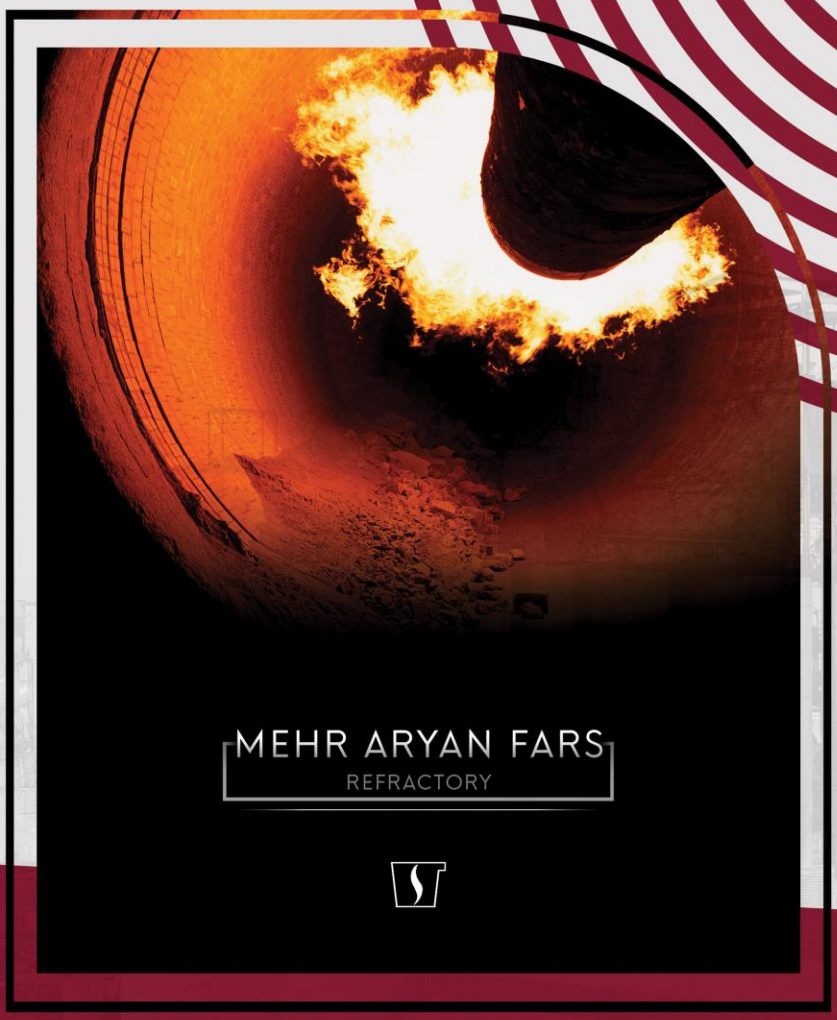


MEHR ARYAN FARS
REFRACTORY

MANUFACTURER OF ALL TYPES OF BASIC & ALUMINA BRICKS IN THE CEMENT INDUSTRY

THE LARGEST PRODUCER OF BASIC REFRACTORIES IN THE STEEL INDUSTRIES & THE SECOND PRODUCER OF FUSED MAGNESIA IN IRAN

MEHR ARYAN FARS

About us

The Middle East region and Iran have seen continuous growth in industries such as steel and cement and the need of such industries for refractory products defines the importance of establishing a refractory unit in the country clearly, especially in the southern provinces of the country. Mehr Aryan Fars Refractory company launched in Shiraz, the capital of Fars province in 2013, is able to produce 50,000 tons of refractories that contain various types of magnesite-carbon bricks and 30,000 tons of basic and alumina mass consumed in the steel industries with the cooperation of the most capable experts of this industry and fully modern equipment as well.

The policy of this company is to provide the most appropriate and economical offers, which is possible through continuous improvement of products and accurate knowledge of customer demand. Relying on this policy, technical knowledge and years of experience of important and reputable companies in the worldwide refractory industry, Mehr Aryan Fars Company equipped with a factory for producing refractory products and an advanced laboratory, has been able to take an effective step towards solving the problems and increasing the useful life of all types of refractories.

