



**İZAYDAŞ**

İZMIT WASTE AND RESIDUE TREATMENT  
INCINERATION AND RECYCLING CO INC.

Clean Environment  
Healthy Society

# 2022 Annual Report

(v4.05 EN)



Mustafa Kemal Atatürk (1881 - 1938)

Founder and first President of the Republic of Turkey

“We don't need anything, we only need one thing; to be hardworking!”

*Atatürk*

*(16.01.1923, from the speech he gave to Istanbul Journalists in İzmit)*



Assoc. Prof. Tahir BÜYÜKAKIN  
Mayor of Kocaeli Metropolitan Municipality,  
President of Marmara Municipalities Union,  
Chairman of the Board of Directors of İZAYDAŞ

**Dear fellow citizens,**

Our world is constantly changing at an incredible extent. While this change provides important gains to humanity with its positive aspects, it almost drags us into darkness with negative aspects such as ecocide, climate changes and ecosystem degradation. We as human beings, who are the main actors of this course of events, have a great responsibility to ensure that our eyes are not completely closed and that we continue to live in a clean world.

As Kocaeli Metropolitan Municipality, we mobilize all our means with the awareness that our environment is a trust bestowed upon us. In this context, we are working hard to make our city more breathable and healthier, with smart city and innovative practices and environmental policies and services we have implemented. By carrying out our works with sustainable projects, we ensure that our citizens look to the future cleaner and happier.

As İZAYDAŞ, we have implemented important applications that will be written in golden letters to the future of Kocaeli. Continuing its works by adding value to nature, environment and people, last year İZAYDAŞ served our city and country by adding success to its successes that will set an example for Turkey again. İZAYDAŞ, which puts its innovative solutions into operation with the best possibilities offered by science and technology, has become the pride of our city and our country in many areas from eliminating hazardous wastes to energy production. Finally as İZAYDAŞ, which started the construction of the Refuse-Derived Fuel Facility, we will undertake environmentalist works in the coming years.

Our services continue without slowing down for our citizens to live in a greener and bluer Kocaeli. We will resolutely continue to prepare our city for the future, to build tomorrow from today, and to work non-stop for the peace and happiness of our people. I wish many more successful years of service in unity and solidarity for the strong Turkey and world city Kocaeli.

**Assoc. Prof. Tahir BÜYÜKAKIN**  
**Mayor of Kocaeli Metropolitan Municipality**





Muhammet SARAÇ  
General Manager of İZAYDAŞ

**Hello,**

We are proud to have reached the year 2023 in which we will celebrate the 100th Anniversary of our Republic. In our company generally we performed better than the average, despite continuing challenging conditions in 2022. But only our past successes carry us to today. In order for success to be sustainable, it is necessary to push forward and improve. Because business life requires constant innovation, change and improvement.

We continue to do our job properly with higher effort, faith and sincerity in our sector where there is a ruthless competition. We are aware that we have to pedal a little harder every day. As a nation, we take care of our work and work hard in order to be vigilant against all kinds of obstacles that may come our way. Our aim is to leave a successful legacy for the future.

We work with great devotion to carry İZAYDAŞ to the future in the best way with all our colleagues working in our company. In line with our strategic plan, we anticipate using resources in the most efficient way and achieving our goals by managing our activities more effectively.

We completed the year 2022 with profit. In our laboratory about 5.000 analysis was carried out. 3.000 companies sent waste, 250 of which were for the first time. We provided transportation services to 1.225 companies with 4.000 expeditions.

The amount of hazardous waste that came to incineration unit was 41.400 ton and the amount of incinerated hazardous waste was 38.500 ton. In consideration of these data, our energy generation was 15 Million 200 Thousand kWh. Of this, 5 Million 100 Thousand kWh was sold to the national grid.

A total of approximately 50 million kWh electrical energy was generated in the LFG facilities installed in our domestic waste sanitary landfills. 9 Million 750 Thousand kWh electricity was generated in our hydroelectric power plant project and with our Biogas plant this year a total of 75 Million kWh electricity was generated. With this energy generation İZAYDAŞ has realized a generation enough for the domestic electricity need of a city with a population of 85,000. We actually served 4.000 ships that enter the bay. Our number of visitors in 2022 was 2.362.

I would like to thank my colleagues who have contributed to all these studies and who have made us reach these figures with great devotion.

Under the leadership of Kocaeli Metropolitan Municipality Mayor and İZAYDAŞ Chairman of the Board Assoc. Prof. Mr. Tahir BÜYÜKAKIN and together with our board of directors, managers and all our colleagues, we will continue to serve our country and our city with the same sincerity, belief and determination.

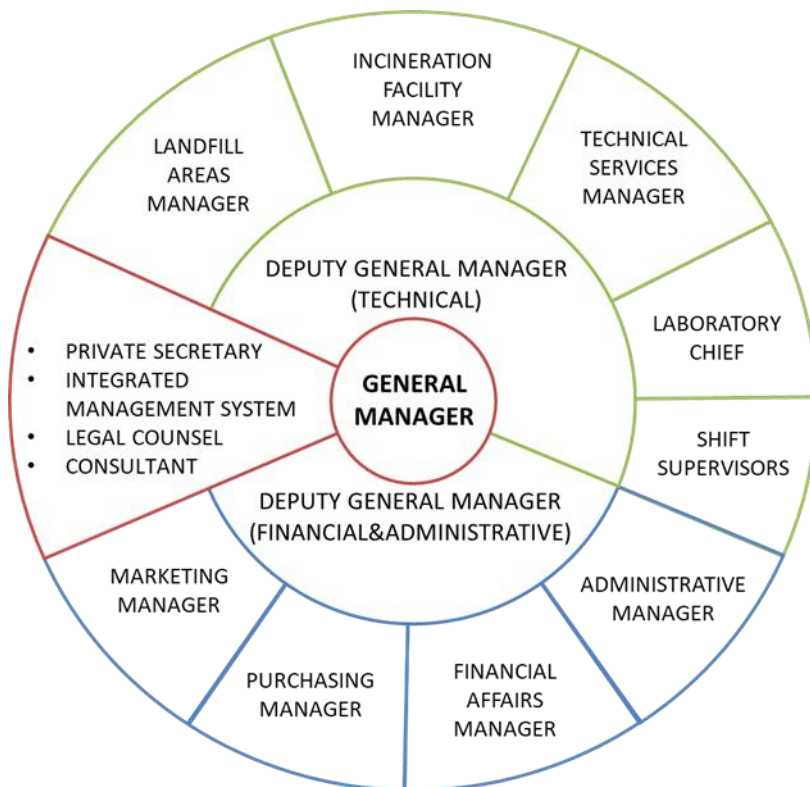
I would like to thank all our stakeholders, especially our customers, for their support and contribution, and I wish 2023 to be a favorable year for our country and all humanity.

