

## OUR TREATMENT EQUIPMENTS

Pump Group / Screen and Sieves / Grease Scraper / Aerator / Ultra-filtration / Reverse Osmosis / Nano-filtration / Electrical Automation / Bridged Scraper / Filter-press Automatic Poly Dosage Unit / Condenser / Biological and Chemical Package Treatment / Active Carbon-Softening-Sand Filters / Impeller and Mixers / Settling Tanks

DOMESTIC  
WASTEWATER TREATMENT

INDUSTRIAL  
WASTEWATER TREATMENT

BIOLOGICAL AND CHEMICAL  
PACKAGE TREATMENT

DRINKING  
WATER TREATMENT

ENVIRONMENTAL ANALYSIS  
LABORATORY



**TIDAP®**

[www.tidap.com.tr](http://www.tidap.com.tr)  
[www.tidapcevrelaboratuvari.com](http://www.tidapcevrelaboratuvari.com)

## Knowledge

## Experience

## Team Spirit



**TIDAP** is established at Bursa Kayapa Industrial Zone over an area of 3.500 m<sup>2</sup>, produces machinery-equipment intended for environmental technologies and it is among the leading industrial enterprises in environmental sector.

It has been offering its services about project, consultancy and machinery-equipment production in the environmental sector in Turkey since 1992 to today.

Tidap has been acting on the principle of permanence of the environmental technologies. Among our products lies all the machinery-equipment intended for physical, chemical and biological treatment systems and sludge dewatering equipments.

Aside from the standard production, the designing of special machinery-equipments, which are required according to the needs of the project and guarantee 100% results, is performed by experienced engineering staff.

Among our products lies all the machinery-equipment intended for physical and biological treatment systems, sludge dewatering and water conditioning equipments.

For the treatment of domestic waste water as well as the treatment of industrial waste water which has small flow rate, our **TIDAP BIOLOGICAL AND CHEMICAL PACKAGE** units are an economical solution.

We are aiming for providing full service to our industrialists by adding ULTRA-FILTRATION, REVERSE OSMOSIS, NANO-FILTRATION advanced treatment and recovery units to the fully and semi bridged SCRAPER systems, bottom scrapers, condensers, surface AERATOR systems, mixers, ROTARY SIEVE grid and PISTON, VERTICAL SHAFT, SPECIAL TYPE CENTRIFUGAL PUMPS, drinking water and water conditioning production.

As part of sludge dewatering systems, **TIDAP FILTERPRESS** systems, which are produced manually, semi automatic or fully automatic, are being used in the chemical, food, phosphate coating bath (metal coating) and mining sectors aside from waste water treatment sector for solid-liquid separation.

**TIDAP** Environmental Services Unit, Investment Consultancy and Site Selection, Environmental Impact Assessment (EIA) Reports and Project Promotion File, getting permission for EMISSION, Non-Sanitary Establishment Permit, Environmental Legislation Consultancy, Solid Waste Landfill and Disposal Facilities Project Designing and Commitment and finally Environmental Supervision Services are providing services throughout Turkey.

“**TIDAP** Environmental Analysis Laboratory”, which we established under the Company roof in 2006, has been continuing its activities about emission, immission and noise with TS EN ISO/IEC 17025 Quality System and authorized by Ministry of Environment and Forestry and also accredited by Turkish Accreditation Agency. As **TIDAP** Environmental Analysis Laboratory, we are constantly extending our scopes.

**TIDAP** with its 21 years of experience as domestic producer in the Environmental Sector, owes its success to principle of not abandoning team spirit and investment to people.

**TIDAP**, which is the only Turkish company operating as Environmentally Integrated, will be continuing to offer all the environmental services to our industrialists at one place.

Best regards.



## OUR TREATMENT EQUIPMENTS

**TIDAP** has been performing the production of basic equipments which are needed for wastewater, process water and drinking water treatment facilities in its own production plant.

