dk

DOKAR

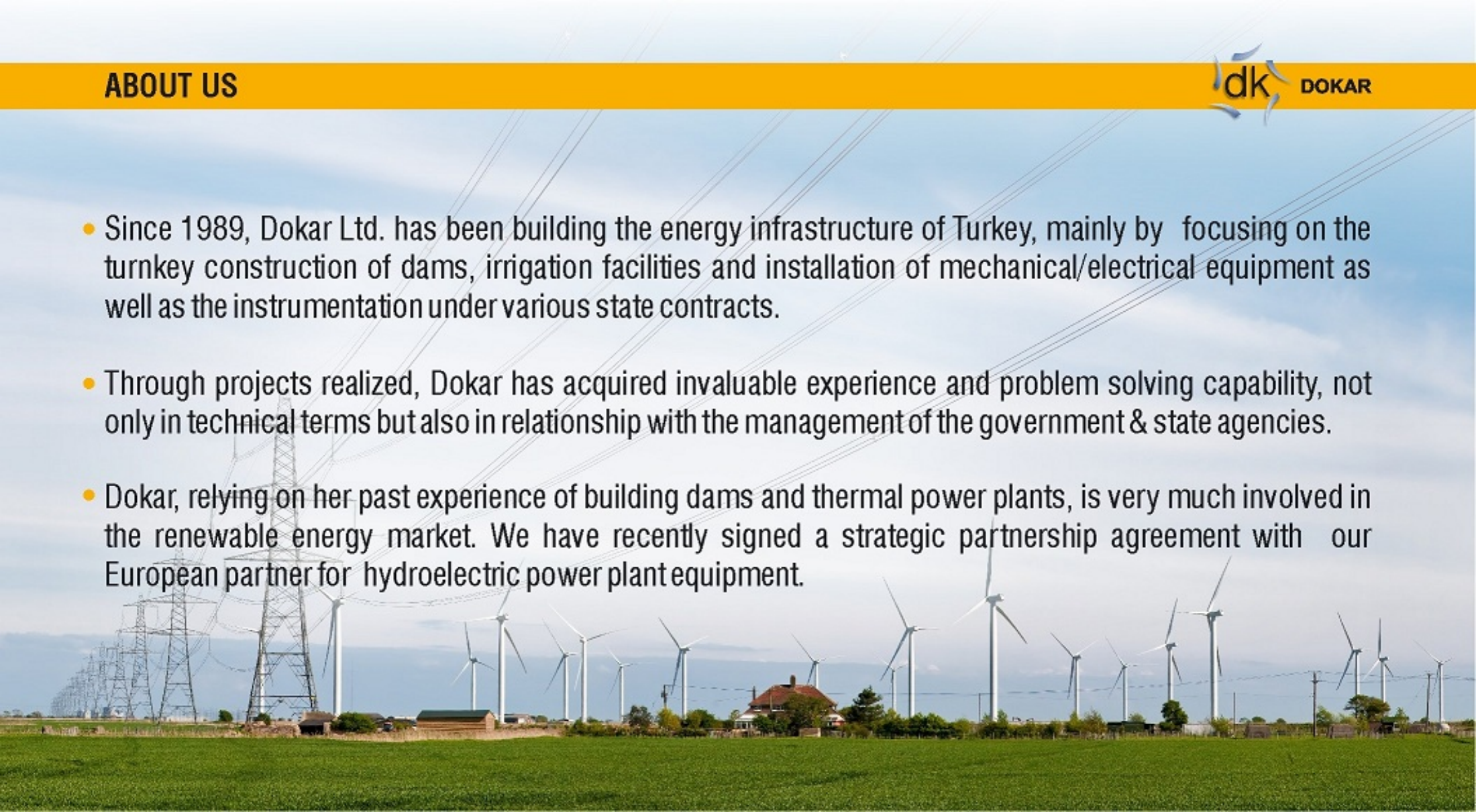
ABOUT US

DOKAR

- Since 1989, Dokar Ltd. has been building the energy infrastructure of Turkey, mainly by focusing on the turnkey construction of dams, irrigation facilities and installation of mechanical/electrical equipment as well as the instrumentation under various state contracts.

- Through projects realized, Dokar has acquired invaluable experience and problem solving capability, not only in technical terms but also in relationship with the management of the government & state agencies.

- Dokar, relying on her past experience of building dams and thermal power plants, is very much involved in the renewable energy market. We have recently signed a strategic partnership agreement with our European partner for hydroelectric power plant equipment.



ABOUT US

DOKAR

- With the special arrangements we provide a turn-key solution for turbine and hydro-generator and their auxillary equipments manufactured by our European partners.

- In 2003 Dokar has finished the construction of the first Rubber Dam in Aydın, Turkey under a contract from State Water Works (DSİ). Both the civil works (foundation works, excavation, river dredging) and the installation (mechanical, electrical equipment, piping & instrumentation) is carried out by Dokar.