**Muhammet SARAÇ**  
**General Manager of İZAYDAŞ**

## OUR MANAGERS



31.03.2023 as of



## INTEGRATED MANAGEMENT SYSTEM MANAGEMENT REPRESENTATIVE

### Certification Body Audits (Third Party Audits)

Integrated management system surveillance audit was carried out by the certification body Kalitest on 25-26.09.2022. Compliance of quality management system practices within the scope of integrated management system with ISO 9001:2015 standard, compliance of environmental management system practices with ISO 14001:2015 standard and compliance of occupational health and safety management system practices with ISO 45001:2018 standard have been audited and documented.

Customer Satisfaction-Complaint Management System re-certification audit was carried out online by the certification body Kalitest on 21.01.2022. The compliance of the management system practices with the ISO 10002:2018 standard was audited and the audit was successfully completed and the continuation of the certificate was decided.

Integrated Management System was established in 2006 with the integration of ISO 9001 Quality Management System, ISO 14001 Environmental Management System and ISO 45001 Occupational Health and Safety Management System and document renewals and additional certifications are indicated in the table below.

Management System	Initial Document Date	Last Document Renewal Date	Completion Date
ISO 9001:2015 Quality Management System	8/21/2006	10/8/2021	8/26/2024
ISO 14001:20015 Environmental Management System	8/21/2006	10/8/2021	8/26/2024
ISO 45001:2018* Occupational Health and Safety Management System	21.08.2006	08.10.2021	08.10.2024
ISO 10002:2014 Customer Satisfaction Management System	17.01.2013	27.01.2022	04.01.2025
ISO 50001:2018 Energy Management System	02.12.2014	20.05.2021	10.12.2023
ISO 27001:2013 Information Security Management System	10.04.2018	28.06.2021	10.04.2024
ISO 17025:2012 Laboratory Accreditation	22.12.2011	10.01.2020	17.04.2024
ISO 17043:2013 Laboratory Proficiency Test Provider Accreditation	07.08.2014	03.12.2018	01.04.2023

*\*The Occupational Health and Safety Management System, which was certified according to the OHSAS 18001 standard in 2006, was certified according to ISO 45001:2018 standard in 2021.*



### Customer Audits (Second Party Audits)

The compliance of the management systems applications with the relevant standards is also audited by the customers, and İZAYDAŞ attaches importance to these audits in terms of the continuity of its customers' service procurement. The customer audits carried out within the scope of the integrated management system in 2022 are given in the table below.

Company	Date
World Courier Tasimacilik ve Loj. Hiz. Tic. Ltd. Şti.	24.01.2022
Roche Müstahzarları San. A.Ş.	21.02.2022
Goodyear Lastikleri T.A.Ş.	27.04.2022
Takeda Pharmaceutical Company Ltd,	13.09.2022
Santa Farma İlaç San. A.Ş.	20.09.2022
Bayer Türk Kimya San.Ltd.Şti	02.12.2022
Novartis Technical Operations NTO Solids Gebze-2 Nisan 2021	02.12.2022
SMO TU Lojistik ve Ambalaj San. ve Tic. Ltd. Şti.	29.12.2022

### Customer Satisfaction Survey

The customer satisfaction survey was outsourced to a research company which carried out the survey by questionnaire method. Research was applied to four customer groups: loyal-irregular customers, potential customers, customers receiving laboratory service and customers receiving proficiency testing service. The results of the research were reported by the research company, and an informative presentation was made on 01.02.2022. Based on the results, İZAYDAŞ success rate according to the customers is 95.6% and the customer satisfaction score is 86.7. According to the results of the research, the issues in need of improvement were followed by action planning.



The customer satisfaction survey for 2022 was carried out in the same extend with outsourcing, and field studies were completed as of January 2023. Reporting and evaluation presentation is planned to be held in the last week of January.

## ENVIRONMENTAL MANAGEMENT SYSTEM

### *Studies within the Scope of Zero Waste Certificate*

The amount of packaging waste sent for recycling within the scope of zero waste is given in the table below.

YEAR	QUANTITY (KG)
2018	27.380
2019	20.140
2020	18.140
2021	22.080
2022	17.430

### *Kocaeli University-Industry Education Cooperation*

Within the scope of Industry-University Education Cooperation Protocol signed on 07.07.2007 "Waste Management-I, Waste Management II and Waste Recovery and Recycling" courses were given at Kocaeli University Hereke Ömer İsmet Uzunyol Vocational School and Hereke Asım Kocabıyık Vocational School in the academic year of 2022.

### *Kocaeli Chamber of Industry – Şahabettin Bilgisu Environmental Awards*

Kocaeli Chamber of Industry has been organizing the “Kocaeli Chamber of Industry Şahabettin Bilgisu Environmental Awards” award program since 1995 in order to reward the industrial organizations that contribute to the development of environmental awareness, protection and improvement of the environment. In the award organization which was held for the 28th time in 2022, the evaluation of the companies that applied was made by taking part in the Field Audit Team in order to find the owners of the environmental awards in the Large Scale Company and SME categories. An Award Ceremony was organized by Kocaeli Chamber of Industry on 15.06.2022 for the enterprises awarded as a result of the evaluations.

### *Environmental Audits*

On 31.10.2022, the Kocaeli Metropolitan Municipality License and Inspection Branch Directorate conducted an audit about the Business License. Unannounced Inspections was carried out by Kocaeli Provincial Directorate of Environment, Urbanization and Climate Change on 21.01.2022, 25.02.2022, 31.03.2022, 13.04.2022, 29.06.2022 and 07.10.2022. There were no identified deficiencies in the audit reports.

