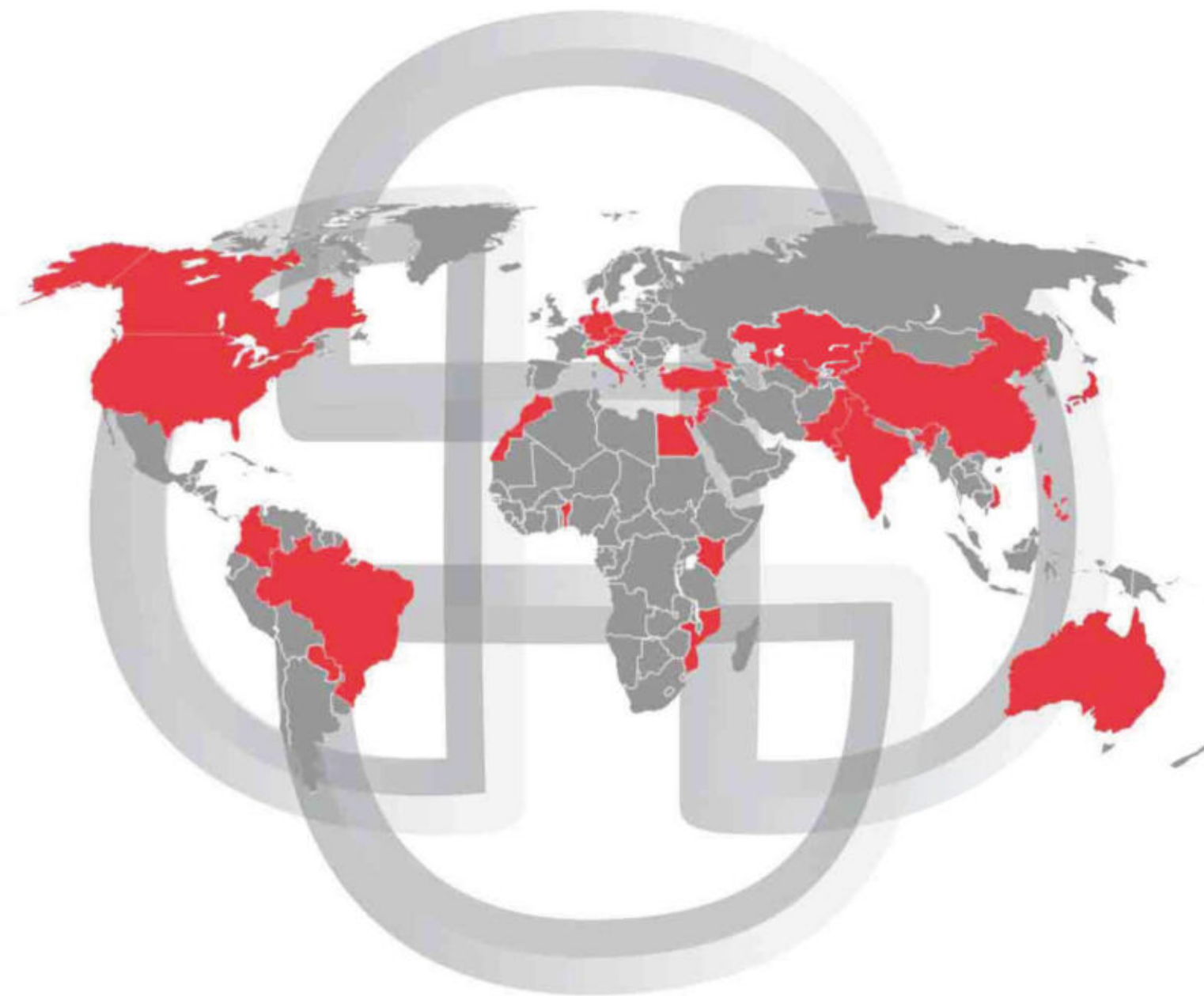




DAL HOLDING INVESTMENT CO.



DAL HOLDING INVESTMENT CO.



