

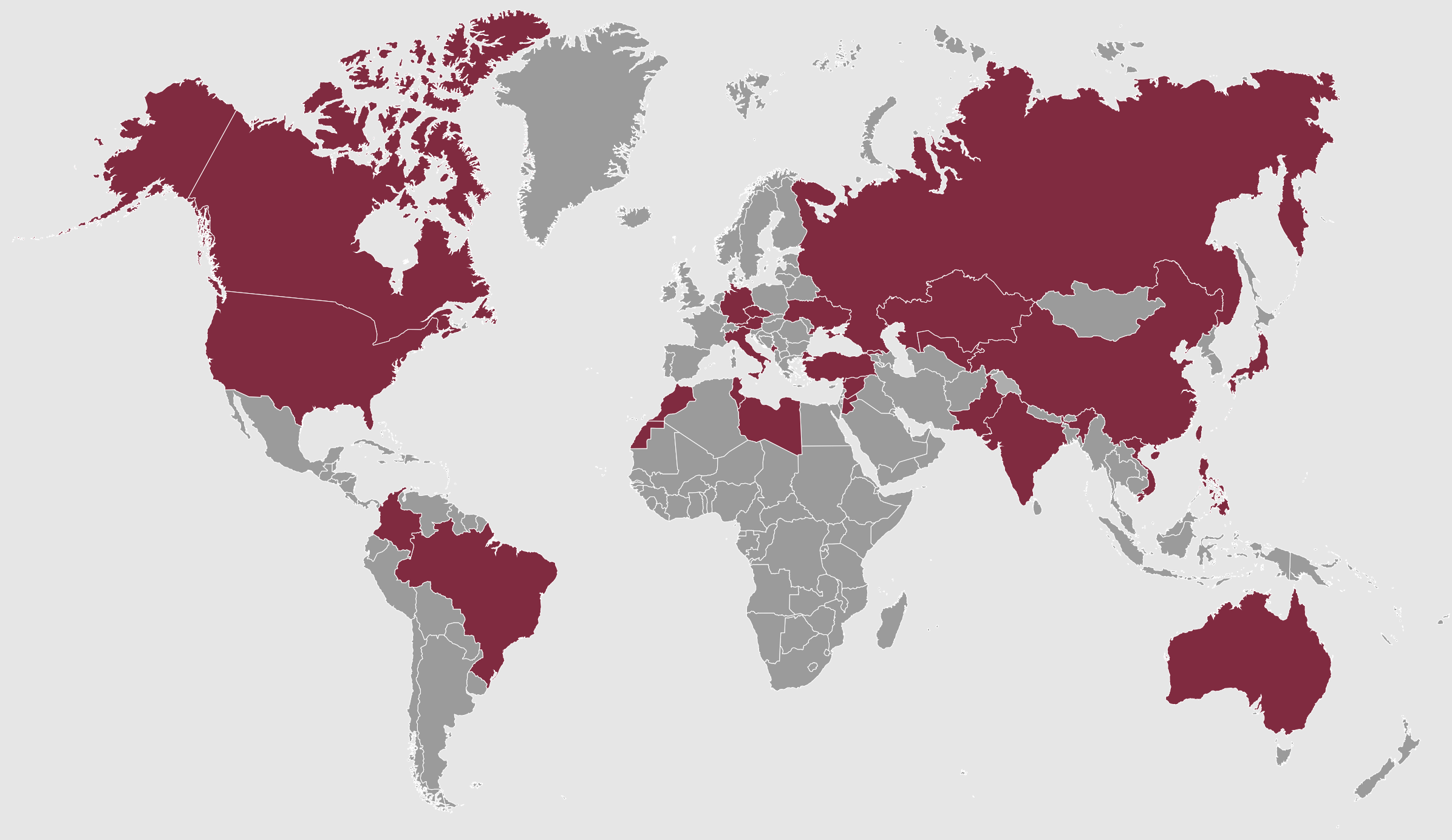


# DAL HOLDING INVESTMENT CO.

TECHNOLOGY

ENVIRONMENT

HUMAN



 **DAL HOLDING INVESTMENT CO.**



## Leading Engineering Company

We are capable of; designing, producing, integrating equipments, accomplishing turn-key projects. We develop, engineer and build greenfield projects and revamp, upgrade brownfield facilities

## The Most Innovative

We enhance and sustain value creation by innovation. We have a strong R & D center that always welcomes sharp minds with fresh ideas. We have made remarkable contributions to the technological advancement in areas we are active

## Multidisciplinary Approach

We offer integrated technologies and provide solutions to various real-world problems by combining and diversifying energy and agriculture; digitalization, optimization of processes and evaluating outcomes

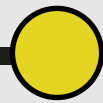




### 1985 DAL TECHNIC MACHINERY

Provided motors and actuators to Turkish Industry suffering from low quality

**One of the leading R&D Centers in Turkey**



### 1990 DAL ELECTRIC MOTORS

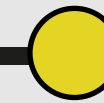
Focusing on automation equipments  
Tailor-made solutions to the cement, lime, mining, electricity, automation industry and technical service support



### 1995 DAL ELECTRIC AUTOMATION

**The First Turkish Automation Company**

Turnkey contractor for high and medium voltage transformers, process control systems, building automation systems



### 2004 OYAK ELEZIG CEMENT PLANT

DAL Technic Machinery Co. is the first Turkish company to get involved in the construction of a cement plant on turnkey basis

