 0,8\% = 30\,274 \text{ €}$

h) Social house tax = $3\,784\,306 \times 0,5\% = 18\,922 \text{ €}$

9. Equipment assembler value

Equipment total cost: **1 068 710 €**

Equipment value corresponding to Attach1 from (EQUIPMNT
NECESSITY)

Investment total value: 6 380 973 €

Out of wich CONSTRUCTION: **3 172 350 €**

Equipment : **1 068 710 €**

Utilities : **366 289 €**

Another payment : **754 813 €**

Add-on value tax 19% : 1 018 811 €

Note: values has bin calculated according to **H.G. 1179/2002** and to a rate exchange of 36 480 lei/ Euro.

After authorization obtain for Industrial Park form the Governmental department the pay of add-on value tax can late in utilities pay mater. This late is available until opening the.

Project chef

Director

Dr.Ing. Wilhelm Weiss

ing. Neculai Bâlbă