Jizzakh Cement Factory - Uzbekistan

33 years
DAL HOLDING

1985 Imported motor and actuators of foreseen lack of these equipments in all sectors of Turkey

1985 DAL Teknik Makina
Ticaret ve Sanayi A.Ş.



One of the R&D Centers of Turkey

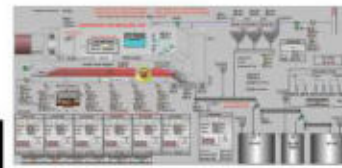


1990 Turnkey solutions in cement, lime, mining, mineral resources and Electric Automation

1990 DalElektrik



Representative of WEG, FackRoxnord, ISGEV



1st automation company of Turkey

1995 DAL ELEKTRİK
OTOMASYON

Serves Turkish heavy industry
Solution Partner with Siemens, A&D
Business Partner with Siemens, ABB, Schneider, Eaton

Completed in March 2014 with 100% of Turkish Engineering

2016 SURHANDERYA
CEMENT PLANT

2016



A new ground from DMT, Clinker crusher with the capacity of 12,000 tpd

2017

DMT
Dal Makina&Tasarim

Tailor-made Machinery Design

NOW

2012 JIZZAKH CEMENT
PLANT

2012



DTI
TEKNOLOJİK ENJENYERLIK
İNŞAAT VE TİCARET A.Ş.

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

2007

100% Turkish Engineering

2004 OYAK ELAZIG
CEMENT PLANT

2004

1 Dal Technic Machinery Co. st Turkish company to be involved with the turnkey basis contracting solutions

enlighting the sector with

+2000 employees



following projects in South America, Africa, Far East, Asia and Middle East

DAL HOLDING INVESTMENT CO.

one of the **first 5** in the world on technology, engineering, critical equipment supply


working in the sector of cement, construction, power, chemicals and mineral resources