### *ISO 14064 Corporate Carbon Footprint Calculation Study*

A contract has been signed with QSI Belgelendirme Muayene ve Test Hizmetleri Ltd. Şti. regarding the calculation and reporting of the carbon footprint originating from all activities of IZAYDAS (İzmit, Derince and Yuvacık Facilities) in accordance with ISO 14064-1:2018 Corporate Carbon Footprint Standard. The year 2020 was taken as the base year and a series of meetings and studies regarding the reporting were held during the year. The draft report has been completed and the final report will be submitted in 2023.



### *Environmental Accident Drill*

An unannounced environmental accident drill was carried out on 15.08.2022 within the scope of Emergency Preparedness and Response Procedure (PR 11), Emergency Preparedness and Response Plans (PL-660-01) and Environmental Accident and Emergency Management Instructions (T-103-01). The drill was completed successfully and the actions to be taken were determined at an evaluation meeting held after the drill.

### *Customer Audits*

Within the scope of the Environmental Management System, audits were carried out by our customers in 2022. In the audits, it has not been identified any non-conformity indications. The audits performed by our customers within the scope of ISO 14001 Environmental Management System are listed below:

- Audit by Goodyear Lastikleri T.A.Ş. on 27.04.2022,
- Audit by the independent auditor firm on behalf of PPG Industries Kimya on 16.06.2022,
- Audit by an independent foreign auditor on behalf of TAKEDA Global İlaç on 13.09.2022,
- Audit by Oyak Renault Automobile Factory on 21.11.2022,
- Audit by BAYER company on 02.12.2022.

## **ENERGY MANAGEMENT SYSTEM MANAGEMENT**

### *Energy Management System Certificate*

The transition audit of the Energy Management System to the ISO 50001:2018 standard for 2020 was carried out by KALİTEST, the certification body, on 27.08.2020 under the supervision of TÜRKAK. As a result of the audit, the documents indicating the compliance of the Energy Management System being implemented with the relevant standard were renewed and our document were renewed until 10.12.2023.

## Improvement Activities

Within the scope of the Energy Management System, actions are planned in 2022 for the improvements to be made in line with the decisions taken and the corporate targets determined at the Management Review meeting held on 10.03.2022. In this context, by considering the initiated actions, improvements were made to replace the existing equipment with energy efficient equipment within the plan and budget (insulations, lighting, motor, fan, leaks, etc.), and improvement actions are also continuing in 2023. Within the scope of the energy management system, natural resource consumptions are tracked throughout the year and the resulting air, water, etc. leaks have been eliminated. Within the scope of the Energy Management System, the performance indicators determined at the beginning of the year were followed up as required by the system.

## LABORATORY

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IZAYDAS Laboratory, which was established and started its activities in 1996, continuously improves the effectiveness of our Quality Management system, which was established in accordance with the requirements of TS EN ISO / IEC 17025 standards, with the participation and contribution of all our personnel, and keeps up with the today's changing conditions, respect legal ethical values and continues to carry out its activities with a management approach that adheres to reliability, honesty, impartiality, confidentiality and independence principles. The quality of the service we provide by IZAYDAS Laboratory is ensured by the methods we have stated and by the customer-oriented studies that transforms their demands into satisfaction and that are in accordance with customer requirements. For this purpose, it has been adopted as our policy to produce fast and reliable results.

IZAYDAS Laboratory Unit added its scope in the field of Emission and Immission to the scope of "Environmental Measurement and Analysis Competence Regulation" and MELBES in order to increase analysis revenues.

Within the framework of the protocol signed between Environmental Reference Laboratory – TÜÇEV – İZAYDAŞ on 20.09.2022; as of the end of 2022 İZAYDAŞ started to carry out proficiency/comparison tests organized by the Ministry or required to be participated within the scope of Article 35 (2) of the Environmental Measurement and Analysis Laboratories Competence Regulation. With this signed protocol, proficiency test revenues have increased significantly.

Since 2013 IZAYDAS Laboratory still continues to be the first domestic and national laboratory that produce certified internal quality control samples for laboratories within the scope of ISO Guide 80 standard, offer them for sale and continuously increase its product portfolio in line with customer demands.

IZAYDAS Laboratory provides services as follows:

- With ISO 17025 Accreditation Certificate in the Experimental Field; Water, Waste Water, Sea Water, Pool Water, Waste, Soil, Sewage Sludge, Waste Oil,



Insulation Liquids, Precious Metals, Medical Waste, Solid Fuel (Coal), Emission and Immission;

- In the Sampling Field; Rivers and Streams, Groundwaters, Lakes and Ponds, Sea Waters, Solid Wastes, Sludge Sampling from Sewage Water and Treatment Plants, Sampling from Surface Soil, Manual Sampling of Petroleum Liquids, Sampling of Insulating Liquids, Emission and Immission Measurement and Sampling;
- With the ISO 17043 Accreditation Certificate, in the Field of Proficiency Testing; Waste, Water, Waste Water, Waste Oil, Sea Water and Soil;
- In the Field of Control Standard Production; Waste oil, water, waste water and waste.

Our analysis parameters within the scope of TÜRKAK Accreditation Certificate and Certificate of Competence are published on the TÜRKAK website at [www.turkak.org.tr](http://www.turkak.org.tr), on the website of the Ministry of Environment, Urbanization and Climate Change at <http://laboratuvar.cevre.gov.tr> and on the website of İZAYDAŞ at [www.izaydas.com.tr](http://www.izaydas.com.tr).

Year	2017	2018	2019	2020	2021	2022
<b>Declaration and Paid Analysis</b>	858	1.050	1.164	1.186	2.426	2.836
<b>Waste Acceptance Analysis</b>	1.420	998	684	206	186	195
<b>Plant Analysis</b>	2.394	2.239	2.218	1.917	2.136	1.905
<b>Total:</b>	4.670	4.287	4.066	3.309	4.748	4.936

## FINANCIAL FIGURES

İZAYDAS reached a turnover of 228.816.328,28 TL and a pre-tax profit of 8.116.256.84 TL in 2022. In 2022, 1.980.040.76 TL of tax payment was made, of which 1.930.995,84 TL is Corporate Provisional Tax payment and 49.044,92 TL is bank withholding tax payment.

İZAYDAS's sources of income are listed as follows:

- Incineration Incomes
- Industrial Waste Landfill Incomes
- Hazardous Waste Landfill Incomes
- Inert Waste Landfill Income
- Special Handling Income
- Municipal Domestic Waste Incomes
- Industry Domestic Waste Incomes
- Energy Incomes
- Marine Vessels Waste Incomes
- Laboratory Incomes
- Other Incomes (Waste transportation, intermediate storage, etc.)

