TCDD TEKNİK



Company Profile

Your Partner Across the Entire Railway Lifecycle

TCDD TEKNİK



CEO Message

TCDD Teknik is a leading Türkiye-based engineering and consultancy company specializing in the railway sector, providing end-to-end solutions across the entire railway lifecycle. With expertise spanning engineering and consultancy, testing and measurement, certification, signaling, rolling stock, maintenance and smart railway technologies, TCDD Teknik combines technical excellence with a deep understanding of Türkiye's railway ecosystem.

By developing indigenous and national technologies and delivering projects in line with international standards, the company bridges local engineering capabilities with global opportunities—advancing safe, sustainable, innovative, and globally competitive railway solutions.

Mustafa ÖZDÖNER

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TCDD TEKNİK

About Company

$100 M
REVENUE

MINISTRY OF TRANSPORT AND INFRASTRUCTURE

%100
PUBLIC CAPITAL

TÜRASAŞ — TCDD — TCDD TAŞIMACILIK

TCDD TEKNİK

PARTNERSHIP STRUCTURE

TCDD	TÜRKSAT	T.C. ANKARA BÜYÜKŞEHİR BELEDİYESİ
%50	%40	%10

One Ecosystem *Decades of Experience* *A New Generation of Engineering*



About Company

Rooted in Türkiye's long-established public railway ecosystem, TCDD Teknik unites the 170-year railway heritage of Turkish State Railways (TCDD) with the agility and efficiency of a private-sector enterprise. TCDD is the state-owned institution responsible for managing railway investments and railway infrastructure in Türkiye. Established in 1927, TCDD manages the construction and maintenance of the national rail network, including tracks, stations, signaling systems, and other infrastructure essential to rail transport.

Positioned alongside TÜRASAŞ (Turkish Rail Systems Vehicles Company), which leads rolling stock, locomotives, vagons production, and TCDD Taşımacılık, which operates passenger and freight services, TCDD Teknik serves as the ecosystem's engineering, maintenance, and technology solutions provider.

Founded with public capital yet governed by private-sector principles, the company bridges deep institutional railway expertise with a dynamic, solution-driven approach to business.

OUR STRATEGIC ROLE

- Supporting Türkiye’s railway development through engineering expertise in new lines and infrastructure renewal projects.
- Advancing national railway technologies through engineering and field expertise in signaling, rolling stock and urban rail systems.
- Taking TCDD’s railway expertise beyond Türkiye by transferring decades of experience and technical know-how to international projects.

Vision &
Mission

We develop innovative, sustainable, and integrated solutions that shape the future of transportation systems and strengthen our position as a global engineering leader.



Vision

To become a global leader in the transportation sector by offering innovative solutions built on original technologies

Mission

To provide integrated and sustainable solutions that contribute to the development of transportation systems

Core Values

Agile, Proactive, Highly Committed, Reliable, Fair, People-Centered, Collaborative, Environmentally Responsible, Transparent, and Genuine

Shaping the future of rail systems
through technological transformation

At TCDD Teknik, we are not merely participants in the rail industry — we are shaping its future. Our mission is to design and deliver the next generation of railway systems by integrating cutting-edge technologies, pioneering domestic innovations, and implementing sustainable practices. We envision a future where rail transport is smarter, safer, more efficient, and seamlessly connected.

Total Staff

1500 +





Fileld Staff

1000 +

Engineer/Architect

400 +





Projects

600 +



How
We Work

At TCDD Teknik, our philosophy is grounded in innovation, sustainability, and a deep-rooted heritage in railway engineering. Through a meticulous and collaborative approach, we transform complex challenges into efficient, streamlined, and future-ready solutions.

1 End-to-End Integrated Project Management

We manage the entire project lifecycle under one roof — from initial feasibility studies and design to implementation and long-term maintenance. This integrated approach ensures seamless coordination, rigorous quality control, and on-time delivery, offering our clients a single point of responsibility and consistent excellence from concept to completion.

2 Technology-Driven and Innovative Solutions

We place innovation and cutting-edge technology at the core of our operations. By utilizing advanced tools such as BIM, IoT platforms, and domestic signaling systems, we enhance precision, enable predictive maintenance, and deliver intelligent, future-proof solutions that set new standards in the rail systems industry.

3 "Safety First" and Uncompromising Quality

Safety is our fundamental and non-negotiable principle. Embedded in every process —from signaling and rolling stock maintenance to infrastructure inspections—we adhere to international standards and conduct rigorous independent safety assessments to ensure the highest levels of reliability, safety, and quality in all our projects.