**100% Turkish Engineering**



### 2007 DTI

**The biggest filter for industrial dedusting in Turkey was built by DTI**



### 2012 JIZZAKH CEMENT PLANT UZBEKISTAN

First class engineering and art is met

**With 100% Turkish Engineering this project is also one of the most important milestones for the Industry**



### 2016 SURKHANDARYA CEMENT PLANT UZBEKISTAN

Surkhandarya Cement Plant works started



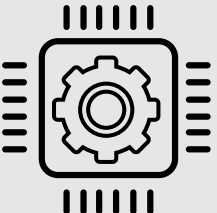
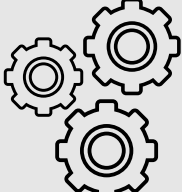
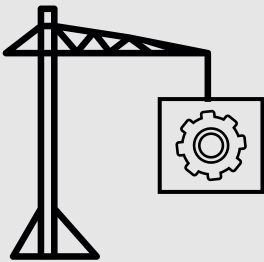



### 2017 DAL MACHINERY& DESIGN

**A clinker crusher designed by DAL Machinery&Design cracking 12.000 tonnes per day which fits neatly to customer needs**



- The **DAL Holding Investment Company was founded in 1985, 33 years ago**, aspired to relieve lack of electric motors and actuators for various industries in Turkey
- Varying from analysis devices to sophisticated mills, the Holding had procured numerous equipments and has been representing many international brands in Turkish Market and also active in several industries
- In **1990**, the Holding established **DAL Electric Company** focusing on automation equipments which was suffering from mediocre quality those days
- The achievements of this Venture were followed by **Turkey's first turn-key basis automation company in 1995, DAL Automation Company**, which successfully satisfied Turkish Heavy Industry's needs
- Sparked with the success in meeting its commitments, the Holding became **the first Turkish Company to get involved in the construction of a cement plant on turn-key basis**. The company erected a Cement Plant for Oyak Cement in a short span of time in the 2000's, which was more than satisfactory
- **In 2007, in order to diversify its business the Holding began to involve in dedusting works for industrial plants**
- **Several EPC projects** have been accomplished since then, including state-of-art **Jizzakh Plant in Uzbekistan, Heidelberg Cement Plant in Georgia** and many more. Upon success in commitments undertaken, in **2016, the Surkhandarya Cement Plant works have begun**
- In **2017**, the Holding's engagement in R&D works resulted in a highly capacity and efficient equipment which is **one of the biggest clinker crusher with a capacity 12.000 tonnes per day**

 <p><b>+2000 employees</b></p> <p>One of the leading players in the world</p>	 <p><b>Global investments and projects</b></p> <p>South America, Africa, Far East, Central Asia and Middle East Region opportunities are on the radar</p>	 <p><b>In the Top 5</b></p> <p>Among the leading 5 technology, engineering and critical equipment supplier groups in the Industry</p>
 <p><b>At your service</b></p> <p>Active in Cement, Construction, Energy, Chemicals and Mineral Resources Industries</p>	 <p><b>One of the first 10</b></p> <p>Among the top 10 in EPC turnkey solutions</p>	 <p><b>From Brasil to Japan</b></p> <p>Providing technologies all over the World</p>

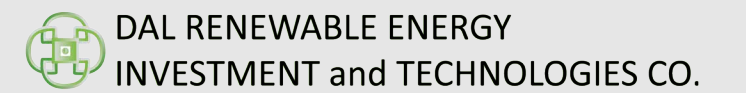


- The Holding grew into one of the **world's leading engineering and contractor companies** in industries including but not limited to cement, mining and energy
- With more than 2.000 professional employees the Holding draws significant attention from several businesses and industries both globally and locally, owing to its achievements stemming from **Turkish engineering**


The Holding is a **leading EPC Contractor and critical equipment supplier** in Heavy Industries

Today, **DAL Holding Investment Co. continues to extend its scope all over the world** and follows investment opportunities and prospective projects in South America, Africa, Far East, Middle East and Central Asia

- The Holding have the following Companies which are **among pioneers in their fields** and are providing their technology globally:





 DEG DAL TEKNİK MAKİNA <b>33</b> YEARS		Long Term	Short Term	
International	Foreign Currency		BBB-	A-3
	Local Currency		BBB-	A-3
	Outlook	FC	Stable	Stable
		LC	Stable	Stable
National	Local Rating		BBB+(Trk)	A-2(Trk)
	Outlook		Positive	Stable
Sponsor Support		3	-	
Stand Alone		BC	-	
Sovereign®	Foreign Currency		BBB-	-
	Local Currency		BBB-	-
	Outlook	FC	Stable	-
		LC	Stable	-