### PUMPS



Our Tidap brand pump production consists of 3 types as follows:

- Piston
- Vertical Shaft
- Centrifugal (Special Type).

According to required capacity and waste water character, they are used for transporting water, wastewater and sludge.

### SCREEN and SIEVES



Tidap screens which is used in industry as physical treatment equipment

- Inward / Outward Flow Rotary Sieve
- Static Sieve / Screen

They are produced in those types, by designing according to wastewater flow and contamination character. For the sieve material; AIS 304 import sieve sheet or domestic stainless steel sheet is used, and motor is driven between 250 microns and 2000 microns.

### SETTLING TANKS



Tidap has been designing and manufacturing process and treatment purpose settling towers for marble, natural stone, ceramic, mining etc. sectors where the density of wastewater is high. Aside from

- Settling tank
- Pier and construction
- Weir structure

Equipments, coagulant dosing structure may be added to the system according to requirements.

Our automatic Tidap chemical (polyelectrolyte) preparing and dosing unit offers economical solutions.

### SURFACE AERATORS



Tidap Aerators are used in the wastewater treatment facilities for aeration and mixing purpose and they have 2 type as follows;

- Fixed Type
- Floating Type.

The equipment is produced from different capacity and diameter ST37 epoxy painted and stainless steel ranging from 1,5 kw to 132 kw.

### IMPELLERS and MIXERS



The mixer is designed for condenser purposes in mixing fast-slow according to density and type of liquid in chemical preparing and dosing units in order to form a solution in required processes. We have four kinds of production as follows;

- Seaman Type
- Propeller Type
- Turbine Type
- Static Mixer

The type, speed and material type of our impellers and mixers are determined by density, volume and shape of the reservoir of the liquid which will be mixed; while motor-reductor, fan and propeller parts are produced from stainless steel or epoxy coated carbon steel.

### ELECTRIC - AUTOMATION



Tidap ensures that the systems are always under supervision and control by making the treatment facilities it installs work with electric-automation system. In our plant, we have been offering services for 16 years with our staff who are experienced about electricity and perform

- System design,
- SCADA and PC supported PLC applications,
- Modernization projects,
- Turn-key facility automation.

As part of our automation works, we produce all kinds of panels to the specifications of our customers.

Thanks to R&D Works carried out by our technical staff, who is expert in their field, the variety of our products increase in time. Treatment equipments that are produced by TIDAP are as follows;

### SCRAPER and CONDENSERS



Tidap Scrapers are used in the systems where sludge and settleable solid materials are settled and removed like preliminary settling tank and final settling tank.

Tidap scraper and condensers are designed and manufactured depending on the tank structure, tank diameter and wastewater character. Our scrapers are;

- Semi bridged, environmentally driven
- Fully bridged, center driven.

Our scrapers are produced with stainless steel or epoxy painted galvanized plated carbon steel depending on the characteristic of the liquid.

### GREASE SCRAPER



Our Tidap grease scrapers are designed in order to separate oils in the wastewater from the water. DAF (Grease Scraper), works with the principle of giving air from the bottom, surfacing the oil and collecting them with motor driven pallets. They are used in

- Wastewater treatment facilities
- Mess halls, hotels
- Gas stations
- Food sectors.

Our oil scrapers are produced from galvanized plated carbon steel or stainless steel.

### ADVANCED TREATMENT



They are the advanced treatment technologies for recycle and reuse of water and wastewater or ensure desired parameters;

- Filtration
- Reverse Osmosis
- Ultra Filtration (UF)
- Nano Filtration (NF)
- Ultraviolet (UV)

We also use membrane technologies for condensing purposes in production processes in order to get drinkable or usable water from sea water. The system, project and designing of the advanced treatment is performed by Tidap staff, including automation unit.

### DEWATERING (FILTER-PRESS)



They are used in a lot of sectors like;

- Ceramic industry
- Mining industry
- Food sector
- Phosphate Coating Baths
- Soap – Oil production
- Waste water Treatment Facilities.