one of the **first 10** in the world on turnkey solutions

selling its technologies all over the world, from Japan to Brazil

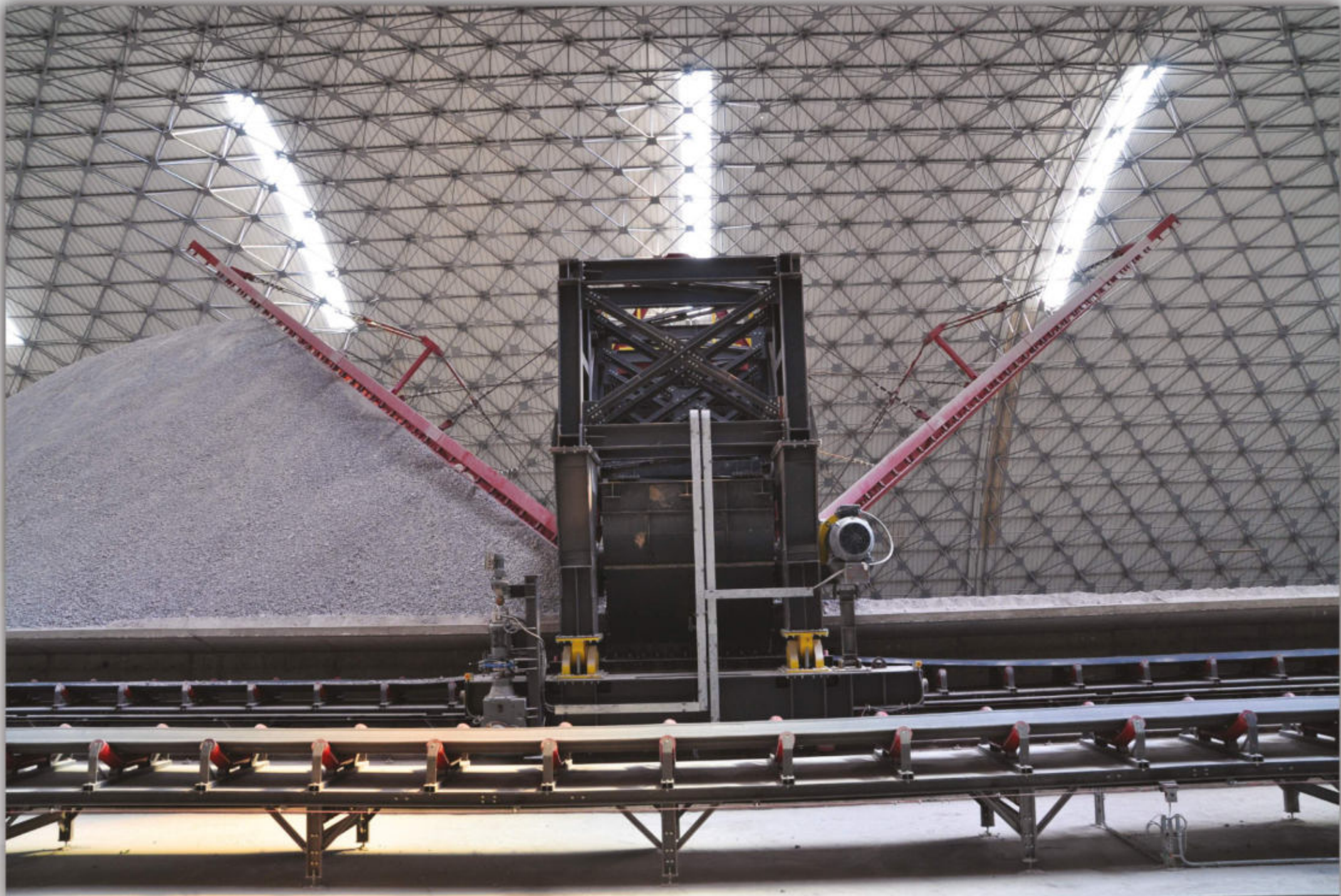


Jizzakh Cement Factory - Uzbekistan

 DEG DAL TEKNİK MAKİNA 33 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	-

The flagship of the holding stated DAL TEKNİK MAKİNA A.Ş. in the category of **INVESTABLE** in the rating study of JCR Eurasia Rating on April 14, 2017 and appraised its perspective, **Long Term National Rating BBB+(Trk) as Positive**

Besides, **Long Term Foreign and Local Currency Rating (BBB-)** and the details of the rest of the rating are specified in the table



Lineer Stocholl - Uzbekistan

 **DAL HOLDING INVESTMENT CO.**
BOARD MEMBERS

CFO

Admin | Legal

CTO

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

 **DalElektrik**

 **DAL ELEKTRİK**
OTOMASYON

 **DMT**
Dal Makina & Tasarım A.Ş.

 **DTI**
DEDUSTING TECHNOLOGIES
INTERNATIONAL

 **FONS** technology

 **DAL CONSTRUCTION**
TECHNOLOGIES CO.

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

 **DAL ENERGY**
Hydroelectric Plants Co.



DAL Teknik Makina
Ticaret ve Sanayi A.Ş.



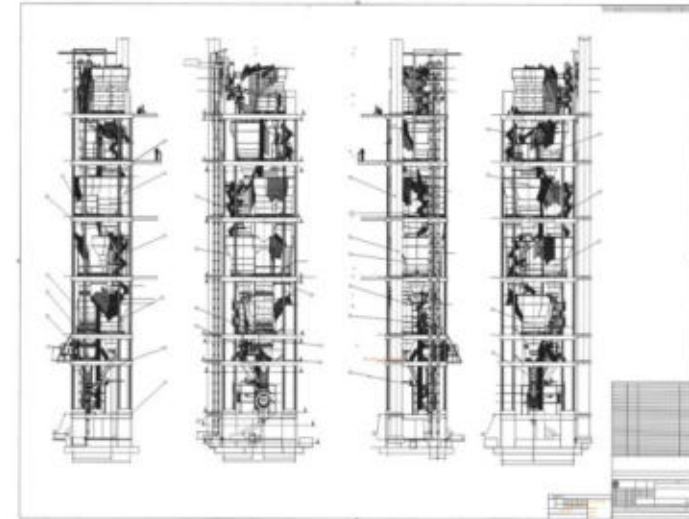
- Dal Technic Machinery CO. started its work activity in 1985, and realizing projects on turnkey basis both in home and abroad with **100% of Turkish Engineering**
- **Total annual volume** of production of the submitted projects in the cement sector is **8.5 million tons**
- As the company accomplished the engineering works 100 % as Turkish engineering **in the sector of cement commitment** became **the first addressing company** in Turkey
- There are **4 European** companies in the sector of technology, engineering and critical equipment procurement, and **5 Chinese** companies of turnkey solutions **in the world**