## Independent Audit

Pursuant to the Turkish Commercial Code (TCC) numbered 6102, our company was covered by a mandatory independent audit and a contract was signed with the Independent Auditor Etken Bağımsız Denetim ve YMM A.Ş. The opinion given in the Independent Audit Report is that the financial information included in the annual report of the board of directors is consistent with the audited consolidated financial statements in all material respects and reflects the truth.

In the part of the other liabilities arising from the legislation, it is stated that there is no significant uncertainty regarding the inability of the business to continue its activities in the foreseeable future within the framework of the continuity of the business according to IAS 570, pursuant to the third paragraph of Article 402 of the Turkish Commercial Code No. 6102 (TCC).

ASSETS	2018 CURRENT PERIOD (TL)	2019 CURRENT PERIOD (TL)	2020 CURRENT PERIOD (TL)	2021 CURRENT PERIOD (TL)	2022 CURRENT PERIOD (TL)
TOTAL CURRENT ASSETS	44.329.933,69	48.154.095,39	46.306.324,68	46.188.746,47	102.149.190,27
TOTAL FIXED ASSETS	150.954.535,51	156.267.618,92	168.188.864,80	195.176.880,47	292.957.077,98
TOTAL ASSETS	195.284.469,20	204.421.714,31	214.495.189,48	241.365.626,94	395.106.268,25
OFF-BALANCE SHEET ITEMS	9.076.893,54	10.000.904,24	12.791.981,76	11.273.224,57	16.527.597,61
GRAND TOTAL	204.361.362,74	214.422.618,55	227.287.171,24	252.638.851,51	411.633.865,86

LIABILITIES	2018 CURRENT PERIOD (TL)	2019 CURRENT PERIOD (TL)	2020 CURRENT PERIOD (TL)	2021 CURRENT PERIOD (TL)	2022 CURRENT PERIOD (TL)
I -SHORT TERM PAYABLES					
TOTAL SHORT TERM LIABILITIES	5.687.284,42	9.379.085,58	12.222.339,84	13.809.600,29	41.989.599,66
II -LONG TERM PAYABLES	16.751.262,98	19.895.339,97	23.230.423,66	27.327.857,21	54.483.685,45
TOTAL LONG TERM LIABILITIES	16.751.262,98	19.895.339,97	23.230.423,66	27.327.857,21	54.483.685,45
III- EQUITIES	172.845.921,80	175.147.288,76	179.042.425,98	200.228.169,44	298.632.983,14
TOTAL EQUITIES	172.845.921,80	175.147.288,76	179.042.425,98	200.228.169,44	298.632.983,14
TOTAL LIABILITIES	195.284.469,20	204.421.714,31	214.495.189,48	241.365.626,94	395.106.268,25
IV- OFF-BALANCE SHEET ITEMS	9.076.893,54	10.000.904,24	12.791.981,76	11.273.224,57	16.527.597,61
GRAND TOTAL	204.361.362,74	214.422.618,55	227.287.171,24	252.638.851,51	411.633.865,86

İZAYDAŞ COMPARATIVE INCOME STATEMENT FOR THE PERIOD 2018-2022	2018 CURRENT PERIOD (TL)	2019 CURRENT PERIOD (TL)	2020 CURRENT PERIOD (TL)	2021 CURRENT PERIOD (TL)	2022 CURRENT PERIOD (TL)
GROSS PROFIT OR LOSS	16.817.166,42	20.117.642,75	25.452.630,10	32.953.947,69	54.453.467,79
OPERATING PROFIT OR LOSS	-3.759.589,27	-4.040.057,17	-931.375,90	-1.259.231,39	5.146.704,67
ORDINARY PROFIT OR LOSS	175.006,62	-125.410,53	2.536.188,13	3.635.171,76	10.297.361,46
GROSS PROFIT OR LOSS FOR THE PERIOD	-699.119,11	-698.633,04	2.669.181,30	2.351.535,84	8.116.256,84
NET PROFIT OR LOSS FOR THE FINANCIAL YEAR	-745.223,77	-698.633,04	1.895.137,22	1.320.993,43	5.619.063,70

## HUMAN RESOURCES

### Employee Statistics

The number of employees in our institution as of the end of 31 December is given in the table below.

DIVISION	2018	2019	2020	2021	2022
General Directorate	8	7	6	6	9
Deputy General Mngr. (Admin.)	1	1	1	1	1
Manager of Financial Affairs	72	69	78	19	20
Manager of Administrative Affairs				66	70
Department of Marketing	30	30	29	27	26
Department of Purchasing	11	11	12	11	11
Deputy General Mngr. (Technical)	20	18	19	21	21
Operating Directorate	76	71	72	74	74
Landfill Areas Directorate	20	19	19	20	20
Department of Technical Services	46	45	45	48	48
Consultants	5	4	4	5	5
External Mission	9	8	7	7	10
Total:	298 (*)	283	292	305	315

(\*) 81 people were recruited by the Decree Law No. 696.

## SUPPORT SERVICES

### Hazardous Waste Transportation

İZAYDAS provides hazardous waste transportation services with its 11 licensed vehicles and 13 certified drivers. As of 2022 we provided 16.242,16 tons of hazardous waste transportation services. In addition, the amount of sludge, hazardous waste and municipal waste transported from Derince Port to our facility with a total of 367 expeditions is 2.097.89 tons. Upon written or verbal request of Kocaeli Metropolitan Municipality-Department of Environmental

Protection and Control- Waste Management Branch Office 28 waste transportation services with notification has been done.

Transported from companies	Unit	2018	2019	2020	2021	2022
Waste Oil	Ton	0	0	0	0	0
Hazardous Waste (Ton, Expedition, Km)	Ton	10.193,06	10.272,24	8.823,11	14.174,03	16.242,16
	Expedition	1.812	1.662	1.427	2.238	2.591
	Km	188.417	163.201	125.333	211.461	251.789
Derince Port Bilge Water, Sludge, Hazardous Waste, Household Garbage (Number of Expeditions, Tons, Km)	Expedition	294	241	303	318	367
	Ton	1.301,66	1.361,40	1.935,28	1.984,97	2.097,89
	Km	20.388	15.678	19.840	23.647	25.672
Reported Waste	Expedition	25	6	3 (*)	37	28
	Ton	339.20	62.27	0.504 (*)	584.08	442.40
	Km	2.447	400	314	2.524	3.803

(\*) Transportation service has been received.