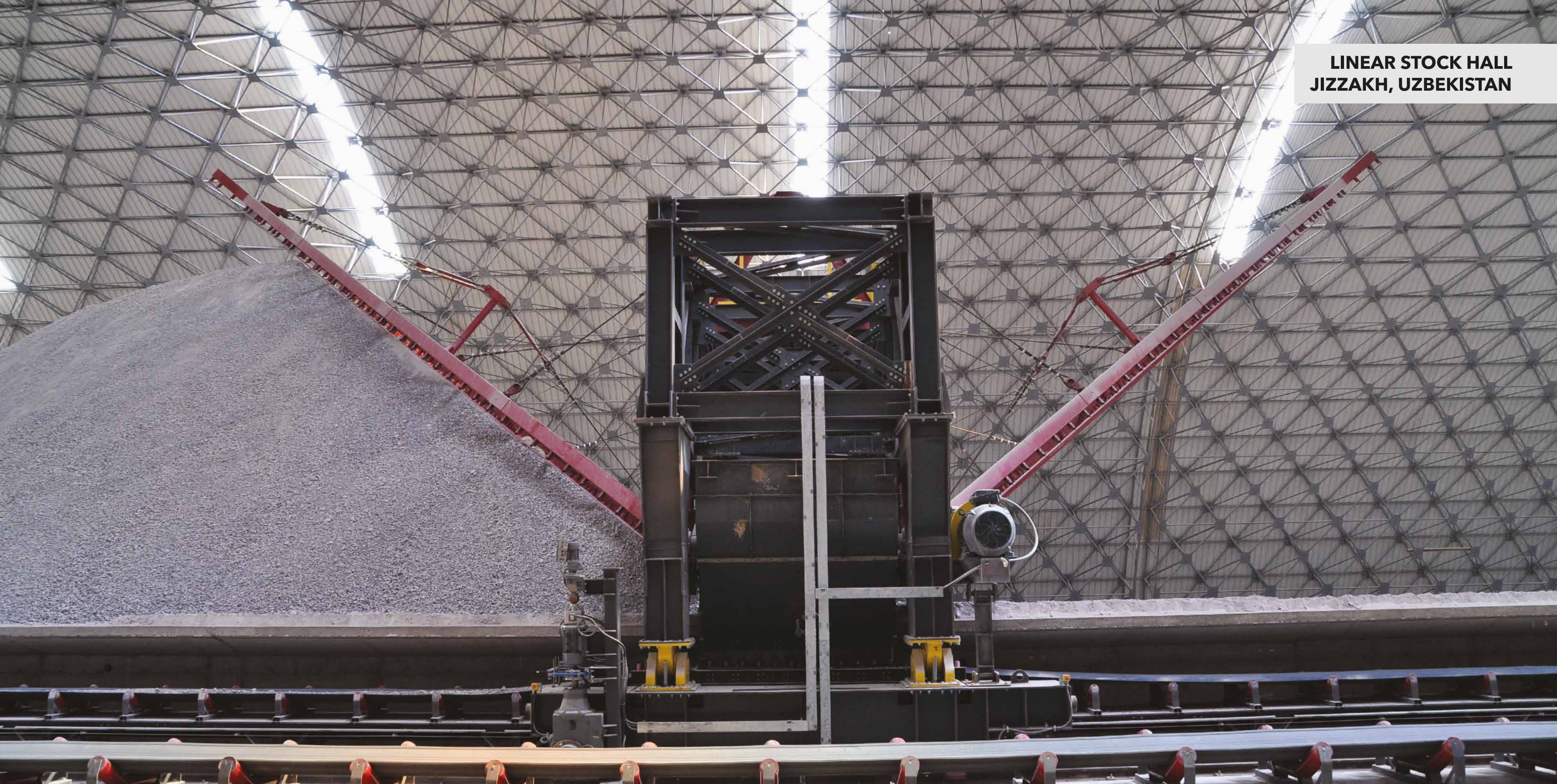
DAL Technic Machinery Co., the flagship of the Holding is confirmed as **investable** in the rating analysis of the JCR Eurasia Rating issued on 14 April 2017

The long term international foreign and local currency ratings are **BBB-** with **stable** outlook, the long term national rating is **BBB+(Trk)** with **positive** outlook

The short term international rating is **A-3**, while the short term national local rating is **A-2(Trk)** and the outlook is **stable**

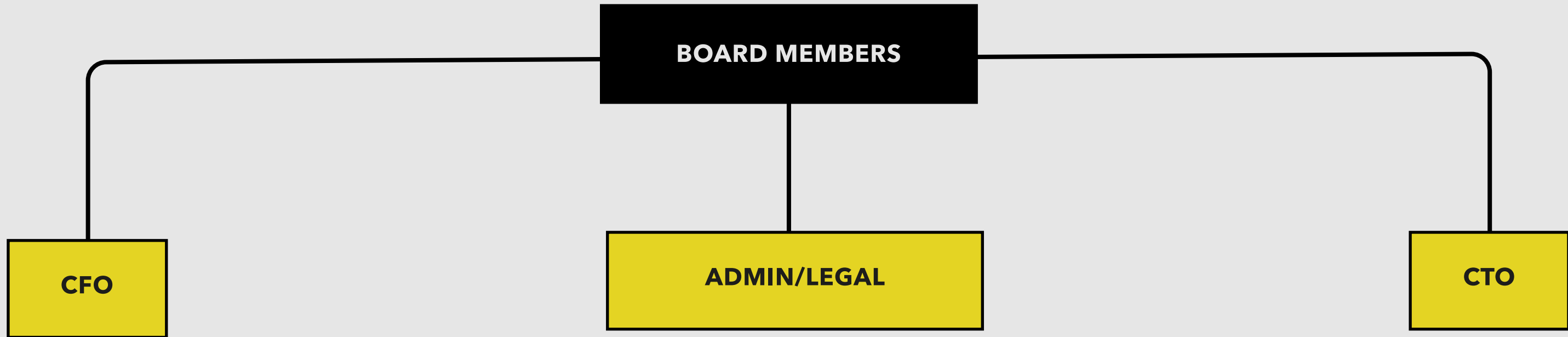
Other details of the ratings are specified in the table