We produce TIDAP® filter-press, depending on the liquid features and specifications, as;

- Chamber Type
- Plate-Frame Type.

There are options for manual, semi-automatic and fully automatic ones.

\* Tidap Piston Pumps are used in desired capacity for Filter-Press feeding.

### WATER CONDITIONING



Tidap produces water conditioning (preparing process water) units in order to filter well, city, etc. water for drinking and using and to prevent the damaging of installations and equipments in industrial facilities. The designing, manufacturing, mounting and automation of;

- Sand filter
- Active Carbon filter
- Ultraviolet Disinfection
- Water Softening systems are completely performed by Tidap staff. Depending on the customer specifications
- PE tanks
- Epoxy coated steel tanks

Are designed in a pneumatic or manual way with time-controlled, volume controlled and electronic-manual controlled feature.

### CHEMICAL PACKAGE TREATMENT



Tidap Chemical Package Treatment Facilities are designed to provide discharge standards to channel in sectors like metal, paint, textile and food and it is a very economical facility for small flow rates. They are our compact facilities which provide continuous or non-continuous treatment, require little space and construction requirement and consist of

- Chemical Scraper
- Chemical preparing and dosing system
- Coagulation - Flocculation
- Chemical settlement
- Sludge dewatering ( optional)
- Automation panel units..

Chemical Package Treatment can be produced with ST37 carbon steel or PE material according to specifications.

## DOMESTIC WASTEWATER TREATMENT

Tidap treatment is making turn-key facilities for the domestic wastewater treatment of settlements like municipalities, organized industrial zones, industrial sites, towns and villages.

In order to treat domestic wastewater, generally physical and biological treatment processes are used.

To dewater the sludge, which forms as a result of treatment, **TIDAP** FILTER-PRESS units are available in our projects. Our company is offering with **100% Project Guarantee** to deliver turn-key construction, machinery and equipment assembly – supply, mounting and commissioning services in their waste water treatment facilities we designed.

## PACKAGE TREATMENT UNITS

**TIDAP** PACKAGE TREATMENT FACILITIES are compact units which are designed in accordance with the activated sludge treatment process on the treatment of wastewater in small scaled hotels, summer sites, work-sites and factories which are domestic and may be treated biologically, and which are highly efficient, and operate automatically and do not require human intervention. All its piping, equipment and electrical control panel are found in the package unit. It's easy to be mounted and its operation cost is very low thanks to automation system.

Our company, which has reached 98% continuous yield quality, designs the package units which are produced under the name of **TIDAP** in the capacities equivalent to 50-3000 population.

**TIDAP** Package treatment units are ideal solution for domestic usage as well as for pretreatment (chemical treatment) on smaller flows and for wastewaters which may biologically be treated such as slaughterhouse, food, fruit-vegetable process, and physical treatment and neutralization etc.

**TIDAP** Package treatment facility is composed of control cabin, aeration, biological settling, disinfection and sludge stabilization units.

Thanks to bacteria concentration stabilizing system which is specially developed by our company, treatment efficiency is continuously high. Increase of capacity may easily be ensured via additional package unit.

Technical Specifications of **TIDAP** Systems

System	Capacity (m <sup>3</sup> /day)	Population Equivalent(person)	Dimensions (cm)	Floor Space (m <sup>2</sup> )	Energy Consumption (kW/h)
TIDAPAK-50	10	50	210*300*280	6,3	1,44
TIDAPAK-100	20	100	210*350*280	7,4	2,19
TIDAPAK-150	30	150	210*400*280	9,3	2,19
TIDAPAK-200	40	200	210*550*280	12,5	2,89
TIDAPAK-250	50	250	210*700*280	15,4	2,89
TIDAPAK-300	60	300	210*850*280	18,1	2,89
TIDAPAK-350	70	350	210*900*280	20,2	3,04
TIDAPAK-400	80	400	210*1000*280	22,5	3,84
TIDAPAK-450	90	450	210*1100*280	24,6	3,84
TIDAPAK-500	100	500	210*1150*280	26,1	3,84
TIDAPAK-550	110	550	210*1250*280	28,4	3,84
TIDAPAK-600	120	600	210*1350*280	30,4	3,84