## PURCHASING

In 2022 the followings are purchased by direct procurement method:

- goods of 15.618.810,952 TL,
- services of 6.076.160,299 TL,
- construction works of 129.500,00 TL.

## TENDER AND CONTRACTS

In 2022, a total of 70 tenders were held consisting of 16 revenue-generating works with a contract value of 9.900.560,00 TL and 54 works with a contract value of 201.996.548,15 TL + VAT.

## MARKETING ACTIVITIES

- 128 company visits were made.
- 4.287 phone calls were made.
- 3.033 price offers were submitted.
- 1.300 units of waste were accepted to our incineration plant and 387 units of waste were accepted to our landfills from waste producers.
- 2.130.900 kg of reported waste (unclaimed) has been disposed of in our facility.



## ACCEPTED WASTE QUANTITIES

The Amount of Waste Coming to the Incineration Plant

Year	2018	2019	2020	2021	2022
Accepted (ton)	41,290	42,137	37,956	39,640	41,950

Amount of Waste Arriving at Landfills (From Customers)

Year	2018	2019	2020	2021	2022
1st Class Landfill (ton)	40,730	42,947	44,585	51,715	52,846
2. Class Landfill (ton)	32,005	18,760	13,991	33,024	55,997
Total (ton)	72,736	61,706	58,576	84,739	108,843

## MARINE SERVICES

Marine Vessels Served

Year	2018	2019	2020	2021	2022
Number of Marine Vessels from which waste was taken (Number)	3.340	3.409	3.454	4.193	3.970

Types and Amounts of Waste Taken from Marine Vessels

Year	2018	2019	2020	2021	2022
Bilge (m <sup>3</sup> )	3.462	2.922	2.196	2.642	3.152
Sludge (m <sup>3</sup> )	5.770	5.321	5.592	5.389	6.504
Waste Oil (m <sup>3</sup> )	285	233	342	307	312
Garbage (m <sup>3</sup> )	3.457	3.391	3.655	4.303	4.446
Polluted Water (m <sup>3</sup> )	670	855	1.248	1.793	1.447
Slop(m <sup>3</sup> )	-	-	-	(*) 1.712	9,090
Total (m <sup>3</sup> )	13.646	12.724	13.033	16.147	24.953

(\*) Slop receiving started in 2021.

İZAYDAŞ Seaplane Flight Hours (minutes)

Year	2018	2019	2020	2021	2022
İZAYDAŞ	12.689	2.235	1.060	720	1325
İSU	635	0	0	0	0
İSKİ	12.475	5.505	0	0	0
KBB Environmental Protection	3.900	4.675	6.405	9.095	11.990
Total:	29.699	12.415	7.465	10.970	13.315

## INCINERATION PLANT

### Clinical and Hazardous Waste Incineration and Power Generation Facility

The operating principle of the facility with an incineration capacity of 5.400 kg/hour, is based on the disposal of combustible plastic wastes from industry, used oils, pharmaceutical and cosmetic wastes, petrochemical wastes, PVC, solvent, paint wastes, adhesives, treatment sludge, hazardous wastes and clinical wastes by incineration.



### Waste Disposed of by Incineration

The data of the wastes disposed of by incineration in the incineration plant in line with the waste acceptance criteria are given in the table below. In 2022, 191.009 Sm<sup>3</sup> of natural gas was consumed as additional fuel in the incineration plant.

Year	2018	2019	2020	2021	2022
Unit	ton				
<b>Solid waste</b>	25,178	28,774	26,885	29,883	28,797
<b>Barrel Feed</b>	2,001	2,008	2,293	2,654	1,949
<b>Clinical waste</b>	106	237	250	220	202
<b>Special liquid</b>	1,980	2,025	1,485	2,289	2,437
<b>Aqueous liquid</b>	2,654	3,067	2,656	2,268	2,591
<b>Flammable liquid</b>	4,841	4,799	3,182	2,666	2,862
<b>Total:</b>	36,762	40,910	36,751	39,980	38,838

### Flue Gas Emission Values

The Flue Gas Emission status of the Incineration Plant in 2022 is given in the table below and meets all the standards of the relevant regulations.

TABLE OF DAILY EMISSIONS				
Emissions	Limit Value (mg/nm3)	Exceeding Value	%	Mass flow rate kg/year
CO <sub>n</sub>	50	0	100,00%	2.460,90
NO <sub>xn</sub>	400	0	100,00%	37.941,40
SO <sub>2n</sub>	50	0	100,00%	1.192,00
TOC <sub>n</sub>	10	0	100,00%	136,90
HF <sub>n</sub>	1	0	100,00%	0,15
HCL <sub>n</sub>	10	0	100,00%	41,31
TOZ <sub>n</sub>	10	0	100,00%	27,90

#### Incineration Plant Performance

As of the end of 2022 total working hours of the facility were 7.360 hours, incidental downtime was 236 hours and planned maintenance downtime was 1.164 hours.

#### Incineration Plant Power Generation

Within the framework of the 49-year production license, 15.338.800 kWh of electrical energy was generated from 38.838 tons of wastes which were incinerated in 2022. 11.007.272 kWh of this was consumed at the facility, 5.286.126 kWh was sold to TEİAŞ and 954.598 kWh of electricity was purchased.

	kWh	2018	2019	2020	2021	2022
Electricity Generated	kWh	16.658.000	17.686.800	16.235.000	16.937.400	15.338.800
Electricity Purchased	kWh	887.371	777.969	896.901	1.022.276	954.598
Electricity Consumed	kWh	11.975.605	13.219.129	11.764.216	11.924.374	11.007.272
Electricity Sold	kWh	5.569.770	5.245.640	5.367.685	6.035.302	5.286.126

## RECYCLING

### Medical Waste Collection, Transport and Disposal

Medical waste generated in all medical institutions within the borders of Kocaeli province is collected by licensed medical waste transportation vehicles and transported to IZAYDAŞ site. Infectious medical wastes are finally disposed of in the 2nd Class Sanitary Landfill after

sterilization and shredding in the Medical Waste Sterilization Facility. Pathological wastes are incinerated at Hazardous Waste Incineration and Power Generation Plant.



The amounts of medical waste collected in Kocaeli province are listed in the table below.