# ORGANIZATION CHART



**DAL Teknik Makina**  
Ticaret ve Sanayi A.Ş.

**DAL Machinery&Design**

**DAL CONSTRUCTION TECHNOLOGIES CO.**

**DAL RENEWABLE ENERGY INVESTMENT and TECHNOLOGIES CO.**

**DAL Electric Automation**

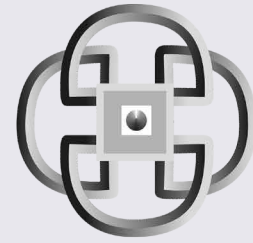
**DTI**  
DEDUSTING TECHNOLOGIES INTERNATIONAL

**DalElektrik**

**DAL ENERGY**  
Hydroelectric Plants Co.

**FØNS technology**





**DAL Teknik Makina**  
Ticaret ve Sanayi A.Ş.







**100% Turkish engineering**

**Annual production volume of the commissioned projects:  
8.5 million tons per year**

**One of the leading 10 companies in the world in the Industry**

#### References

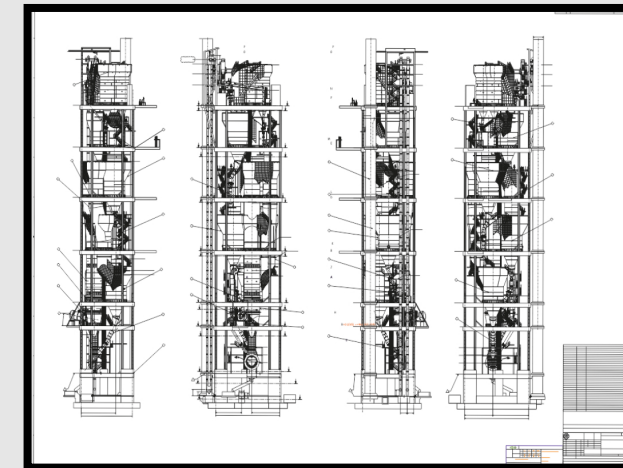
Heidelberg - Georgia	Pioneer Cement - Pakistan
Jizzakh Cement Factory - Uzbekistan	OYAK Elazig Cement
Marzinc	Elazig Grinding Plant
Iskenderun Iron and Steel	Marmara Cement
Yurt Cement	Silopi Cement
OYAK Mardin Cement	Nuh Cement (Increase of capacity)
ADOCIM Sultankoy Cement	Surkhandarya Cement - Uzbekistan
CIMKO Adiyaman Cement	

DAL Technic Machinery Co., the flagship of the Holding, was established in 1985 and it has been carrying out domestic and international projects on turnkey basis with **100 % Turkish Engineering since then**

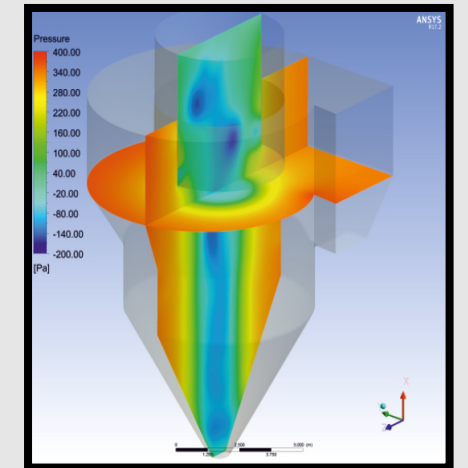
**Total volume of annual production capacity** of the commissioned projects in the cement industry is **8.5 million tons**

Being the first and the only company with **100 % Turkish engineering, DAL Technic Machinery Co. leads the domestic market**

The Company also remains **robust in the international market** while competing with European Technology companies and Chinese EPC contractors, securing its place **in the top 10 league of the Industry**



Preheater Tower Platform



Contour CFD



**DalElektrik**

Provides tailor-made solutions in various industries

Representative of WEG, Falk Rexnord, ISGEV

One of the leading 5 companies in the world

**References**

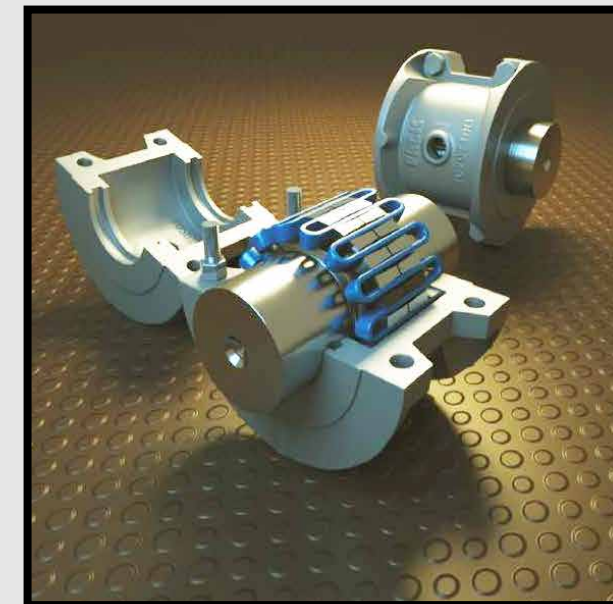
- |                           |                            |
|---------------------------|----------------------------|
| Pioneer Cement - Pakistan | Eti Silver                 |
| TURPAS Kirikkale Refinery | Kroman Steel               |
| Dalgakiran Compressor     | ICDAS Iron and Steel       |
| OYAK Mardin Cement        | Marzinc                    |
| As Cement                 | MES Machine                |
| Elazig Altinova Cement    | MAS Pumps                  |
| Batisoke Cement           | Turbosan                   |
| Yurt Cement               | Standart Pumps             |
| ADOCIM Artova Cement      | CUMENTAS                   |
| ADOCIM Sultankoy Cement   | DSI                        |
| TURPAS Metallurgy         | CVS Machinery Construction |