## INDUSTRIAL WASTEWATER TREATMENT

**TIDAP** is carrying out wastewater treatment projects and their turnkey applications in the sectors of automotive, food, chemistry, marble, slaughterhouse, dairy, leather and other industrial sectors. Giving particular importance to easy operation, getting result and customer satisfaction, our company uses its own productions on treatment projects, apart from special import equipments. For the discharge of wastewater to receiving environment and its treatment or recycling at canalization standards; the processes of project, approval, manufacturing, mounting, automation and commissioning are carried out in compliance with ISO 9000 series standards and ISO 14001 series standards by experienced engineering staff of our company.

Designed by our company for the purpose of treatment of industrial wastewater, wastewater treatment systems, their dimensions and treatment units show difference according to industry/sector type, production method, amount of wastewater, pollution values of wastewater and type/discharge standards of receiving environment.

Treatability studies during the processes of project and operation related to wastewater from industrial facilities are carried out in the laboratories of our company, and the capacity of treatment facility is accurately determined by means of equipments such as automatic flowmeter, sampling devices etc.

Among the methods we are applying on industrial treatment; chemical treatment, neutralization, oxidation, floatation, oil separation, activated sludge, advanced treatment methods; ultra-filtration, nano-filtration, reverse osmosis, ultraviolet disinfection, concentration, sludge dewatering filter-press methods are applied in accordance with the requirements of projects.

Tidap offers its customers continuous consultancy and service after the delivery of the facilities of which project and construction is made by Tidap. By carrying out the analyses of effluent water periodically, the performances of the treatment facilities that were constructed by our company are followed.



## WATER CONDITIONING AND TREATMENT

Necessary properties for waters which are used for drinking, service and industrial facilities show differences. Chemical and bacteriologic properties of drinking and service water effect human health directly.

For the usage in industrial facilities, various techniques of filtration and treatment should be used in order to ensure hardness-turbidity removal, chemical-bacteriologic pollution, maintenance of machine-equipments and water required by the process.



Filtration;

- Sand Filters
- Active Carbon filter
- Multi-layered (multimedia) Filter
- Iron and Manganese Holder Filters

Ultraviolet Disinfection

Softening;(Demineralization)

- Reverse Osmosis



Advanced Treatment Technologies

- Ultra-filtration
- Nano-filtration
- Reverse Osmosis
- Water Recycle and Reuse



Systems are used in our projects according to water analyses, usage need and flow. We also use membrane technologies as well as water conditioning and drinking water treatment for the purpose of recovery in our wastewater treatment projects.



Apart from the membranes used in advanced treatment methods, all mounting, automation and manufacturing are carried out by experienced engineering staff of our company in our factory.



## FILTER-PRESS (DEWATERING)

**TIDAP** Filter-presses are ideal solution for solid-liquid separation. It is used in many sectors.

- Ceramic
- Mining
- Phosphate Coating Baths
- Food and Beverage industry
- Oil Production and Biodiesel
- Paint Sector
- Treatment Facilities

Tidap Filter-presses may be manufactured as

- Chamber type
- Plate - Frame type

according to properties of the liquid, capacity and usage need. Filter-press operates according to hydraulic working principle, and the number of plates is determined according to need of capacity. Open discharge and closed discharge options are available.

In our filter-press manufacturing, surfaces which contact liquid are manufactured from stainless steel, and the other parts are manufactured from epoxy coated carbon steel.

Tidap Piston pumps has high performance operation as filter-press feeding pump. Cloth washing, automatic plate shaking, automatic plate opening are optional and may be produced open the request of the customers.