Year	2018	2019	2020	2021	2022
<b>Total Amount of Medical Waste (kg)</b>	2,272,583	2,337,337	2,889,970	3,212,660	2,955,488
<b>The Amount of Pathological Waste (kg)</b>	42,643	46,342	43,858	47,687	58,904

### Biogas Plant

Biogas is obtained as a result of anaerobic digestion by using cattle manure, fruit and vegetable waste, tripe waste, grass and process-compatible food sector waste at the Biogas Plant. The gas produced is converted into electrical energy with the help of a gas engine. The heat energy generated by cooling the gas engine is used to heat the reactors operating under mesophilic conditions.





The amount of waste taken to the facility and fermented product output from the facility are given in the table.

Type of waste	2018	2019	2020	2021	2022	Unit
Grass	0	100	320	1,882	4,306	kg
Chicken Manure	0	0	0	0	667.340	kg
Cattle Manure	3.072.390	3.345.460	2.724.620	4.459.840	5.055.110	kg
Fruit and Vegetable	0	2.905	21.224	10.405	14.053	kg
Tripe Waste	92.490	45.430	158.070	228.320	271.080	kg
Other	69.200	71.900	689.580	1.024.400	1.330.868	kg
Total:	3.234.080	3.465.795	3.593.814	5.724.847	7.342.757	kg

Type of the	2018	2019	2020	2021	2022	Unit
Fermented Solid	1.000	200	2.280	7.920	32.020	kg
Fermented Liquid	3.177.020	3.237.080	3.605.020	5.870.000	7.794.000	kg
Total:	3.178.020	3.237.280	3.607.300	5.877.920	7.826.020	kg

The amount of energy generated is given in the table below.

Year	2018	2019	2020	2021	2022
Energy (kWh)	109,200	27,700	18,800	71,600	198,700

## WASTE ACCEPTING

### Pre-treatment quantities

The amount of pre-treatment (liquid partition, dust partition, packaging amount going to recycling, etc.) performed on the wastes on a yearly basis is shown in the table.

YEAR	Unit	2018	2019	2020	2021	2022
Adjustment of various liquids or powders to the desired weight	kg	110.500	183.571	118.430	220.745	147.065
Amount of Contaminated Packaging Going to Recovery	Plastic	kg	22.390	25.030	14.920	16.740
	Metal	kg	151.340	163.860	101.740	90.770
Amount of IBC Recycled	pc.	2.425	1.267	821	657	320

## LANDFILL AREAS

### İzmit Landfills

İzmit Municipal and Hazardous Solid Waste Sanitary Landfill Areas were built in 1997 on an area of 363.007 m<sup>2</sup> of the 800.000 m<sup>2</sup> area allocated by the Ministry of Environment, Urbanization and Climate Change. Municipal and hazardous wastes accepted to the landfill are transferred to the working area in the appropriate lot according to the type of waste. There are 6 lots with a capacity of 3.163.000 m<sup>3</sup> for municipal waste (total capacity 4.753.000 m<sup>3</sup> with the in-between roads and after lot 1 displacement), and one lot with a capacity of 969.919 m<sup>3</sup> for hazardous wastes. It is covered with overburden to prevent odor and adverse environmental conditions by applying laying/compaction processes with the help of construction machines.

When the landfilling process is completed, which is estimated to be 25-32 years, this area will be greened and will be returned to the Ministry of Environment, Urbanization and Climate Change.

İzmit Landfill	Unit	2018	2019	2020	2021	2022
The Amount of Hazardous Waste (1 <sup>st</sup> Class)	ton	56.719	59.058	56.819	63.028	68.213
Amount of Industrial Domestic Waste (2 <sup>nd</sup> Class)	ton	32.253	19.408	15.992	33.799	41.320
The Amount of Domestic Waste (2 <sup>nd</sup> Class)	ton	670.38 5	633.46 8	663.72 0	642.38 4	590.25 1

Totally 590.251 tons of Municipal Waste (2<sup>nd</sup> Class), 68.213 tons of Hazardous Waste (1<sup>st</sup> Class) were landfilled and disposed of at Izmit Sanitary Landfills in 2022.

### Landfill Gas (LFG) / Energy Generation Project

#### İzmit Landfill

A tender was made on 23.06.2010 for the construction and operation of a power plant from landfill gas (LFG) of İZAYDAŞ İzmit and Dilovası Domestic Solid Waste Landfill. As a result of the tender, power generation was started on 02.03.2012 after making the electrical connections of the İzmit Landfill Facility and the completing the electricity generation works. In 2022, the total gross amount of energy generated was 46.892.410 kWh/year.

Year	2018	2019	2020	2021	2022
<b>Gross Generated Energy(kWh/year)</b>	38.824.960	26.251.650	33.663.420	49.575.710	46.892.410
<b>Energy Sold(kWh/year)(*)</b>	37.284.780	24.902.720	32.056.240	47.569.810	44.557.530

(\*) Refers to the net electrical energy supplied to the grid after transformer and busbar losses.

The energy generation facility from landfill gas, built within the scope of the Landfill Gas

Power Generation Facility Project, is being developed as the "Gold Standard Project", which is considered as the most prestigious among international voluntary standards. Körfez Enerji Company, which has been generating energy from landfill gas since March 2012, has sold a total of 631.452 tCO<sub>2</sub>e carbon between 2014 and 2018. In 2022, (tCO<sub>2</sub>e) carbon sale was not performed.

Table of the amount of carbon credits sold between 2018 and 2022

Year		2018	2019	2020	2021	2022
<b>Credit Amount (tCO<sub>2</sub>e)</b>	<b>İzmit</b>	90.000	There has been no validation	There has been no validation	309.243	There has been no sale
<b>Credit Amount (tCO<sub>2</sub>e)</b>	<b>Dilovası</b>	-	-	-	-	-

#### Dilovası Landfill

There are two gas engines at the Dilovası Landfill. The engines have an installed capacity of 1.063 MW and the plant operates at full capacity for over 8.000 hours per year. Dilovası Landfill Facility started to generate electricity on 24.10.2015 as a result of the electrical connections and the completion of the electricity generation works. In 2021, the total gross amount of energy generated was 2.976.370 kWh/year. Since no waste is taken, energy generation has decreased.