DAL Electric Motors Co was established in 1990

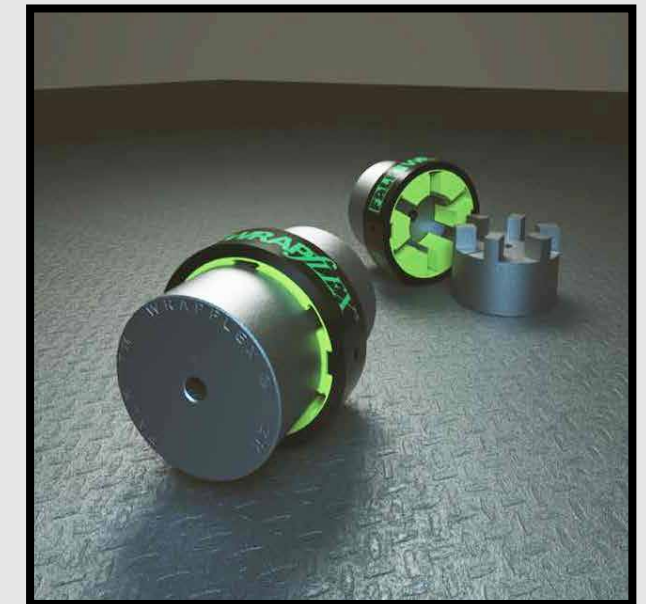
The Company focuses on tailor-made solutions to the **cement, lime, mining, mineral resources, electricity and automation industry** and provides technical service support

DAL Electric Motors Co is among the **leading 5 companies in the industry world-wide**, producing motors meeting the NEMA (The National Electrical Manufacturers Association of U.S.) standards

The Company is **distributor for well-known brands such as WEG, Falk Rexnord and ISGEV**



Steel Flex



Wraplex



The logo for FØNS technology is centered on a background of flowing, light blue and white abstract shapes. The text "FØNS" is in a bold, white, sans-serif font, with a diagonal slash through the letter 'O'. To its right, the word "technology" is written in a smaller, white, lowercase sans-serif font. The entire text is contained within a black rectangular box that has a thin red vertical bar on its right edge.

**FØNS** technology







**An Innovator and Technology Developer**

**1st company in the world, which applied for patent in the technology of horizontal clinker cooler**

**Offices in 5 countries including Denmark, Turkey, India, Czech Republic**

**References**

- |                             |                                  |
|-----------------------------|----------------------------------|
| Lukavac Cement - Austria    | Bolu Cement                      |
| Sange Cement - China        | Mersin Cement                    |
| Yurt Cement                 | Lucky Cement - Pakistan          |
| Askale Cement               | CIMKO Narli Cement               |
| Home Smie Cement - Austria  | Kavcim Cement                    |
| Trabzon Cement              | Pioneer Cement - Pakistan        |
| NCL Cement - India          | CIMSA Nigde Cement               |
| Jizzakh Cement - Uzbekistan | Aslan Cement                     |
| Zuari Cement - Italy        | Batican Cement                   |
| Hawari Cement - Austria     | Surkhandarya Cement - Uzbekistan |
| Al Qaim Cement - Jordan     | Century Cement - India           |
| Mardin Cement               | Bestwat Cement - Pakistan        |
| Rezzato Cement - Italy      | Holcim Cement - Philippines      |
| Denizli Cement              | Nuh Cement                       |

FONS Technology International produces clinker coolers with **high productivity to the world cement market**

Fons Technology International developed technologies to overcome challenging issues which decreases efficiency by causing stoppages, wear and tear part costs, energy losses

**FONS Delta Cooler, Shuttle Floor or Walking Floor** with productive horizontal transportation system is more advanced than the current clinker coolers in the market

The company is the **1st patent applicant of this improved technological system**



FONS Delta Cooler



**DAL Electric  
Automation**

**A Turnkey contractor**

**Solution partner: Siemens A&D**  
**Business partners: Siemens, ABB, Schneider, Eaton**

**One of the top 5 companies in the world**

DAL Electric Automation Co. is in the business to serve for Turkish heavy industry since 1995

The Company is a **turnkey contractor** of; **high and medium voltage** transformer centers and distribution networks low voltage distribution networks illumination systems process control systems building automation systems cabling including grounding of **electricity and automation systems**

DAL Electric Automation Co. is a **solution partner of Siemens** and **business partners with ABB, Schneider and Eaton**

Apart from the cement industry, DAL Electric Automation Co. delivers solutions to Whitegoods, Steel, Automotive, Lime and Coal, Power Generation, Paper, Wood, Oil and Gas, Glass and Building Automation Industries