- The said Rubber Dam was the 8th largest rubber dam in the world as of 2003. Dokar and Bridgestone of Japan carried out the turnkey construction of the Rubber Dam together.

ABOUT US

DOKAR

- Dokar has completed a contract from the EÜAŞ Afşin Elbistan Power Plant Unit B on fly ash hauling & stockpiling. Afşin Elbistan Power Plant Unit B is the largest coal-fired (1440MW installed power) power plant in Turkey with a Flue Gas Desulphurisation unit. Dokar design team has designed and constructed a state-of-the-art ash handling system which has been operating flawlessly since 2004. The state-of the art handling system for the fly-ash has safely stockpiled 18.100.000 m^3 of fly ash and FGD sludge since 2004.

- Since 1989, Dokar has been undertaking hard-to-design and hard-to-construct projects. The differenciation of Dokar is her ability to design and implement brand new ideas which reduces cost and increase efficiency.

- Dokar is committed to be an efficient designer and contractor in building the infrastructure of Turkish renewable energy market. Please feel free to contact us for any turnkey projects.

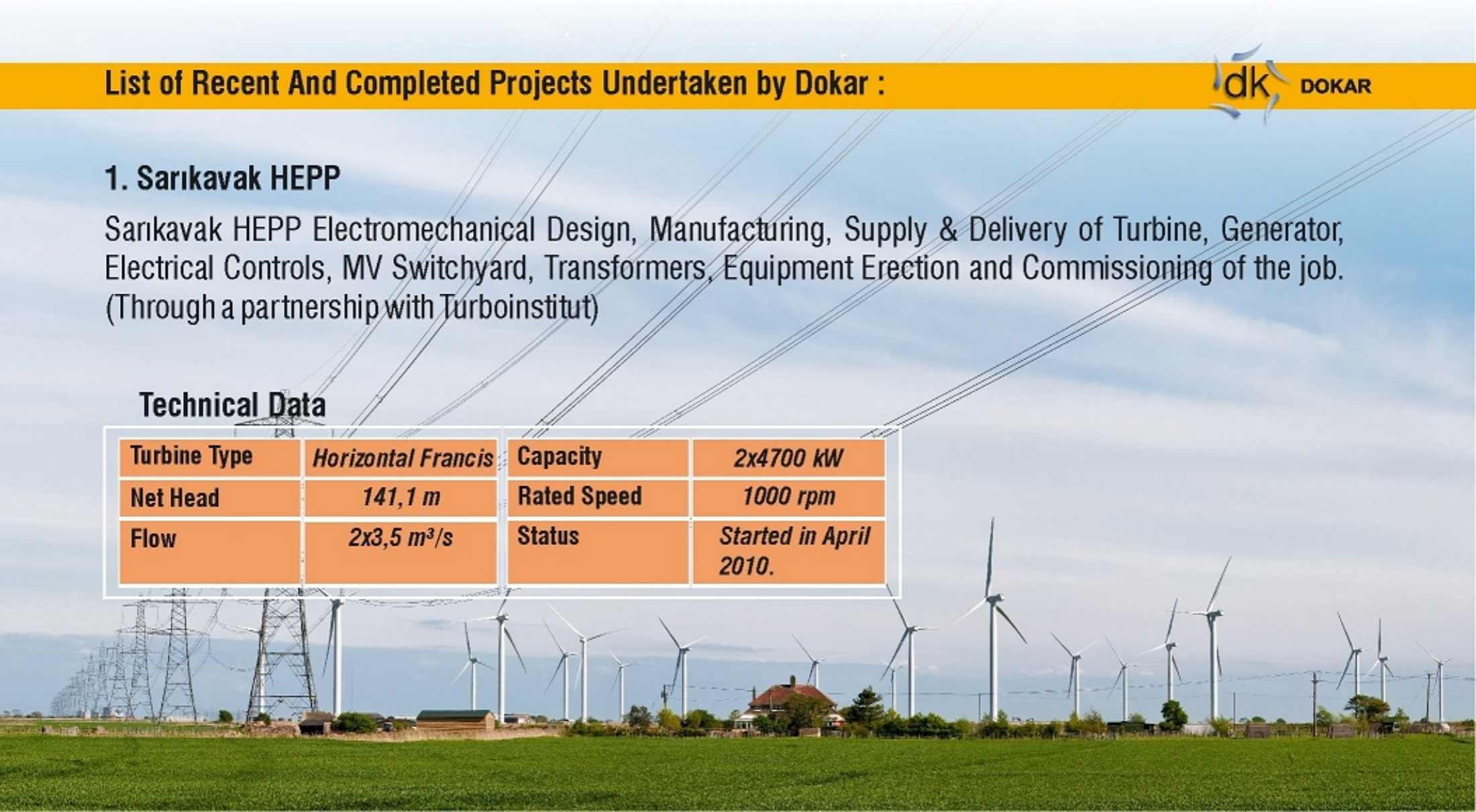
DOKAR

1. Sarıkavak HEPP

Sarıkavak HEPP Electromechanical Design, Manufacturing, Supply & Delivery of Turbine, Generator, Electrical Controls, MV Switchyard, Transformers, Equipment Erection and Commissioning of the job. (Through a partnership with Turboinstitut)