Year	2018	2019	2020	2021	2022
<b>Gross Generated Energy(kWh/year)</b>	10.220.073	6.177.303	3.939.120	2.976.370	2.286.340
<b>Energy Sold(kWh/year)<sup>(*)</sup></b>	9.728.296	5.762.160	3.649.438	2.810.734	2.092.200

(\*) Refers to the net electrical energy supplied to the grid after transformer and busbar losses.

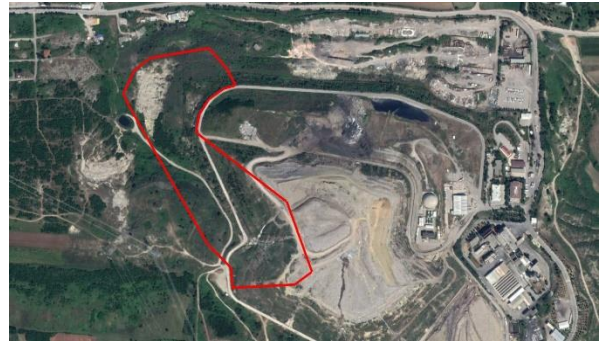
#### Waste Characterization Study

Waste characterization studies for the summer and winter periods of 2022 were carried out at İZAYDAS İzmit Sanitary Landfill in February and August.

#### Ground-water / Leachate Analysis

In 2022, in accordance with the "Regulation on the Landfill of Wastes", samples were taken from the Groundwater Wells and Leachate Collection Manholes in the İzmit and Dilovası Landfills and analyzed.

## Major Projects Realized in 2022



The new landfill area for the lot expansion construction work is the area surrounded by red color. Lot expansion works started in the last months of 2021 and were completed on 01.10.2022. On 04.10.2022, the first waste receiving has started.



## MAINTENANCE

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In 2022, a total of 1713 general work, incidental maintenance work and production and revision work:

- 627 mechanical failure maintenance works,
- 235 electrical breakdown maintenance works,
- 282 instrument failure maintenance works,
- 569 vehicle maintenance breakdown works

and a total of 2992 periodic and planned maintenance works were carried out by the Technical Services Maintenance Department:

- 1234 mechanical maintenance works,
- 300 electrical maintenance works,
- 704 instrument maintenance works,
- 628 vehicle maintenance works.

- Parameters measured in accordance with the Continuous Emission Measurement Systems Statement are CO<sub>2</sub>, HCL, HF, SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>O, TOC, Temperature, Flow, O<sub>2</sub> and Dust. QAL2 measurement tests were performed by an accredited laboratory, and measurement functions were created.

- 72 measurement and control instruments were calibrated and reported.



- The emission and operating parameters data required for the Ministry report have been prepared monthly.

## INFORMATION TECHNOLOGIES

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- The Management Review meeting planned within the scope of ISMS was held.



- ISO 27001 Information Security Management System Surveillance Audit was carried out and the audit was passed successfully.
- The drills planned within the scope of ISO 27001 Information Security Management System (ISMS) were carried out.
- Periodic maintenance was carried out within the scope of the IT Devices Annual Maintenance Plan.

## OCCUPATIONAL HEALTH AND SAFETY (OHS)

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### Occupational Accidents

As of the end of December 2022, the number of minor and major occupational accidents was recorded as 34. First aid, medical intervention, and hospital referral procedures were applied to 34 casualties in 34 occupational accidents. In 2022, 150 work days were lost due to 34 occupational accidents.

We keep the number of accident-free workdays in our facility on the board located above the shift supervisor. If there are two or more lost work days as a result of the accidents experienced

by an IZAYDAS employee on our board, we reset our board. As of 31.12.2022, workdays which has passed without accidents has been recorded as 82. Our accident-free workday record is 568 in our records.

The accident frequency index and accident severity rate for the years 2018-2022 are given below.

YEAR	2018	2019	2020	2021	2022
Number of Accidents (IZAYDAS + Contractor Company)	44	44	52	45	34
Loss of working days (IZAYDAS + Contractor Company)	43	18	208	75	150
Accident Frequency Rate	70,68	78,96	86,88	61,14	45,36
Accident Severity Index	0,069	0,031	0,348	0,106	0,2

#### OHS Activities

The number of on-the-job work permits of the contractor company is 464 in 2022.

Distribution of the total number of work permits in 2022 is:

- 8 excavation works,
- 134 work in tanks and confined spaces,
- 284 hot work,
- 368 working at height.

The OHS unit continued to work with a total of ten people in 2022.

#### Other OHS Activities

On 16.08.2022, within the scope of the OHS Project carried out by the Istanbul Chamber of Industry, volunteer-based OHS Consultancy service was taken and our current Occupational Health and Safety practices in our company were reviewed under four main topics with desk work and site tour. As a result of the evaluation, our OHS system, practices and ownership were evaluated, and finally they were interpreted as “excellent” with 96 points in respect of the OHS Management and Leadership, Basic Legislation Requirements, Hazard Management, Training and Employee Participation topics in accordance with the KARNE method. In the tables, “continuation of the current practice” was suggested for many subjects and some minor additional suggestions were made.



On 25-26.10.2022, the compliance of our management system practices within the scope of Integrated Management System (IMS) with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 standards was evaluated by the certification body Kalitest, and at the surveillance audit the continuity of the ISO 45001:2018 standard certificate was decided.

## PUBLIC RELATIONS

### Events We Participated

As IZAYDAS, which is one of the affiliates of Kocaeli Metropolitan Municipality and the leading organization in environment and waste management, besides the Metropolitan Municipality events we take care to meet with waste producers at every opportunity, with our increased capacity and innovations put into practice in favor of waste producers. In 2022, we have participated in eleven events.