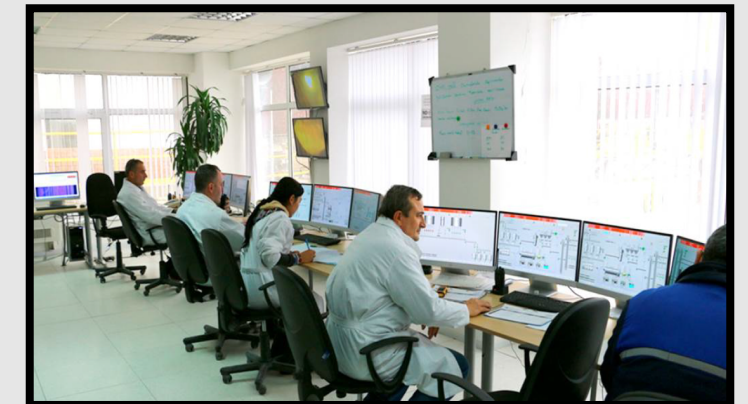
DAL Electric Automation Co. is one of the **top 5 companies in its sector**

**References**

- |                                     |                             |
|-------------------------------------|-----------------------------|
| Cargill Food and Agriculture        | Marzinc                     |
| ADRA Co. Cement - Syria             | Isdemir                     |
| ADOCIM Tokat Cement                 | Almalyk Mining - Uzbekistan |
| MB Starch Sugar                     | CIMSA Afyon Plant           |
| Yurt Cement                         | Adana Cement                |
| Colu Cement                         | Kayseri Sugar (PC7 Upgrade) |
| Akcansa Cement Ladik Factory        |                             |
| Akcansa Cement Buyukcekmece Factory |                             |



CCR - Central Control Room



CCR - Central Control Room





DEDUSTING TECHNOLOGIES  
INTERNATIONAL

**The biggest filter in Turkey was built by DTI**

**Provides safer workplaces and cleaner environment**

**One of the leading 5 companies in the world**

Dedusting Technologies International Co. is providing engineering, material and equipment supply, design, erection, commissioning and supervising services for the industrial dust collection systems

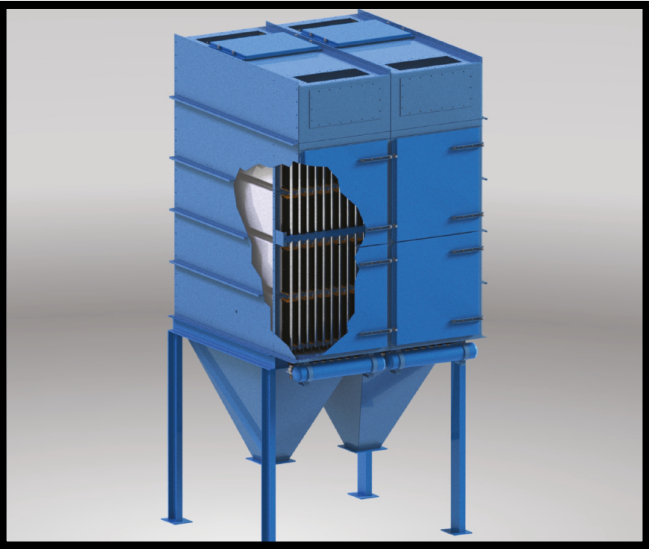
**The biggest filter in Turkey** was built by DTI with **2,4 million m<sup>3</sup>/h capacity**

The pipes and cages used in the filters are manufactured within the scope of the Company

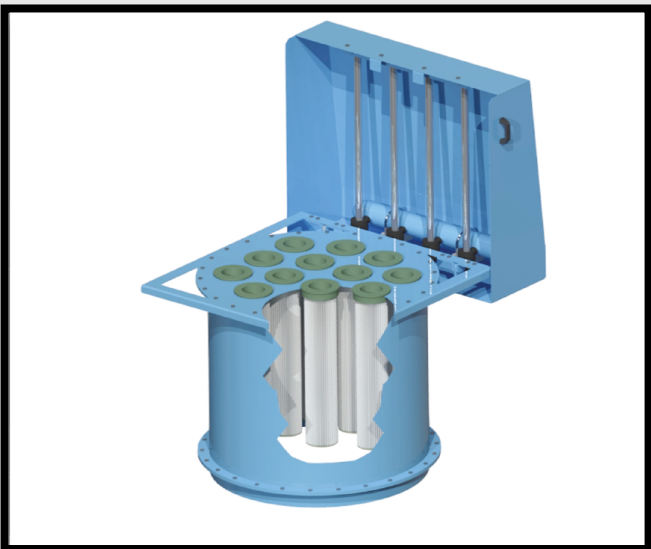
**Quality Control System of ISO 9001:2008** is used as an important means to ensure stable protection and improvement of the Quality Control System of DTI

DTI is among the **leading 5 companies in the world of its sector of activity**

References	
Jizzakh Cement	Kardemir Steel
Isdemir Steel	Lafarge
Yurt Cement	Nuh Cement