Finished Projects

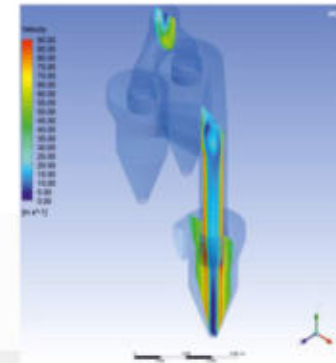
- Jizzakh Cement Factory - *Uzbekistan*
- Marzinc
- Iskenderun Iron and Steel
- Yurt Cement
- OYAK Mardin Cement
- ADOCIM Sultankoy Cement
- CIMKO Adiyaman Cement
- Pioneer Cement - *Pakistan*
- OYAK Elazig Cement
- Elazig Grinding Plant
- Heidelberg - *Georgia*
- Marmara Cement
- Silopi Cement

Ongoing Projects

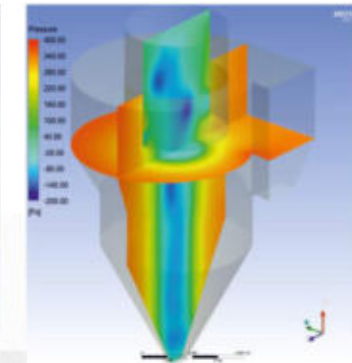
- Nuh Cement (Increase of capacity)
- Surkhandarya Cement - *Uzbekistan*



Preheater Tower Platform



Velocity CFD



Contour CFD

- Company accomplishes EPC of about 30 cement plants in the world
- Continuously increases modernization and capacity

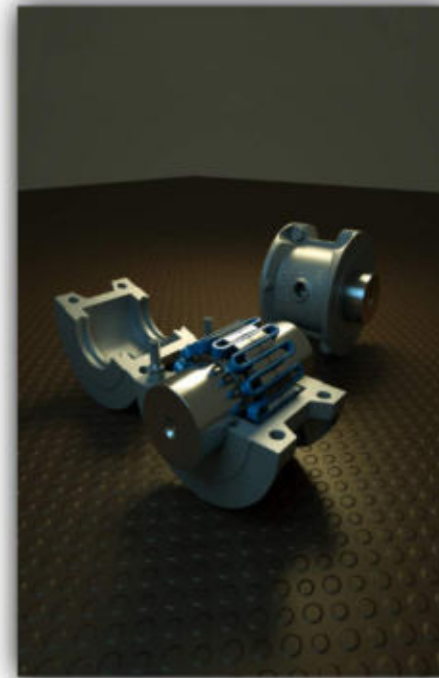
- ▶ **100 % is Turkish engineering**
- ▶ **Annual production volume of the submitted projects is 8.5 million tons**
- ▶ **One of ten companies in the world in its sector of activity**



- Dal Electric Motors Co. was established **in 1990**
- The company is producing **turnkey solutions** to the cement, lime, mining, mineral resources, electricity and automation industry and providing technical service support
- Dal Electric Motors Co. is one of the first five companies in its sector of activity in the world
- Company is the **representative of Turkey** of well known brands of **WEG, Falk Rexnord, ISGEV** in the international market

Finished Projects

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



Steel Flex



Wraplex

- ▶ **Turnkey solutions in cement, lime, mining, mineral resources, electricity and automation**
- ▶ **WEG, Falk Rexnord, ISGEV is a representative of Turkey**
- ▶ **One of the first five companies in the world**

FØNS technology

- FONS Technology produces clinker coolers with **high productivity** to the world cement market
- FONS has solved frequently appearing issues relating to the economic and productivity loss of the clinker coolers in the operation processes by the help of the improved **Delta Cooler Technology**
- **FONS Delta Cooler, SHUTTLE FLOOR or WALKING FLOOR** with productive horizontal transportation system is more advanced than the clinker coolers in the market
- The company is the **first patent applicant** of this improved technological system
- Turkey is a headquarter and there are offices in **Denmark, India** and **Czech Republic** as well as representative offices in **Brazil and Jordan**