Technical Data

Turbine Type	*Horizontal Francis*	**Capacity**	*2x4700 kW*
Net Head	*141,1 m*	**Rated Speed**	*1000 rpm*
Flow	*2x3,5 m³/s*	**Status**	*Started in April 2010.*

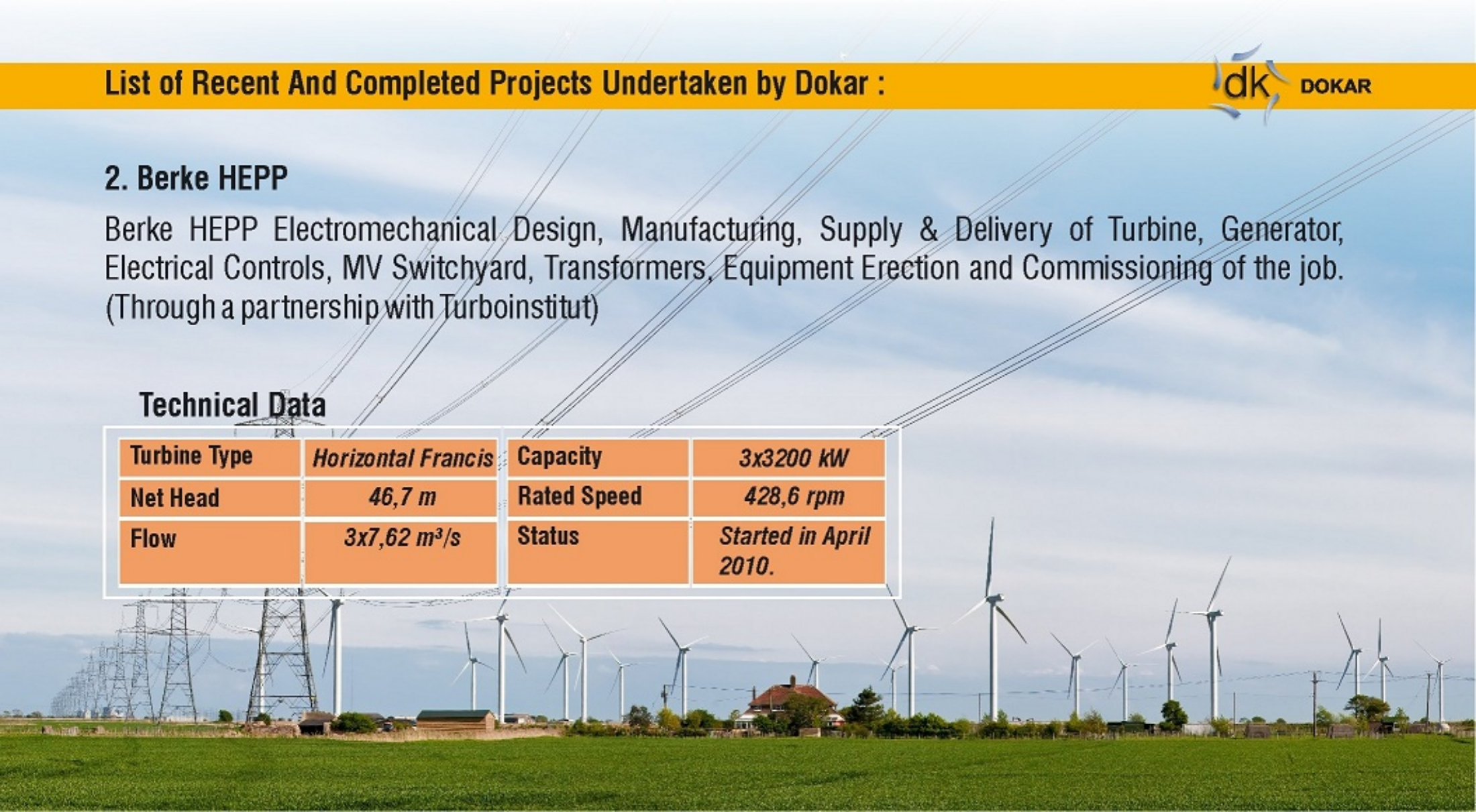


2. Berke HEPP

Berke HEPP Electromechanical Design, Manufacturing, Supply & Delivery of Turbine, Generator, Electrical Controls, MV Switchyard, Transformers, Equipment Erection and Commissioning of the job. (Through a partnership with Turboinstitut)