Pipe Filter



Jet Pulse Pipe Filters



**DAL**  
**Machinery&Design**

**Technology supplier**

**Customized training provider**

**One of the top 5 companies in the world**

**References**

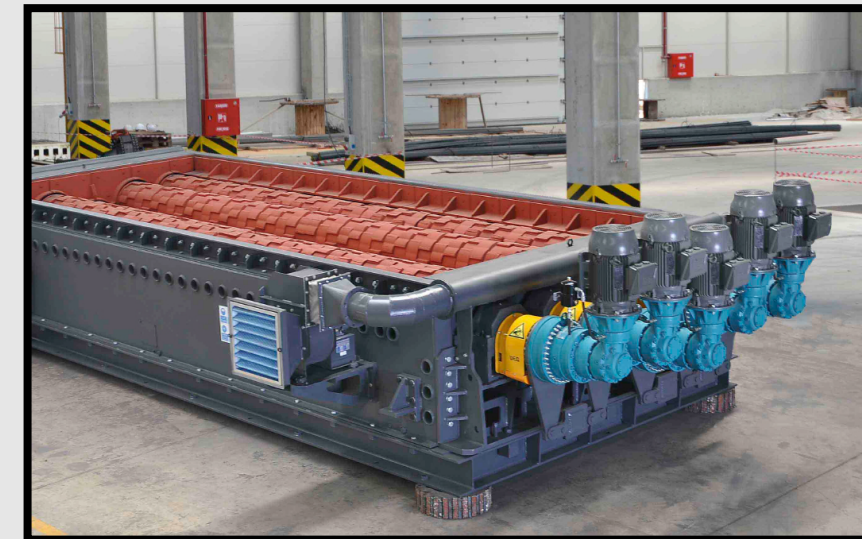
- |                             |                         |
|-----------------------------|-------------------------|
| Hieldelberg - Georgia       | OYAK Mardin Cement      |
| Pioneer Cement - Pakistan   | ADOCIM Sultankoy Cement |
| Jizzakh Cement - Uzbekistan | CIMKO Adiyaman Cement   |
| Marzinc                     | OYAK Elazig Cement      |
| Iskenderun Iron and Steel   | Elazig Grinding Plant   |
| Yurt Cement                 | Marmara Cement          |
| ADOCIM TOKAT Cement         | Silopi Cement           |

DAL Machinery Design Co., as a **technology providing company**, accomplishes projects on turnkey basis. The Company embraces creativity, which comes up with the most economic and environment friendly solutions

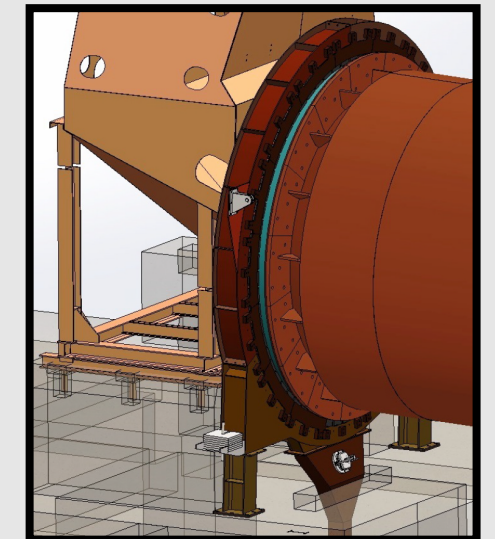
The Company also **provides Cement and Mineral Technologies / Industrial Services / Research & Development and Cement Factory Inspection Services**

The Company designs iron oxide, magnesite salt and portland cement equipments with focus of energy efficiency