Finished Projects

- | | |
|--------------------------------------|------------------------------------|
| • Yurt Cement | • Bolu Cement |
| • Askale Cement | • Mersin Cement |
| • Home Smie Cement- <i>Austria</i> | • Lucky Cement - <i>Pakistan</i> |
| • Trabzon Cement | • Lukavac Cement – <i>Austria</i> |
| • NCL Cement - <i>India</i> | • Sange Cement - <i>China</i> |
| • Jizzakh Cement - <i>Uzbekistan</i> | • CIMKO Narli Cement |
| • Zuari Cement - <i>Italy</i> | • Kavcim Cement |
| • Hawari Cement - <i>Austria</i> | • Pioneer Cement - <i>Pakistan</i> |
| • Al Qaim Cement - <i>Jordan</i> | • CIMSA Nigde Cement |
| • Mardin Cement | • Aslan Cement |
| • Rezzato Cement - <i>Italy</i> | • Baticim Cement |
| • Denizli Cement | |

Ongoing Projects

- | | |
|---|--------------------------------------|
| • Surkhandarya Cement - <i>Uzbekistan</i> | • Holcim Cement – <i>Philippines</i> |
| • Century Cement - <i>India</i> | • Nuh Cement |
| • Bestway Cement - <i>Pakistan</i> | |



FONS Delta Cooler

- ▶ **FONS is the first company in the world, which applied for patent in the technology of horizontal clinker cooler**
- ▶ **Technology manufacturer**
- ▶ **Representation offices in five countries**



• Dal Electric Automation Co. started serving for Turkish heavy industry **in 1995**

• The company is a **turnkey contractor** of high and medium voltage transformer centers and distribution, low voltage distribution, illumination, process control system, building automation system, cabling, including grounding of **electricity and automation systems**

• Dal Electric Automation Co. is preparing equipment of **high and medium voltage distribution system of Siemens, ABB and Schneider**. Furthermore, every version is a generator by means of low voltage panel and system control panel of **Eaton certificate panel**

• The company changed the **Solution Provider**, started in 2002 with Siemens A&D to **Solution Partner** in 2007

• Dal Electric Automation Co. is **one of the first five companies** in its sector of activity in the world

Finished Projects

- ADOCIM Tokat Cement
- MB Starch Sugar
- Yurt Cement
- Bolu Cement
- Akcansa Cement Ladik Factory
- Akcansa Cement Buyukcekmece Factory
- Marzinc
- Isdemir
- Almalyk Mining - *Uzbekistan*
- ADRA Co. Cement - *Syria*

Ongoing Projects

- Cargill Food and Agriculture
- Almalyk Mining - *Uzbekistan*
- CIMSA Afyon Plant
- Adana Cement
- Kayseri Sugar (PC7 Upgrade)



CCR - Central Control Room



CCR - Central Control Room

- ▶ **Company was established 22 years ago**
- ▶ **Turnkey contractor**
- ▶ **Solution partner Siemens A&D**
- ▶ **Business partners: Siemens, ABB, Schneider, Eaton**
- ▶ **One of the first five companies in the world**

The logo consists of three blue rectangular blocks, each containing a white letter: 'D', 'T', and 'I'. The letters are in a serif font. Below the blocks is a yellow curved line that arches under the letters.

DEDUSTING TECHNOLOGIES
INTERNATIONAL



- Dedusting Technologies Int. 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
- The pipes and cages used in the filters are manufactured **within the scope of our 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
- Dedusting Technologies of DTI is **among the first five companies** in the world of its sector of activity

Most of the below mentioned projects are approved

- Cement
- Iron Steel
- Smelting
- Mineral
- Gypsum Lime
- Combined Drying and Pulverizing Plant
- Paper Industry
- Ceramic Industry
- Chemical Industry
- Thermal Power Plant
- Crushing and Screening Plants
- Asphalt Plant
- Aluminum
- Glass Industry
- Rubber Industry

Ongoing Projects

- Erdemir
- Isdemir
- Lafarge
- Dal Teknik



Pipe Filter



Jet Pulse Pipe Filters

- ▶ **The biggest filter in Turkey**
- ▶ **Equipment is produced within the scope of the company**
- ▶ **One of the first five companies in the world**