Technical Data

Turbine Type	*Horizontal Francis*	**Capacity**	*3x3200 kW*
Net Head	*46,7 m*	**Rated Speed**	*428,6 rpm*
Flow	*3x7,62 m³/s*	**Status**	*Started in April 2010.*

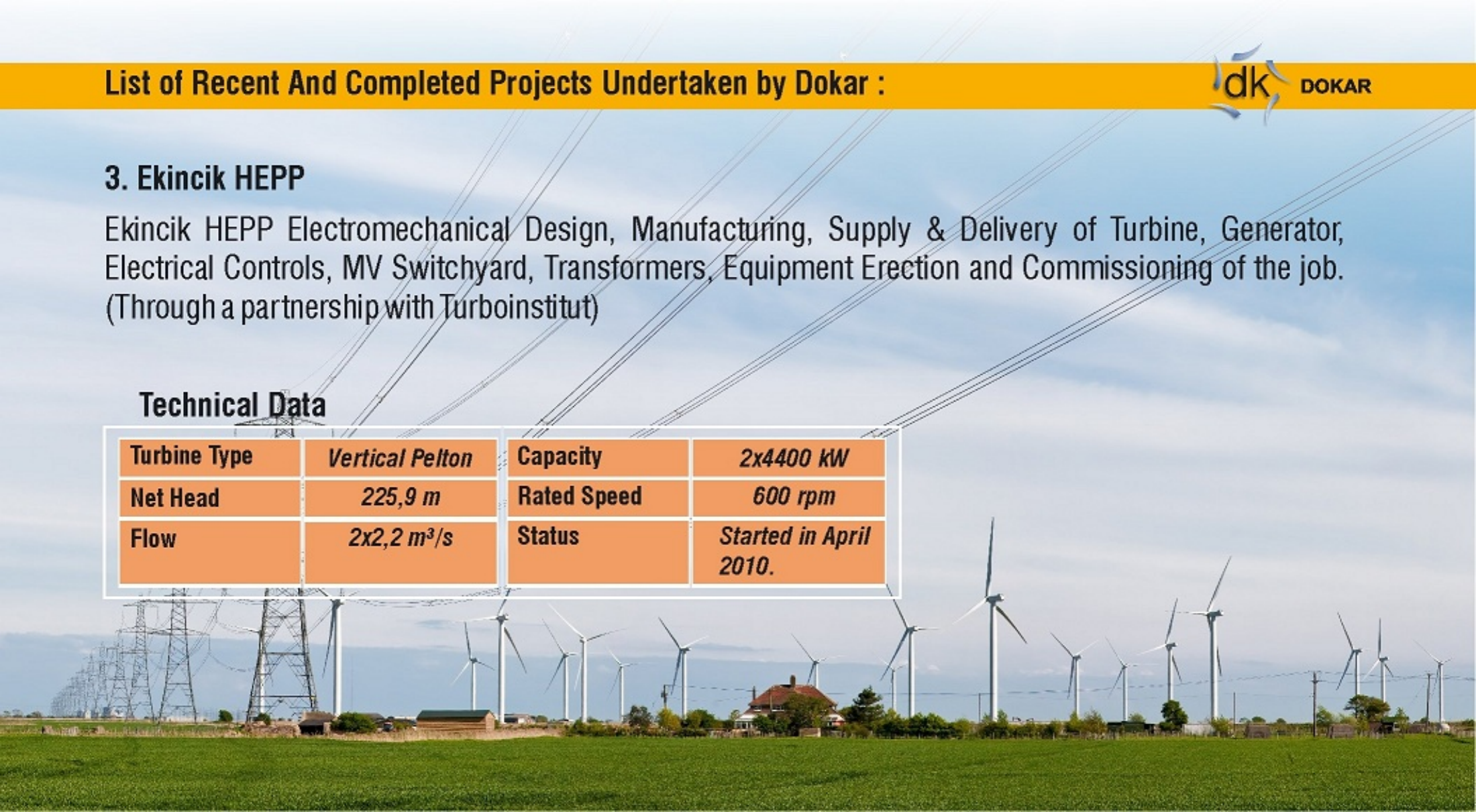


3. Ekincik HEPP

Ekincik HEPP Electromechanical Design, Manufacturing, Supply & Delivery of Turbine, Generator, Electrical Controls, MV Switchyard, Transformers, Equipment Erection and Commissioning of the job. (Through a partnership with Turboinstitut)

Technical Data

Turbine Type	*Vertical Pelton*	**Capacity**	*2x4400 kW*
Net Head	*225,9 m*	**Rated Speed**	*600 rpm*
Flow	*2x2,2 m³/s*	**Status**	*Started in April 2010.*



DOKAR

4. Sütlüce HEPP

Sütlüce HEPP Electromechanical Design, Manufacturing, Supply & Delivery of Turbine, Generator, Electrical Controls, MV Switchyard, Transformers, Equipment Erection and Commissioning of the job. (Through a partnership with Turboinstitut)

