33 years DAL HOLDING

1985 DAL Teknik Makina Ticaret ve Sanayi A.S. - One of the R&D Centers of Turkey

1990 DalElektrik - Representative of WEG, Faegh Richardson, IEG IV

1995 DAL ELEKTRIK 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

SURHANDERYA CEMENT PLANT 2016

JIZZAKH CEMENT PLANT 2012

The biggest filter in Turkey was built by DTL

OYAK ELAZIG CEMENT PLANT 2007

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

now

2017 Tailor-made Machinery Design

DMT Dal Makina & Tasarrım

enlightening the sector with +2000 employees

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

DAL HOLDING INVESTMENT CO.
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.
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**
- Marzinke
- Iskenderun Iron and Steel
- Yurt Cement
- OYAK Mardin Cement
- ADOCIM Sultankoy Cement
- CIMKO Adiyaman Cement
- Pioneer Cement - **Pakistan**
- OYAK Elazig Cement
- Elazig Grinding Plant
- Heildelberg - **Georgia**
- Marmara Cement
- Silopi Cement

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

- 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

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.
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
- Askale Cement
- Home Smie Cement - Austria
- Trabzon Cement
- NCL Cement - India
- Jizzakh Cement - Uzbekistan
- Zuari Cement - Italy
- Hawari Cement - Austria
- Al Qaim Cement - Jordan
- Mardin Cement
- Rezzato Cement - Italy
- Denizli Cement
- Bolu Cement
- Mersin Cement
- Lucky Cement - Pakistan
- Lukavac Cement - Austria
- Sange Cement - China
- CIMKO Narli Cement
- Kavcim Cement
- Pioneer Cement - Pakistan
- CIMSA Nigde Cement
- Aslan Cement
- Baticim Cement

Ongoing Projects
- Surkhandarya Cement - Uzbekistan
- Century Cement - India
- Bestway Cement - Pakistan
- Holcim Cement – Philippines
- Nuh Cement

► 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
- Marzine
- Isdemir
- Almalyk Minning - Uzbekistan
- ADRA Co. Cement - Syria

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

**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**
• 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

• Ongoing Projects
• Erdemir
• Isdemir
• Lafarge
• Dal Teknik

➤ The biggest filter in Turkey
➤ Equipment is produced within the scope of the company
➤ One of the first five companies in the world
Dal Machinery & Design 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 & Design Co. as among the first five in the world in the sector of its activity.

Finished Projects
- Jizzakh Cement - Uzbekistan
- Marzin
- 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

- Technology supplier
- Equipment trainer
- One of the first five companies in the world
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 projects, turn-key solutions 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.

Desing and application of Solar Tracking System Mechanisms. In this way, productivity increase of up to 35% can be achieved.

It is aimed to achieve a single 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 investments more feasible and be installed all over the world in smaller bioenergy facilities.

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