MEHR ARYAN FARS

In 2023, according to the capacities of Mehr Aryan Fars Company and the need of the Cement industries for updated and high-quality products, this company has constructed new presses and furnaces to produce the products needed by the cement industries (Basic and Alumina bricks). Currently, the production capacity of this factory is about 5000 tons per year with two-1250 ton presses and two shuttle furnaces with a temperature of 1800 degrees Celsius. By adding three more presses along with three shuttle furnaces as well as a tunnel furnace with a temperature of 1800 degrees Celsius, the production capacity of this factory will reach 25,000 tons per year by 2026.

Our Company will be a leader in refractory materials and solutions, and we offer a comprehensive range of products specifically designed for the cement industry. Our products are well-known for their durability, reliability and performance in the harsh environment of cement kilns and also are designed to extend the lifespan of cement kiln linings and reduce downtime and maintenance costs.

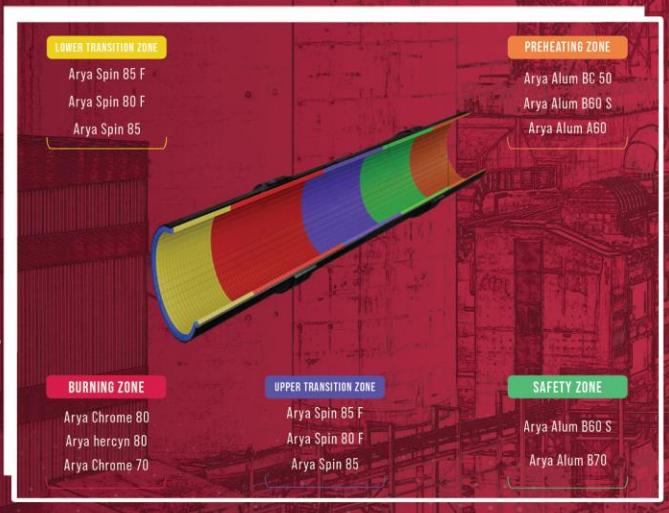
Cement industries

For the cement industry, refractory engineering is a vital technology to achieve end product quality and long life of combustion systems, reduction of energy costs and low emission values. Mehr Aryan Fars Refractories Co. has become the market leader in the steel and cement industries in Iran by developing the productions and sales of innovative refractory products Matching the latest types of plants and environmental regulations.

We complete our assigned tasks competently and with complete customer focus from beginning to end,including raw materials, design, product development, application and service.
This means that structured working procedures, meticulous checks and effective quality management are ensured throughout the company.

In line with the cement production, the rotary kiln is exposed to a variety of thermal, chemical, and mechanical influences. Particularly the increasing use of alternative fuels leads to extremely high thermochemical and thermomechanical stresses in the refractory lining. Based on the material flow, a rotary kiln is usually divided into the following zones:

Preheating Zone	Safety Zone	Upper Transition zone	Burning Zone	Lower Transition zone
1	2	3	4	5



MEHR ARYAN FARS

Mehr Aryan Fars designs and installs refractory products for the rotary cement kilns which are in accordance with international standards. We have created unique solutions for the most critical areas of the kiln on the market. Brick installation is often very difficult due to the many deformations of the furnace metal body in the furnace rims.

The refractory lining and bricks in a cement kiln are specifically designed to endure the incredibly high temperatures (up to 1500°C) which is needed during the cement production process. We provide a range of tried-and-tested standard products that are engineered to meet the exact demands of the rotary cement kilns. Our offers guarantee not only reliable and efficient operation, but also maximum satisfaction to our valued customers.

