

PROJECT PROFILE – SUMMARY SHEET

<i>Project Introduction</i>	
1. Project title: Synthetic Stone Production	
2. Sector : Manufacture of other non-metallic mineral products (26) Sub sector: Manufacture of other non-metallic mineral products n.e.c (2699)	
3. Products/Services: artificial stone	
4. Location: Free zone <input type="checkbox"/> Economic special zone <input type="checkbox"/> Industrial Estate <input checked="" type="checkbox"/> Main Land <input type="checkbox"/>	
5. Project description: <p>The main goal of this plan is to establish an Synthetic Stone production factory in Lorestan province. The artificial stones are obtained from recombination of natural stones with additives with lower weights and more rapid usage. These stones are made of combination of cement, clays, waste stones aggregates and light soils. The materials used in these stones have quality based on environmental and human considerations. The iron oxide pigments provide these stones with particular color. The product obtained from this process is casted with natural designs and make their view more natural. In term of price, the artificial stones are cheaper than the natural stones since there is no difficult work on these stones which are necessary for natural stones to sell them in markets and they are of lower weight and thickness which allows us to use them 3 times more than natural stones.in addition to their structural strength, they can carry large loads in particular foundations.</p>	
6. Annual capacity: 15000 t/year	
<i>Project Status</i>	
7. Local / internal raw material access: 100 %	
8. Sale:	
Anticipated internal market: 100%	Anticipated export market: 0%
9. Construction Period: 24 months	
Schedule	Beginning of activity: In-site beginning of activity: End of project: Commercial activity beginning:

- Legal permissions (establishment license, foreign currency quota, environment, etc)

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(OIETAI)**

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Plan summary

Plan

Synthetic Stone Production

Product's introduction

The main goal of this plan is to establish an Synthetic Stone production factory in Lorestan province. The ISIC code of this product is 26961210 of the group of producing non-metallic stone products (26) and subgroup of other stone non-metallic products which are not classified in other places (2699).

The artificial stone is imported and exported based on sub-chapter 6810 of the Iranian custom regulations entitled as objects made of cement, concrete or artificial stone even the strengthened samples.

The conditions under which this is permitted to be imported obtained from trade ministry and mines and industries ministry are to pay 15% import fees in 2016 (custom fee:4% and trading fee:11%).

The booklet of the custom provides 3 tariff codes as follow:

Tariff	Tariff description
68109900	Other stone non-metallic, concrete or cement products which are not classified in other places
68101990	Other stone non-metallic, concrete or cement products in brick tablet or similar objects which are not classified in other places
68109110	Pre-constructed parts or cement or artificial stone for floor

The artificial stones are obtained from recombination of natural stones with additives with lower weights and more rapid usage. These stones are made of combination of cement, clays, waste stones aggregates and light soils. The materials used in these stones have quality based on environmental and human considerations. The iron oxide pigments provide these stones with particular color. The product obtained from this process is casted with natural designs and make their view more natural. In term of price, the artificial stones are cheaper than the natural stones since there is no difficult work on these stones which are necessary for natural stones to sell them in markets and they are of lower weight and thickness which allows us to use them 3 times more than natural stones. In addition to their structural strength, they can carry large loads in particular foundations.

Product's application

The application of artificial stones is like natural samples in construction industry.

Proposed places for plan

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The raw materials required for this plan are silicon sand, cement, aluminum powder, lime and concrete lubricants among which the silicon sand has the largest share. All raw materials required for this plan are supplied by domestic resources and in order to reduce the production costs, it would be better to select the site near the silicon sand suppliers.

Raw, auxiliary and consuming materials

Based on the first phase investigations and studying the plan implementation potentials, there Lorestan industrial parks are desirable for implementing this plan based on important factors such as raw material supply, infrastructural facilities, communication ways access, human resource supplying, environmental aspects, public exemptions and position of other competitors.

Sales plan and target market

The factory sales prices are as follow based on investigations and enquiring the sales costs.