TCDD TEKNİK



Our Services

Engineering & Consulting

TCDD Teknik delivers integrated engineering and consulting solutions that combine technical excellence with strategic insight. From design and analysis to implementation and optimization, we provide innovative and sustainable services that drive efficiency, safety, and reliability in every project.

Engineering

TCDD Teknik provides comprehensive engineering services from concept to final implementation for infrastructure investment projects. Our approach is innovative, sustainable, and flexible, with a focus on delivering high-quality projects on time and within budget. We evaluate not only the initial investment but also operational requirements to minimize lifecycle costs. Our services cover end-to-end design — including route and track alignment, architectural and structural design, electrical, electronic, and mechanical systems design, as well as fire and CFD simulations, visualization, and animation.

Consulting

TCDD Teknik offers a wide array of consultancy services throughout the project lifecycle. This includes construction consultancy (controlling application designs and production), rolling stock consultancy (for rolling stock procurement, maintenance and operation), and project management consultancy (providing PMI/ISO 21500 standard compliance, BIM consultancy, and training). We also provide system engineering support for safety, requirement management, and integration documents.

Engineering & Consultancy
Projects

TCDD Teknik demonstrates its extensive expertise through a diverse portfolio of engineering, technology, and consulting projects. Our work ranges from enhancing railway safety to advancing technological innovation, as reflected in the key projects highlighted below.



01

URBAN TRANSPORT PROJECTS

Kocaeli, Konya, Malatya, Gaziantep, Hatay, Isparta, Amasya, Çorum

Design, feasibility studies and detailed engineering projects for urban transportation systems across 8 cities.

8 CITIES
URBAN TRANSPORT PROJECTS



02

BANDIRMA-BURSA-YENIŞEHIR-OSMANELI HIGH-STANDARD RAILWAY

Consultancy services for the Bandirma-Bursa-Yenişehir-Osmaneli High-Standard Railway Project.

CONSULTANCY EXPERIENCE
ON A STRATEGIC RAILWAY CORRIDOR



03

EURASIA ROAD TUNNEL OPERATION & MAINTENANCE CONSULTANCY

Consultancy experience in the operation and maintenance of one of Türkiye's landmark infrastructure projects, creating significant technical know-how for our company and teams.

TUNNEL OPERATION & MAINTENANCE
CONSULTANCY EXPERTISE



04

SYSTEM ENGINEERING

- Requirements
- Interface
- RAM & SAFETY
- Testing & Commissioning
- Integration

REFERENCES

Kayseri Anafartalar-YHT | Sirkeci-Kazılışme Çaltunizade-Çamlıca

SYSTEM ENGINEERING EXPERTISE
EXPERTISE



05

- Architectural & Structural Design
- Application / IFC Projects

REFERENCES

- Muş
- Tatvan
- Adapazari

STATION & TERMINAL DESIGN DESIGN EXPERTISE
DESIGN EXPERTISE

9 ONGOING PROJECTS

150+ EXPERT PERSONNEL

500+ KM RAILWAY LINES

100+ ENGINEERING SOLUTIONS

NATIONAL AND INTERNATIONAL PROJECT EXPERIENCE

TCDD TEKNİK



Our Services

Maintenance (National & High Speed Lines)

TCDD Teknik provides comprehensive maintenance solutions across railway infrastructure, rolling stock and critical systems, combining engineering expertise with preventive, predictive and corrective maintenance approaches in both national and high speed lines.

1 Onboard systems, ETCS onboard, predictive maintenance and automatic train inspection systems.	**Rolling Stock**
2 ERTMS/ETCS, CBTC, GSM-R, transmission, CCTV, public address, telephone, radio and access control systems.	**Signalling & Communication Systems**
3 Maintenance of electrification, power supply and electronic systems.	**Electrification Systems**
4 Rail grinding, welding, mechanized repairs, rail and sleeper replacement, and track component maintenance.	**Track Maintenance & Rehabilitation**

TCDD TEKNİK



Our Services

Urban Rail System

TCDD Teknik provides integrated operations and maintenance solutions across the entire urban rail ecosystem, ensuring safe, reliable and continuous mobility through its engineering expertise and extensive field experience.

Operations

The training employed the following methods:

SCADA Operations

Real-Time Monitoring and Control

Energy Management & System Monitoring

Reliable and Continuous Energy Management

Operational Technical Support

Expert Support for Daily Operations

Fault & Emergency Coordination

Rapid Response and Fault Coordination

System Performance Monitoring

Continuous Monitoring for System Performance

Maintenance Resource & Stock Management

Continuous Monitoring for System Performance



Maintenance

We provide integrated maintenance solutions covering rolling stock, infrastructure and critical railway systems throughout their operational lifecycle.

1. **Rolling Stock Maintenance**

   Periodic and heavy maintenance, fault management and maintenance of rolling stock subsystems.