Technical Data

Turbine Type	*Horizontal Francis*	**Capacity**	*2x3000 kW*
Net Head	*122,3 m*	**Rated Speed**	*1000 rpm*
Flow	*2x2,7 m³/s*	**Status**	*Started in April 2010.*

DOKAR

5. Ayranlı HEPP

Ayranlı HEPP Electromechanical Design, Manufacturing, Supply & Delivery of Turbine, Generator, Electrical Controls, MV Switchyard, Transformers, Equipment Erection and Commissioning of the job. (Through a partnership with Turboinstitut)

Technical Data

Turbine Type	*Horizontal Francis*	**Capacity**	*2x8025 kW*
Net Head	*118,4 m*	**Rated Speed**	*600 rpm*
Flow	*2x7,5 m³/s*	**Status**	*Started in April 2010.*

DOKAR

6. Ayranlı-3 HEPP

Ayranlı-3 HEPP Electromechanical Design, Manufacturing, Supply & Delivery of Turbine, Generator, Electrical Controls, MV Switchyard, Transformers, Equipment Erection and Commissioning of the job. (Through a partnership with Turboinstitut)

Technical Data

Turbine Type	*Horizontal Francis*	**Capacity**	*2600 kW*
Net Head	*118,4 m*	**Rated Speed**	*750 rpm*
Flow	*2x2 m³/s*	**Status**	*Started in April 2010.*

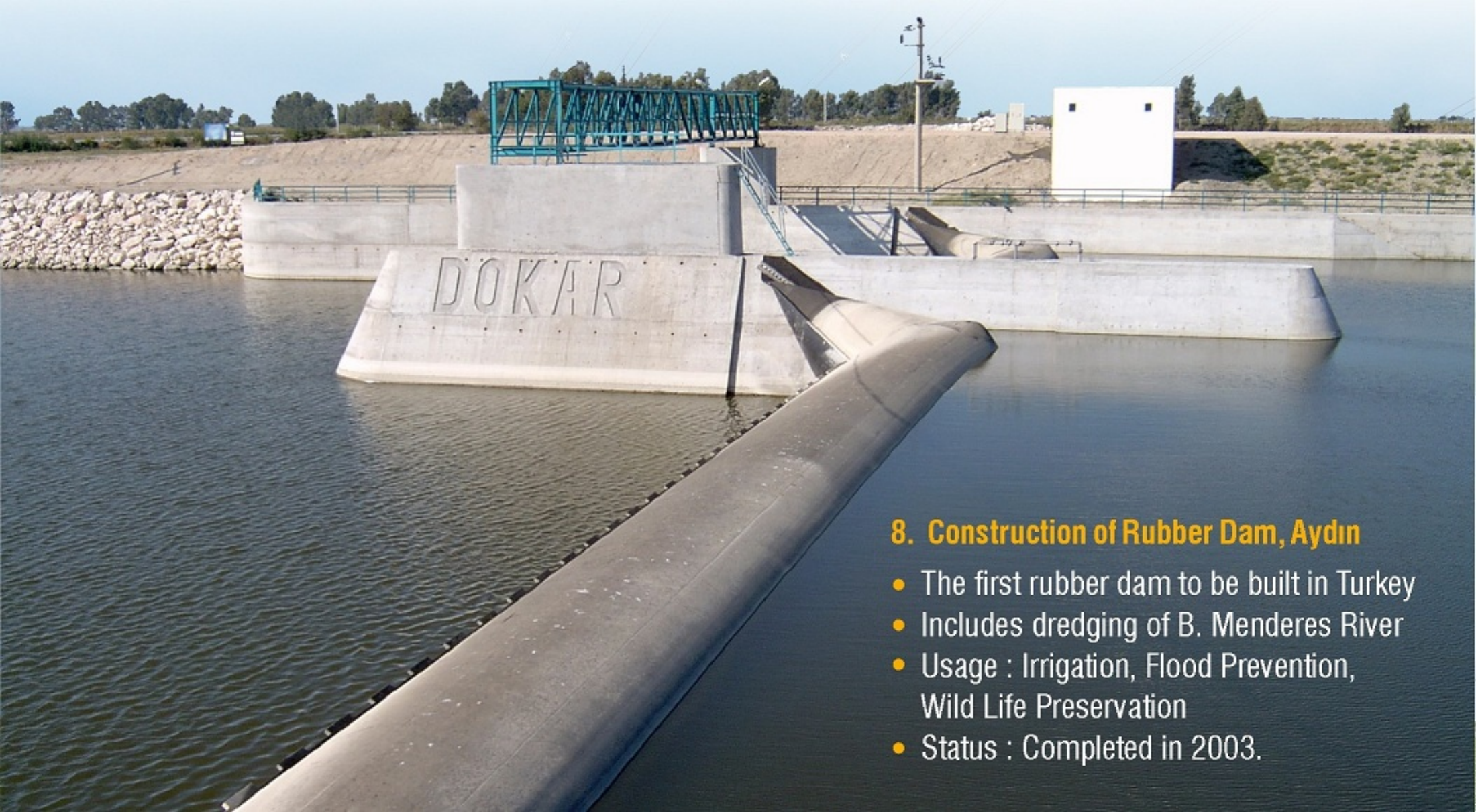
DOKAR

7. Afşin Elbistan B Coal Fired Thermal Power Plant Fly ash hauling & stockpiling, K. Maraş

- First truck based fly ash handling project in Turkey
- Stockpiling of 18.1 million m^3 fly ash
- Status : Completed in 12.04.2010