- Manuel
- Semi-automatic
- Fully-automatic

working system options are available.



## OUR ENVIRONMENT CONSULTANCY ACTIVITIES

By the Ministry of Environment, Planning, Environmental Control Regulation No. 27 061 dated 21st November, 2008 **ÇDYB-0398** is a document with numbered Certificate of Proficiency in Environmental Consulting, dated 29th April, 2009 and the Environment Law No. 27 214 to be taken within the scope of the Regulation on Permits and Licenses Tidap Ltd. Sti. serves as the environmental consulting. To date, it is referred to be the first company coming to mind in numerous services as TIDAP and being first in Bursa are the sources of pride

- **Environmental Permit / Licence**
- **Environmental Audit**
- **Management and Maintenance of Wastewater Treatment Plant**
- **Environmental Training**
- **Emergency Plan**
- **Waste Management**
- **Opening the Business and Working License (GSM Lisance)**
- **Environmental Impact Assessment**
- **Corporate Investment Consulting**



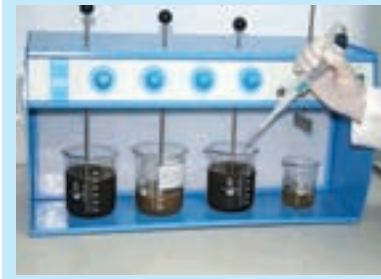
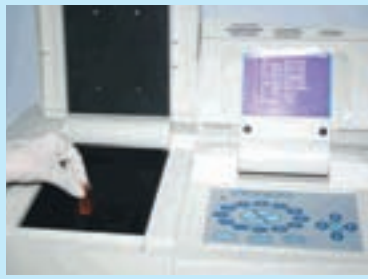
## ENVIRONMENT LABORATORY

Our company has begun its operations as **TIDAP** Environment Analysis Laboratory unit within the body of **TIDAP** LTD. STI. in 2006.

**TIDAP** Environment Analysis Laboratory aim at to carry out all environment analyses and measurements, and has been continuing its studies in this direction.

Authorized by Ministry of Environment and Forestry for its operations, our Environment Laboratory has been continuing its studies on the subjects of emission, immission and noise in the direction of TS EN ISO/IEC 17025:2010 Quality System Requirements, and aims to increase its quality of service by expanding its scope.

All measures and analyses, of which traceability are ensured, carried out in accordance with the internationally approved standards and methods



## OUR MEASURE AND ANALYSES PARAMETERS

### WASTE GAS

SO <sub>2</sub> Determination with Electro-chemical Cell Method	TS ISO 7935/April 1999 EPACTM022:1998
NO <sub>x</sub> (NO,NO <sub>2</sub> ) Determination with Electro-chemical Cell Method	TS ISO 12039/February 2005
CO Determination with Electro-chemical Cell Method	TS ISO 12039/ February 2005
O <sub>2</sub> Determination with Electro-chemical Cell Method	TS ISO 12039/ February 2005
CO <sub>2</sub> Determination with Electro-chemical Cell Method, Calculation	TS 9503/October 1991
Sootiness determination with Comparison of Color (Bacharach) method	TS ISO 9096/April 2004
Particle Substance determination with Isokinetic sampling and gravimetric method	ISO 15713/2006
Fluorine Sampling and Determination with Ion selective method	TS 1911-1/November 2001
Chlorine (Cl- ve HCL) Sampling and Determination with Spectrofotometric method	TS 1911-2/November 2001
	TS 1911-3/January 2002

### AMBIENT AIR

PM <sub>10</sub> determination with Gravimetric Method	EPA 40 CFR PART 50 Appendix I and M / July 1997
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### NOISE

Noise determination with hand type noise measurement device	TS 9798 1996-2/January 1992 TS 9315 ISO 1996-1/September 2005
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# TIDAP®

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