Preheating Zone
- Abrasion

Upper Transition Zone
- Unstable coating
- Atmosphere redux
- Thermal shock
- Alkali attack
- Mechanical stresses
- Ovality

Safety Zone
- Thermal shock
- Alkali attack
- Mechanical stresses

Burning Zone
- Stable coating
- Clinker penetration
- Thermal shock

Outlet Zone
- Abrasion
- Mechanical stresses

Lower Transition Zone
- Unstable coating
- Atmosphere redux
- Thermal shock
- Alkali attack
- Mechanical stresses
- Ovality
- Abrasion
- Heat under load

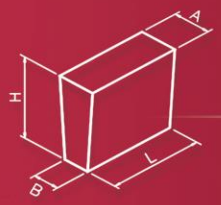
AREA	PRODUCT NAME	MGO (%)	AL2O3 (%)	CR2O3 (%)	SIC (%)	CCP(MPA)	RUL T05 (C)
PREAHEATING ZONE	Arya Alum BC 50	-	45-50	-	-	50	1300
	Arya Alum B60 S	-	50-60	-	10	60	1400
	Arya Alum A60	-	55-60	-	-	60	1650
SAFETY ZONE	Arya Alum B60 S	-	50-60	-	10	60	1400
	Arya Alum B70	-	68-72	-	-	50	1450
UPPER TRANSITION ZONE	Arya spin 85 F	84-86	11.5-12.5	-	-	65	1700
	Arya spin 80 F	81-83	11.5-12.6	-	-	60	1700
	Arya spin 85	81-85	11.5-13.5	-	-	55	1650
BURNING ZONE	Arya chrome 80	80-83	3-5.1	5-6.1	-	60	1700
	Arya hercyn 80	80-82	5-6.1	(FE_2O_3) 5-7	-	45	1680
	Arya chrome 70	67-70	5-5.1	14-17	-	50	1600
LOWER TRANSITION ZONE	Arya spin 85 F	84-86	11.5-12.5	-	-	65	1700
	Arya spin 80 F	81-83	11.5-12.6	-	-	60	1700
	Arya spin 85	81-85	11.5-13.5	-	-	55	1650
OUTLET ZONE	Arya Alum 85 SP	-	82-85	($P2O5$) 2	-	70	1550

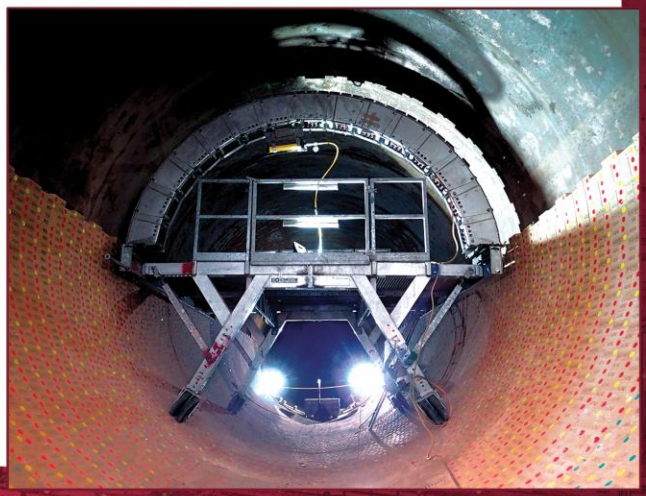
Raw Materials

In order to produce high quality product competitive with global suppliers,Mehr Aryan Fars refractory, Uses the best quality raw materials with suitable physical properties and chemical analysis.