8. Construction of Rubber Dam, Aydın

- The first rubber dam to be built in Turkey
- Includes dredging of B. Menderes River
- Usage : Irrigation, Flood Prevention, Wild Life Preservation
- Status : Completed in 2003.

What is a Rubber Dam ?

DOKAR

- Rubber dam is an inflatable tube of rubberized fabric, which is installed across a river or spillway. The most significant advantage of the rubber dam is quick deflation by pumping out air.
- The rubber dam that Dokar is constructing is composed of a 60 meter long tube with a diameter of 4,65 meters. This is the first project of its kind in Turkey. Every stage of the project except the procurement of the rubber tube, (foundation works,excavation, river dredging, installation of the rubber tube) is carried out by Dokar.

Main Benefits of the Project:

DOKAR

- Water will be supplied from the river to the nearby Bafa Lake, preserving the wild life habitat.
- Flooding and the associated damage to nearby cotton fields will be prevented.
- More water will be stored upstream for cotton field irrigation.
- Migration of the fish from sea to Bafa Lake through the Menderes River will not be effected.

Main Characteristics of the Rubber Dam Project :

Excavation Works	6 million m^3
River Dredging	28 Km (on both banks of B. Menderes River)
Hauling Work	10,8 million ton
Service Roads	30 Km
Foundation Works	36.000 m piles
Concrete Works	28.000 m^3
Steel Works	1.700 ton
Assembly Works	structure composed of 60 mt. long Bridgestone rubber tube and associated steel understructure

Foundation Slabs

DOKAR

Foundation Slabs

DOKAR

Anchor Lines

DOKAR

Anchor Lines

DOKAR

Piping & Installation of Control Equipment

DOKAR

Piping & Installation of Control Equipment

DOKAR

Installation of Rubber Body

DOKAR

Installation of Rubber Body

DOKAR

9. Construction of Keskin Dam, Eskisehir

- Usage : Irrigation and Flood Prevention
- Height of the Dam : 28,6 mt.
- Water Storage Capacity : 8,5 million m^3
- Status : Completed in 1997. (in 3 years' time)

10. Construction of Koyunlu Dam, Niğde

- Usage : Irrigation and Flood Prevention
- Water Storage Capacity : 1,25 million m^3
- Status : Completed in 1993. (in 4 years' time)

11. Construction of Mamasın Dam, Aksaray (2nd phase)

- Usage : Irrigation and Flood Prevention
- Water Storage Capacity : 160 million m^3
- Status : Completed in 4 years' time. (w/ affiliated company)

12. Construction of Murtaza Dam, Niğde

- Usage : Irrigation and Flood Prevention
- Water Storage Capacity : 8,5 million m^3
- Status : Completed in 6 years' time. (w/ affiliated company)

13. Construction of Yozgat Sewer System, Yozgat

- Sewer system composed of 70 Km of concrete pipes
- Status : Completed in 5 years' time. (w/ affiliated company)

List of Recent Consultation Projects Completed by Dokar :

DOKAR

1. Design, Construction and Management of Reinforced Concrete Pipe Factory, Pamukova

- Ø200-700 mm reinforced concrete pipe production capability
- Usage : Underground irrigation system
- Status : Completed in 3 months.

2. Design of Reinforced Concrete Pipe Factory, İzmir

- Ø2100 mm reinforced concrete pipe production capability
- Usage : Sewer System
- Status : Completed in 3 months.

Renewable Energy

DOKAR

DOKAR

1. Hydroelectric Energy

- Dokar, relying on her past experience of building dams and thermal power plants, is very much involved in the renewable energy market. We have recently signed a strategic partnership agreement with our European partner for hydroelectric power plant equipment.

- With the special arrangements we provide a turn-key solution for turbine and hydro-generator and their auxillary equipments manufactured by our European partners.

- Dokar is ready to build your hydroelectric power plant from scratch on a turnkey basis. The partnership analysizes the raw site data, designs and constructs the civil works, designs and manufactures the electromechanical equipment on a water-to-wire basis.

Renewable Energy

DOKAR

- Analyses the raw site data including the water flow duration curve of the river,
- Designs the hydraulic structures such as cofferdam, canal, tunnel and powerhouse,
- Designs the electromechanical equipment such as turbine, generator, control equipment and substation,
- Constructs the hydroelectric power plant,
- Manufactures and installs electromechanical equipment on a water-to-wire basis.