DAL Machinery Design Co. is among the **top 5 in the sector**



Roll Clinker Crusher - 12000 tpd



Kiln Inlet Sealing



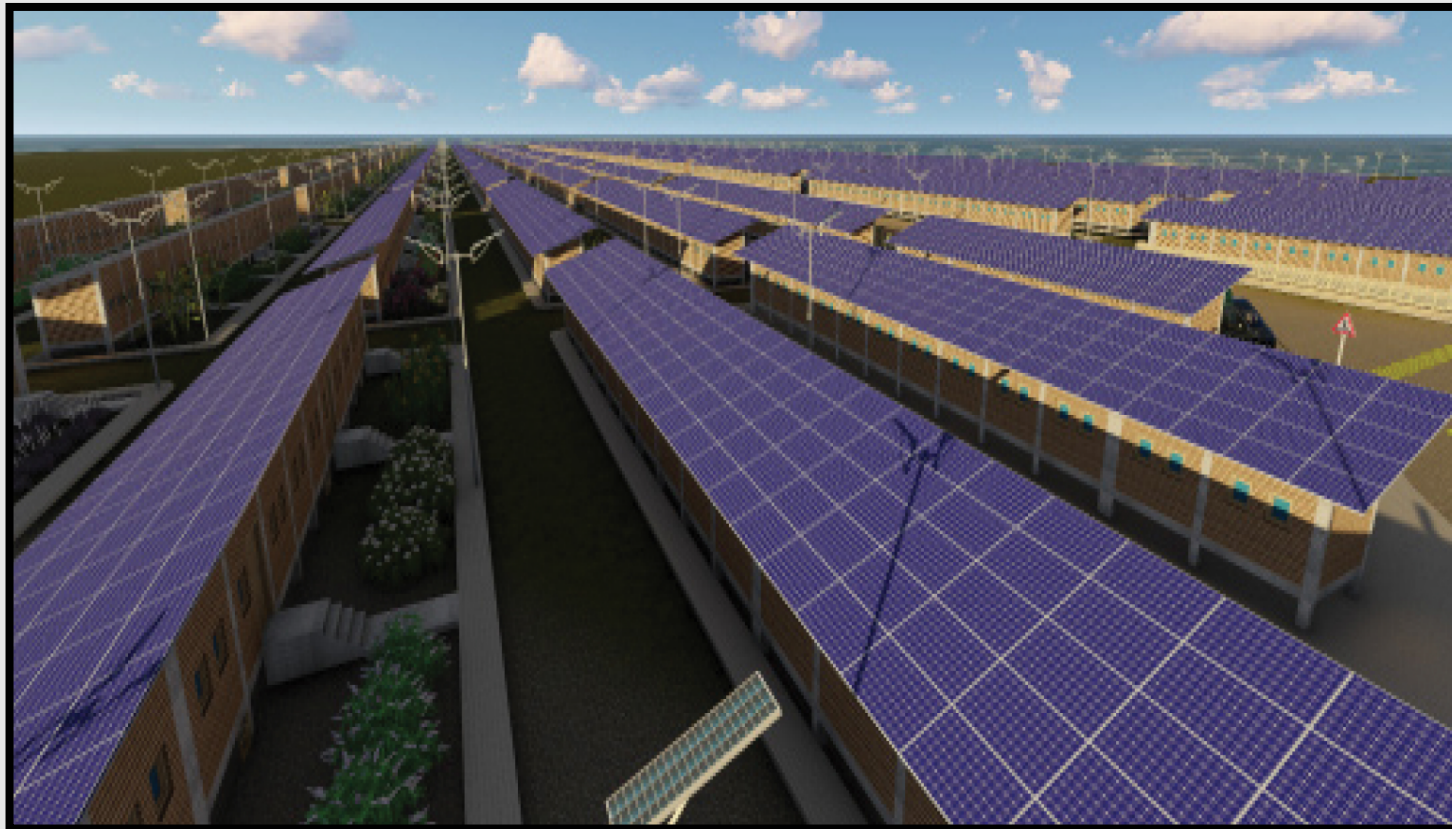


DAL RENEWABLE ENERGY  
INVESTMENT and TECHNOLOGIES CO.

**An R&D intensive Company**

**Meeting energy needs even in the most difficult geographies**

**Turnkey solutions all over the World**



Sun City

One of the mission of the Holding is to encourage the **use of environmental friendly energy resources** and **low footprint energy generation**. The Holding is fully devoted to Research & Development to increase the potency and feasibility of renewable energy technologies and low footprint energy generation

DAL Renewable Energy Investment and Technologies Co. is investing all over the world in such projects on turn key basis and provides technological support services

Today, renewable energy projects are not only being implemented in developed counties but also in the regions with adversities in reaching energy. The policy makers intend to meet energy needs by renewable sources to promote the growth of the community by increasing their life quality and providing ample energy for the industry in the region. The Company **invests in several concepts** such as;

**Sun City:** The solar power plant is a concept city where all the steps are carried out by hand delivered on a turnkey basis. With the modular installation, it is possible to make industrial investments even in the most difficult geographical areas using the site which will be formed from the residences that can live in the local population as a solar power plant at the same time

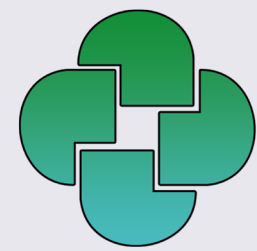
**Solar Housing:** All projects and applications of houses that can meet their needs completely independently from the renewable energy regardless of the network

**Solar Tracking System Mechanisms:** Such applications may increase productivity up to 35%

The Company aims a **leap forward in energy efficiency by using hybrid-inverter systems and synchronously working solar and grid systems**

The Company also makes **R&D works** which will **increase the efficiency of bioenergy plants** as well. A significant drop in the cost and size of the bioenergy plants will enable installation of such technologies all over the world





**DAL ENERGY**  
Hydroelectric Plants Co.

**A part of Holding's expansion and diversification policy**

**A good example of hydro electric plants with smallest foot print**

**17,06 MW capacity**

DAL Energy Hydroelectric Plants Co. is a new member of the Holding. It holds energy production licence from Energy Market Regulatory Authority and is currently investing on a Hydroelectric Plant

The Holding recognizes the positive aspects of Hydroelectric Power. Hydroelectric power is a **green source of energy** as hydroelectric power plants **does not cause any pollution**. Besides **Hydroelectric power is a renewable energy source**, contrary to fossil fuels

The Holding intends to repeat the success of the group companies and deepen their expansion in energy industry







**TURKEY**

**Capacity increase and production enhancement investment in Corlu Region**

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**17,06 MW**  
Hydroelectric Plant

**GERMANY**

**An R&D center and innovation hub**

**KAZAKHSTAN**

**A partnership agreement**  
signed with Kazakh Invest National Co. to attract foreign direct investment

**UZBEKISTAN**

**Cement Factory**  
Zomin

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**Lime Factory**  
Zomin

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**Gas Concrete Plant**  
Zomin

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**Ready Mixed Concrete Plant**  
Zomin

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**Metal Construction Plant**  
Ahangaran

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**Building Materials and Chemical Plant**  
Zomin

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**Zomin Paving Stone and Concrete Elements Plant**

**MONTENEGRO**

**Lime Factory**

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**Gas Concrete Plant**

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**Paving Stone and Concrete Materials Plant**

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**Building Materials and Chemicals Plant**

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**Building and Metal Structure Plant**

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**Ready Mixed Concrete Plant**



**SURKHANDARYA CEMENT FACTORY  
UZBEKISTAN**







# DAL HOLDING INVESTMENT CO.

**TECHNOLOGY**

**ENVIRONMENT**

**HUMAN**

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