DMT
Dal Makina&Tasarım



- Dal Machinery&Desing Co. as a **technology providing** company is accomplishing projects **on turnkey basis** with the help of the creative ideas, the most economic and environment friendly solutions
- The company is providing Cement and Mineral Technologies / Industrial Services / Research&Development and Cement Factory Inspection Services
- Manufacturer of iron oxide, magnesite salt and portland cement equipment
- Dal Machinery&Desing Co. as among **the first five** in the world in the sector of its activity

Finished Projects

- Jizzakh Cement - *Uzbekistan*
- Marzinc
- Iskenderun Iron and Steel
- Yurt Cement
- ADOCIM Tokat Cement
- OYAK Mardin Cement
- ADOCIM Sultankoy Cement
- CIMKO Adiyaman Cement
- Pioneer Cement - *Pakistan*
- OYAK Elazig Cement
- Elazig Grinding Plant
- Marmara Cement

Design and Engineering

- Pioneer Cement - *Pakistan*

Erection Supervision

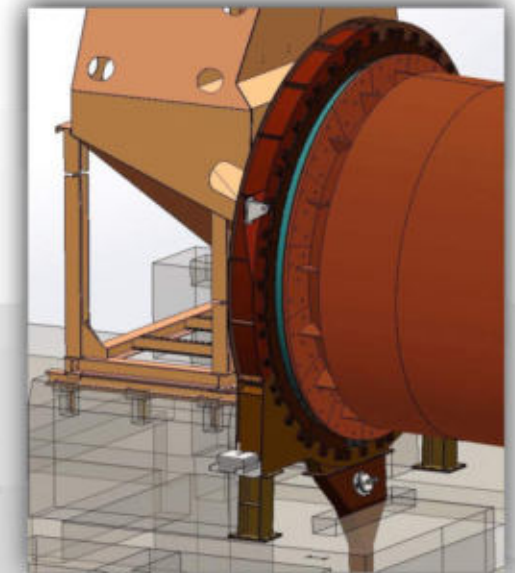
- Hieldelberg - *Georgia*

Main detail of Engineering and Purchase

- Silopi Cement



Roll Clinker Crusher - 12000 tpd



Kiln Inlet Sealing

- ▶ **Technogy supplier**
- ▶ **Equipment trainer**
- ▶ **One of the first five companies in the world**



DAL RENEWABLE ENERGY
INVESTMENT and TECHNOLOGIES CO.



- It is the main objective to **increase the use of environmentally friendly energy resources** by realizing Research & Development activities in order to increase the productivity and reduce the costs by **developing renewable energy technologies** at home and abroad
- DAL Renewable Energy Investment and Technologies CO., Inc. is presenting and investing all over the world in the preparation of renewable energy project, turn-key solution and technological support services
- In the world, turnkey solutions are being developed and implemented in **geographies with difficulties in reaching energy**, with renewable sources of energy to meet them, to enable the establishment of industrial facilities and to **increase the quality of life of the local population** at the same time

Sun City: The solar power plant is a 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 by 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

- Design and application of **Solar Tracking System Mechanisms**. In this way, productivity increase of up **35 % can be achieved**
- It is aimed to achieve a big advantage by using **hybrid- inverter** systems with R & D studies and solar and grid system power technologies working together
- With our R & D work, which will increase the efficiency of bioenergy plants, it will be possible to make investment more feasible and be installed all over the world in smaller bioenergy facilities



Sun City

- ▶ **Increase productivity with Research & Development activities**
- ▶ **Meeting energy needs even in the most difficult geographies**
- ▶ **Turnkey solutions all over the World**



Rotary Kiln - Uzbekistan

Turkey

- Reaching maximum capacity of the factory in Corlu European Free Zone
- 21 MW Solar Power Plant

Uzbekistan

- Reaching maximum capacity of Zamin Cement Factory (250.000 ton/year)
- Reaching maximum capacity of Zamin Lime Factory (50.000 ton/year)
- Construction of Building and Steel Structures Manufacturing Factory in Angren SB (capacity of 1.000 ton/month at the first stage)
- Construction of Zamin Gas Concrete Plant (200.000 m³/year)
- Construction of Zamin Paving Stone and Concrete Elements Plant (360.000 m²/year)
- Construction of Zamin Building Materials and Chemicals Plant (30.000 ton/year)
- Construction of Zamin Ready mixed Concrete Plant (120.000 m³/year)