ROTARY KILN BRICK DIMENSIONS

Shape	A(mm)	B(mm)	H(mm)	L(mm)	V(dm3)
ISO 622	103	96.2	220	198	4.32
ISO 322	103	89	220	198	4.16
422 (2/3)	68.7	58.2	220	198	3.1
822 (3/4)	77.3	72.1	220	198	3.6
ISO 820	103	97.8	200	198	3.98
ISO 420	103	92.5	200	198	3.87
ISO 220	103	89	200	198	3.8
ISO 620	103	96.2	200	198	3.94
ISO 320	103	89	200	198	3.8
420 (2/3)	68.7	58.2	200	198	2.51
820 (3/4)	77.3	72.1	200	198	2.96
B 820	73.5	69.5	200	198	2.83
B 420	75	68	200	198	2.83
B 220	78	65	200	198	2.83
B 618	74	69	218	198	2.55
B 318	76.6	66.5	218	198	2.55
P18	70	65	218	198	2.41
P+18	85	75	218	198	2.85
B 625	74	69	250	198	3.54
B 325	76.6	66.5	250	198	3.54
P25	70	65	250	198	3.34
P+22	85	75	250	198	3.96
B 622	74	69	220	198	3.11
B 322	76.6	66.5	220	198	3.11
P22	70	65	220	198	2.94
P+22	85	75	220	198	3.48
B 620	74	69	200	198	2.83
B 320	76.6	66.5	200	198	2.83
P20	70	65	200	198	2.67
P+20	85	75	200	198	3.17


A
H
B
L



RAW MATERIAL	MATERIAL BASIS	C.S (MICRON)	DENSITY (GR/CM3)
DEAD BURNED MAGNESIA	MgO (97%)	350	3.3(CM3)
FUSED MAGNESIA	MgO (96.5-98.5%)	1000	3.48
FUSED SPINEL	AL2O3 (68-72%)	600	3.5
BAUXITE	Al2O3 (87%)	-	3.5
CHROMITE SAND	Cr2O3 (Min40%)	-	3.5
HIGH IRON MAGNESIA	MgO (87%) / Fe2O3 (7%)	-	3.35

DEAD BURNED MAGNESIA 97%

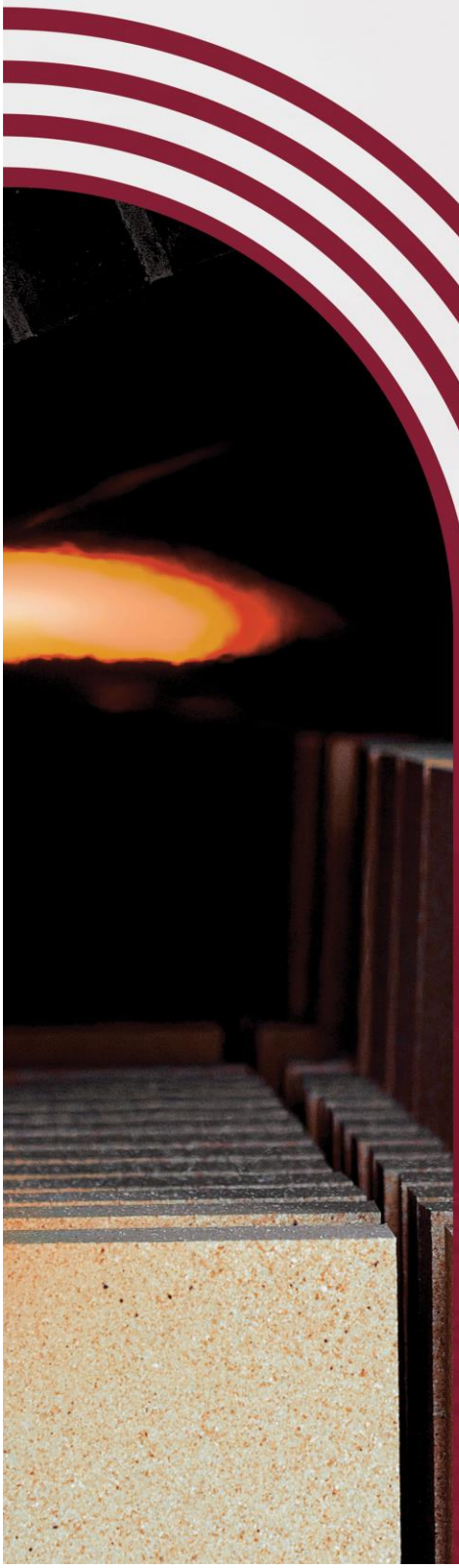
FUSED MAGNESIA

FUSED SPINEL

BAUXITE (ROTARY) 87%

CHROMITE SAND

HIGH IRON MAGNESIA



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