Sales price

Annual sales (million rials)	Unit price (Rials)	Capacity (t)	Description	No.
115,500	7,700,000	15,000	Artificial stone	1
115,500		15,000	Total	

The production prediction in first to fifth years is as follow based on plan financial calculations and financial indices estimations.

Production prediction

Year 5	Year 4	Year 3	Year 2	Year 1	Description
90%	90%	90%	80%	70%	Production percentage
13500	13500	13500	12000	10500	Artificial stone (t)

Nominal and practical capacities

Studying and investigating different units as well as economic plan study confirm that the optimal production capacity is about 15000 T annually. Considering the unpredictable factors such as work stop and repair and maintenance, the efficiency of this unit is 90% which is set to be 13500 T annually.

Production procedure and technology used

The artificial stone production system is to compressing under the vacuum conditions and pressing and vibrating which allow forming the mixture dry combination and changing it to the combined high quality stone. The artificial stone can be changed directly to slabs with different dimensions and thicknesses or can be cut in different blocks which are of different thicknesses.

The main features pf stone production process is:

- Capability of using correct level of components in mixture for compressing
- Lack of air in compressed components during compression

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- Compression combined operation and vibration of materials in vacuum

Artificial stone block production steps

Each production level is divided into sections or departments which in turn are equipped with machineries with particular processes.

1. Step 1: block construction

1-1- Machines and devices to supply the mixture components and preparing them for next step

1-2- Machines and equipment for mixing components and sending them to the block generating line

1-3- Machines of block combination and compression and compressing and vibrating under vacuum conditions

2. Step2: cutting blocks into slabs

Machines and equipment to cut blocks into slabs

3. Step3: slab-processing processes

Continuous lines and machineries for processing slabs (calibration, polishing, sizing and working)

At the end of this production line, the automatic packing of pieces is done.

The plan investment costs

The fixed plan investment cost is estimated as 110.34 billion Rials and the working capital is lower than 6 billion Rials.

%	Total (million rials)	Required				Description
		Total required (million rials)	Rial (million rials)	Rial equivalence	Currency	
9%	10,500	10,500	10,500	0	0	Land
3%	3,078	3,078	3,078	0	0	Landscaping
47%	54,404	54,404	54,404	0	0	Building
24%	27,500	27,500	27,500	0	0	Machineries
6%	6,991	6,991	6,991	0	0	Installations
0%	0	0	0	0	0	Laboratory equipment
0%	400	400	400	0	0	Vehicles
0%	87	87	87	0	0	Workshop equipment

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%	Total (million rials)	Required				Description
		Total required (million rials)	Rial (million rials)	Rial equivalenc e	Currency	
0%	353	353	353	0	0	Service and administrative equipment
4%	5,166	5,166	5,166	0	0	Unexpected and miscellaneous
93%	108,478.69	108,478.69	108,478.69	0	0	Total fixed assets
2%	1,869.77	1,869.77	1,869.77	0	0	Pre-exploitation costs
95%	110,348.46	110,348.46	110,348.46	0	0	Fixed investment costs
5%	6,024.06	6,024.06	6,024.06	0	0	Working capital
0%	0	0	0	0	0	Other assets
100%	116,372.52	116,372.52	116,372.52	0	0	Total plan investment costs

The plan production costs

The annual production costs are estimated to be 51.1 billion Rials.

Costs (million rials)	Description	No.
22,055	Consumer materials and packing	1
8,889	Production salary and wage	2
5,272	Water, electricity, fuel and communication	3
191	Insurance	4
3,073	Repair and maintenance	5
2,310	Marketing and ads	6
1,974	Production unpredicted and miscellaneous	7
7,352	Depreciation	8
51,116		Total

Economic indices

Plan summary

Value-measurement scale	Description
103223.57 million rials	NPV
37.45%	IRR
2.27 years	PBP

Management and Planning Organization of Lorestan Province