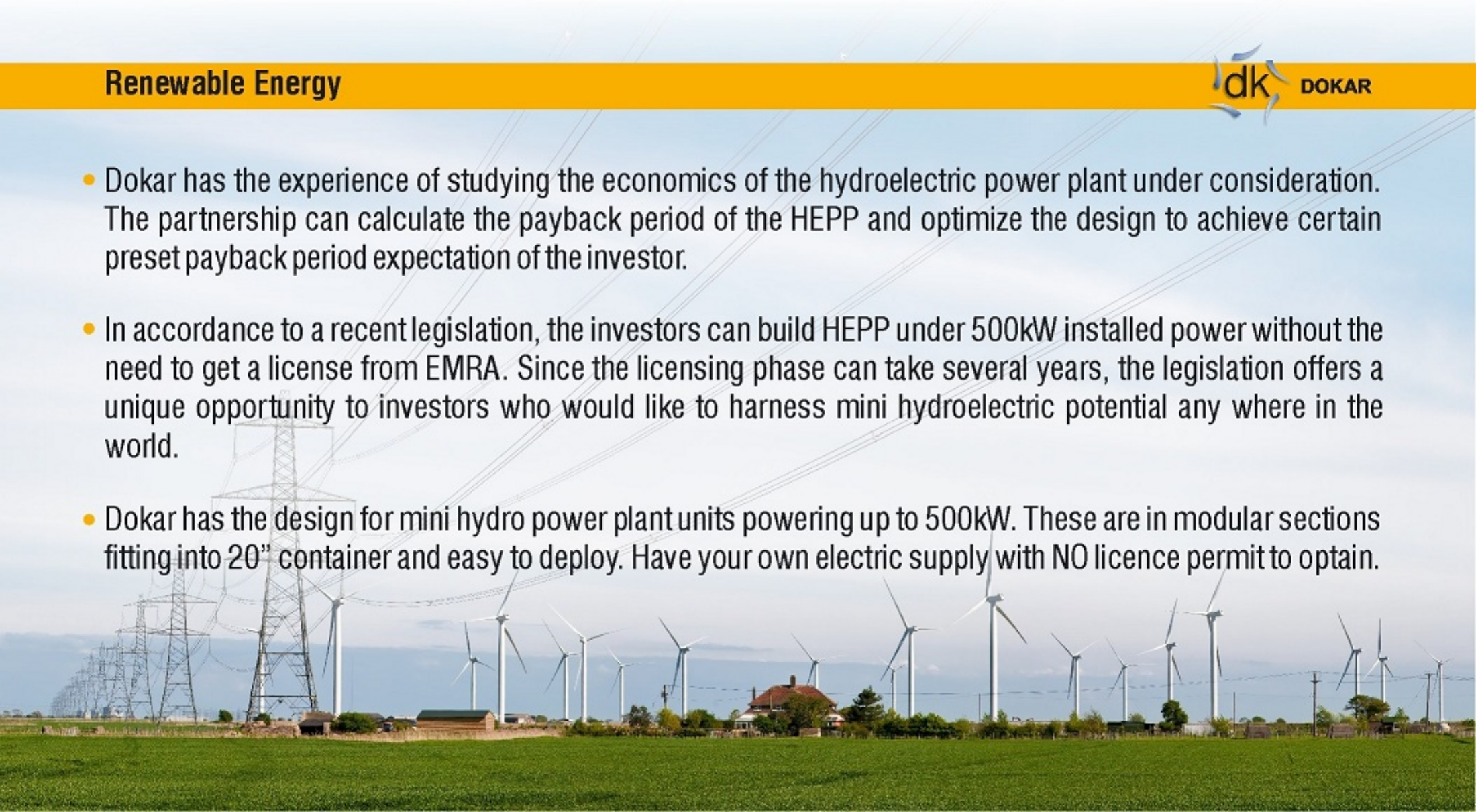
Renewable Energy

DOKAR

- Dokar has the experience of studying the economics of the hydroelectric power plant under consideration. The partnership can calculate the payback period of the HEPP and optimize the design to achieve certain preset payback period expectation of the investor.

- In accordance to a recent legislation, the investors can build HEPP under 500kW installed power without the need to get a license from EMRA. Since the licensing phase can take several years, the legislation offers a unique opportunity to investors who would like to harness mini hydroelectric potential any where in the world.

- Dokar has the design for mini hydro power plant units powering up to 500kW. These are in modular sections fitting into 20" container and easy to deploy. Have your own electric supply with NO licence permit to optain.