Montenegro

- Purchase of Lime Factory
- Construction of Building and Steel Structure products Manufacturing Factory (capacity of 1.000 ton/month at the first stage)
- Construction of Gas Concrete Plant (200.000 m³/year)
- Construction of Paving Stone and Concrete Elements Plant (360.000 m²/year)
- Construction of Building Materials and Chemicals Plant (30.000 ton/year)
- Construction of Ready mixed Concrete Plant (120.000 m³/year)



Raw Material Component System- Uzbekistan

1. Design and Simulation

- Ansys Fluent, Ansys CFX, Ansys DesignXplorer (256 Core, 1 TB)

2. Engineering Infrastructure

- Autodesk Inventor, Autocad, Solidworks, Lumion, Oracle infrastructure

3. Integrated File System - IFS

- We are using the modules within the scope of IFS ERP system having .NET and web based ERP system in all of our operation processes and content
- Continuous flow and control of existing procedures are expressed through the relevant ERP system.
- The purpose of choosing IFS ERP system is its housing of the all modules requiring one action as well as availability of integrated project management module, therefore there is no need to use any technologies such as PRIMAVERA, Microsoft Project.
- Operational processes are provided with process screen, also, tracking and reporting systems of relevant processes with observation and reporting screens. Performing modifications and customizations according to needs and requirements on the system, the sustainability of process conformance is provided. System users within their used modules have an opportunity to conclude reports among themselves and/or to other departments. In addition, special reports prepared by the help of IFS are effective due to continuous management operation and monitoring
- Controlling mechanisms applied within the system are divided into two layers such as bottom and surface control mechanisms. As the bottom layer control mechanisms are directed to the control of operational process work, the surface layer controlling mechanisms are considered to be related mechanisms of effectivity and access on the users system. The bottom layer of the system is provided with continuous information control and error messages while the surface layer is provided with continuous position control and status based permission sets

4. IT System in The Disaster Recovery Base

- We have a leading system in any level and currently, Simplicity Technology is used. Any kind of server failure is not reflected in the work process of the users as the other server is providing service without interruption
- The third server is also working in the other location (Yenibosna) beyond Sirinevler location in the scope of Disaster Recovery system, which is designed in the mode of coming online
- Besides above mentioned, Activation of Information Security ISO27001 and Work Continuity Management System ISO22301 in this scope is on process



Surkhandarya - Uzbekistan

Trainings

- Financial Specialized Training Program (Deloitte Academy)
- Advanced Excel and Macro Training
- English training programs in different levels (in the scope of continuous trainings)
- Computational Fluid Dynamics - CFD
- Autodesk Inventor 3-D Modelling
- Steam Turbine Installation Training (Abroad education)
- Education of Burning Technologies (Abroad education)

Social Responsibility Projects

1. Assessment of Domestic Flow

Education of primary school children and teaching them the sense of responsibility at an early age and provision of widespread of this matter are accomplished with the purpose of increasing the turnaround ratio of 6 - 7 % level of flow in our country

2. DAL Academy

This is a supportive project in the recruitment of the students with three year education with respect to the vacancies both in the industry of the country and our team of workers in the point of Human Resources in the collaboration with the universities. Currently, ten students are having training in the scope of the project in a year. We are planning to reach the target of the students under training for thirty students for the upcoming years

3. Quail Breeding Farm

Our first target is schools located in the villages. Due to its nutritional value the quail has 1/100 efficiency. Both the eggs and the meat having nutritional value provide healthy growing and improvement of children. By means of quail breeding containers located in the villages the deficiencies caused because of lack of nutrition are prevented. We are also working in collaboration with the village authorities in order to provide durability of this process





Şirinevler Mah. Adnan Kahveci
Blv. Haydar Akın İş Mrk.
Bahçelievler/ İstanbul / Türkiye
Tel:+90 (212) 639 85 00
info@dal-group.com
www.dal.com.tr

DAL HOLDING INVESTMENT CO.

Yakkasaray Districk
Mirobod -1 str 47 / 49
Tashkent City / Uzbekistan
Tel:+998 (71)20510 07
info.taskent@dal-group.com
www.dal.com.tr