Event Name	Date	Place
KARTEPE SUMMIT	25-27.03.2022	KOCAELİ
11. LOGISTICS AND SUPPLY CHAIN CONGRESS	12.05.2022	KOCAELİ
WORLD FARMERS DAY	14.05.2022	KOCAELİ
ENVIRONMENT WEEK EVENT	06.06.2022	KOCAELİ
KSO ŞAHABETTİN BİLGİSU 28th ENVIRONMENTAL AWARDS	15.06.2022	KOCAELİ
İZMIT GULF SEA FESTIVAL	6/25/2022	KOCAELİ
EIF 15. WORLD ENERGY CONGRESS	12-14.10.2022	IN ISTANBUL
ZERO WASTE FESTIVAL	14-16.10.2022	KOCAELİ
XII. TURKTAY PANEL	18-19.10.2022	ANKARA
GREEN CHESS TOURNAMENT	19-20.11.2022	KOCAELİ
ENTECH FAIR	23-26.11.2022	ANKARA

### Our visitors

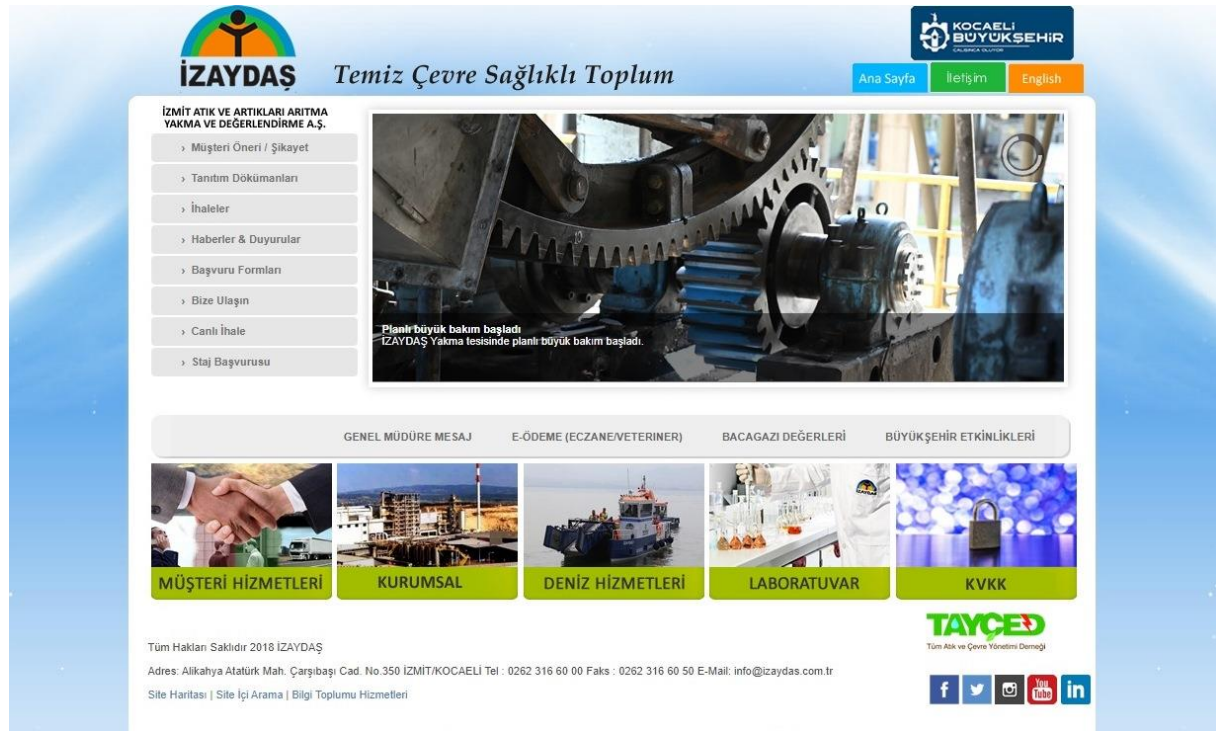
In 2022, the number of visitors accepted to IZAYDAS from schools, local and foreign institutions, municipalities, associations and foundations, and chambers was 2.362.

Year	2018	2019	2020	2021	2022
The number of visitors	4.961	3.142	1.316	526	2.362

## Other Studies

[www.izaydas.com.tr](http://www.izaydas.com.tr)

Our website is updated regularly. Our monthly and annual activity reports and tender announcements are published up-to-date.



In 2022, a total of 26.902 people has visited our website. The number of domestic and international visitors for the last five years is given in the table below.

Website Visitor Numbers	Year	2018	2019	2020	2021	2022
	Turkey	22.154	18.661	18.588	18.819	22.766
	International	2.101	2.394	2.680	2.911	4.136
	Total	24.255	21.055	21.268	21.730	26.902

## Social media

We take place in social media with a total of 10.171 followers in order to strengthen our communication, increase our strength and keep our corporate brand value at the top, with the thought that we all have a place on digital platforms.



### *IZAYDAS Weekly Activity Videos and Visual Designs*

Weekly activity videos are prepared in order to increase internal communication and share our activities with the public transparently. During 2022, 52 weekly activity videos, 6 videos for special days and weeks, and 23 visual design works were prepared and shared on social media.



### *IZAYDAS on Press*

News and interviews were given to news agencies, local and national press about the promotion of our institution, its activities and new investments.

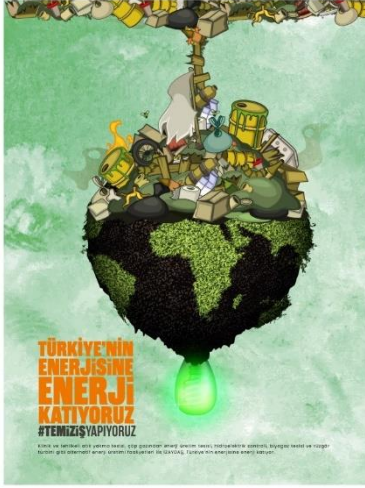
In 2022, 441 news about IZAYDAS were published in the public press and 3.798 news were published on the internet sites.

Additionally, four opinion letter and articles were published in sectoral journals.

### *Our advertising designs*

In 2022 our advertising activities in the sector magazines continued with the designs we prepared last year.





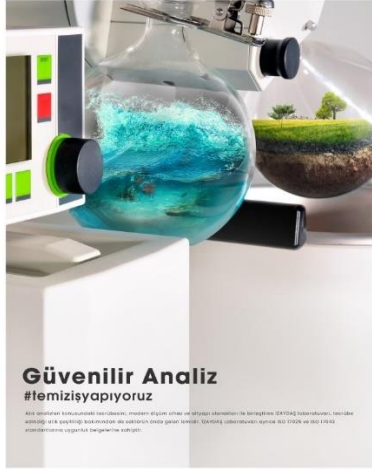
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/ Kocaeli

Tel: 0262 316 60 00 Fax: 0262 316 60 50

[info@izaydas.com.tr](mailto:info@izaydas.com.tr) - [www.izaydas.com.tr](http://www.izaydas.com.tr)