2. Geothermal Energy & Waste Heat

- Since most of geothermal water sources in Turkey have low temperature, this new product offering by Dokar is expected to open new application opportunities in the geothermal energy field in Turkey.
- Again Dokar is offering complete packaged geothermal power plant solutions to investors.
- The typical application fields are limited with one's imagination simply, because WHG can produce electricity from low enthalpy heat sources which can not be harnessed otherwise.
- Some application fields are; Geothermal Water, Exhaust Gas out of Chimney, Paper Mills, Textile Industry, Cement Factories, Petrochemical Industry, Thermal Power Plants.





DOKAR

3. Wind Energy

As far as the wind energy projects are concerned, Dokar has the ability and resources to construct wind power plants including the installation and commissioning of the plant. We can;

- License the wind power plant
- Carry out appropriation of land
- Cast the foundation concrete for wind mill
- Finalise the installation by assembling the tower




● Doğan KARABAY Founding Partner

DOKAR

Education

- **Sept. 61 - Sept. 65 Yıldız Teknik Üniversitesi İstanbul, Turkey**
  BS in Mechanical Engineering.

Work Experience

- **Oct. 89 - Dokar Construction Ltd. Ankara, Turkey**
  Founded Dokar Construction Ltd. President of the company since 1989. Holds A-class constructor license.

- **May 85 - Jul. 89 Yöntaş Construction A.Ş. Ankara, Turkey**
  General Manager and board member in charge of DSİ projects.

- **Feb. 82 - May 85 Yüksel Construction A.Ş. Ankara, Turkey**
  Assistant to General Manager in charge of the Prestressed Concrete Pipe Factory.

- **Aug. 74 - Jan. 82 İSDEMİR İskenderun Steel Factory İskenderun, Turkey**
  Manager in charge of the construction group in the state owned 2 million ton/year steel factory.

- **Apr.72 - Jul. 74 E.C.A. Valf Sanayi A.Ş. Manisa, Turkey**
  Chief of manufacturing in the valve factory.

- **Aug. 65 - Apr. 72 Makine Kimya Sanayi A.Ş. Kırıkkale, Ankara**
  Chief of manufacturing in the state owned shotgun/machine gun factory.

● Sabri KARABAY Partner

DOKAR

Education

- **Sept. 92 - Feb. 94 Massachusetts Institute of Technology Cambridge, MA, USA**
  Completed Master of Science study at Mechanical Engineering Department. Thesis, sponsored by Ford R&D Department, on the development of innovative quality control scheme of car body spot-welds by employing vibration principles.
- **Sept. 88 - Jul. 92 Middle East Technical University Ankara, Turkey**
  BS in Mechanical Engineering
  Ranked 1st out of 296 senior students.

Work Experience

- **Sept. 95 - Dokar Construction Ltd. Ankara, Turkey**
  Partner in charge of construction projects.
- **May 94 - Jul. 95 Barış Elektrik Endüstri A.Ş. Ankara, Turkey**
  Company involved in composite material and harness production. Incharge of the R&D Department.
  Holds a NATO clearance certificate.
- **Sep. 92 - Feb. 94 Massachusetts Institute of Technology Cambridge, MA, USA**
  Worked as a research assistant on the Ford R&D project, development of quality control scheme of car body spot-welds.
- **Summer 91 TÜBİTAK SAGE Defense Industries R&D Institute, Ankara, Turkey**
  Involved in the design and manufacturing of rocket propellant production facility using CAD software.
- **Summer 90 Hema Gear Plant Ankara, Turkey**
  Involved in gear manufacturing process, namely turning, drilling, milling, hobbing, shaving, heat treatment, quality control.
- **Summer 89 Nokia Maillefer Cable Machinery Helsinki, Finland**
  Involved in product testing and assembly of fiber optic cable machinery.

● Semih KARABAY Partner

DOKAR

Education

- **Sept. 93 - Sept. 95 University of Michigan Ann Arbor, MI, USA**
  Completed Master of Science study at Electrical Engineering Department. Thesis on system identification and real time control of plasma enhanced chemical vapor deposition system used for flat panel display manufacturing.
- **Sept. 89 - Jul. 93 Middle East Technical University Ankara, Turkey**
  BS in Electrical & Electronics Engineering
  Ranked 2nd out of 260 senior students.

Work Experience

- **Sept. 95 - Dokar Construction Ltd. Ankara, Turkey**
  Partner in charge of finance & business development.
- **Sep. 93 - Sep. 95 Display manufacturing Technology Center, Univ. of Michigan MI, USA**
  Worked as a research assistant on the real time control of PECVD.
- **Summer 92 TÜBİTAK SAGE Defense Industries R&D Institute Ankara, Turkey**
  Involved in the design of flight test setup system for missiles.
- **Summer 91 METU Process Control Lab. Ankara, Turkey**
  Involved in the design of a PC based test setup system for a benchmark heat control problem and data generation for neural net controller training.

DOKAR

Dokar Construction Ltd.
Hoşdere Cad. Özvatan Sokak Terasevler 29/3
Çankaya - Ankara - Türkiye
Phone: +90 312 440 11 33 Fax: +90 312 440 11 66
www.dokar.com.tr