2. **Signaling Systems**

   Preventive and corrective maintenance of wayside signalling, CBTC onboard, ATS and related control systems.

3. **Electrification Systems**

   Maintenance, inspection, testing and fault response for catenary, traction power, switchgear, grounding and protection systems.

4. **Communication Systems**

   Maintenance of transmission, passenger information, radio, public address, telephone, CCTV, access control and clock systems.

5. **Electric, Electronic and Mechanical Systems**

   Maintenance, troubleshooting and optimization of SCADA, ECS and auxiliary electronic systems.

6. **Escalator & Elevator Systems**

   Periodic and major maintenance, fault management, OEM coordination, field supervision and performance monitoring.

7. **Track Maintenance**

   Rail and turnout grinding, profile correction, geometric optimization, turnout crossing replacement, aluminothermic rail welding, measurement and renewal works.

Urban Rail System
Projects

~1 MILLION PASSENGERS EVERY DAY

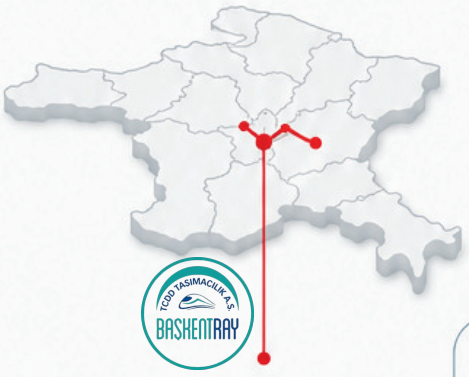
5 MAJOR CITIES
İSTANBUL • ANKARA
KOCAELİ • İZMİR
GAZİANTEP

17 PROJECTS

25 MILLION USD CONTRACT VALUE

SAFE, RELIABLE AND SUSTAINABLE OPERATIONS

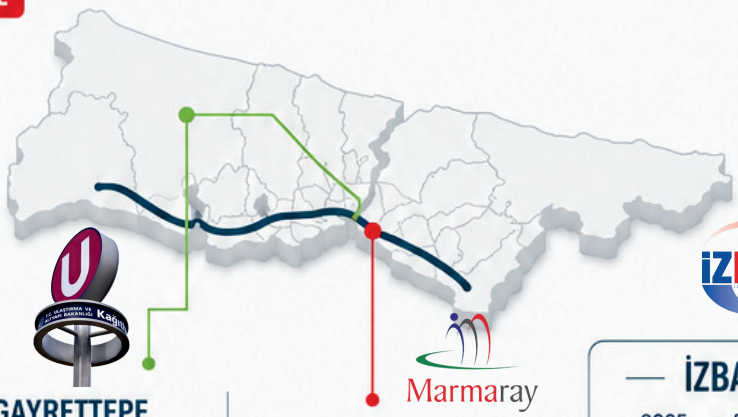
URBAN RAIL NETWORKS UNDER MAINTENANCE



BAŞKENTRAY LINE

37,4 km

24 stations



GAYRETTEPE METRO LINE

47,5 km

10 stations

13 service stations

10 trains

MARMARAY LINE

76 km + 8,3 km (SKZ)

43 + 8 stations (SKZ)

İZBAN

2025 as of October

189 Vehicles

Periodic Maintenance Works



OUR MAINTENANCE ACTIVITIES

ROLLING STOCK MAINTENANCE
Ensuring safe and reliable operations of rolling stock.

TRACK MAINTENANCE
Maintaining smooth, safe and high-quality journeys.

ELECTRIFICATION ACTIVITIES
Catenary, power supply and electrification systems maintenance.

ELECTRONIC SYSTEMS ACTIVITIES
Signalling, communication and electronic systems maintenance.

ELECTROMECHANICAL SYSTEMS ACTIVITIES
Elevators, escalators and electromechanical systems maintenance.



Our Services

Signaling & Rolling Stock

TCDD Teknik provides comprehensive engineering solutions in signaling and rolling stock systems, delivering safe, efficient, and sustainable railway operations. With a strong engineering background and a commitment to innovation, the company plays an active role across the entire project lifecycle — from feasibility studies and system design to production, testing, and long-term maintenance.

Signaling

We offer design, construction, maintenance, and repair services for advanced railway communication and control systems. Our scope includes ERTMS/ETCS and CBTC systems, GSM-R, transmission subsystems, and integrated communication systems such as telephone, CCTV, fire alarm, access control, and radio systems—ensuring safe, efficient, and uninterrupted railway operations.

Rolling Stock

TCDD Teknik offers end-to-end engineering solutions throughout the entire lifecycle of rolling stock projects — from concept to commissioning and beyond. Our multidisciplinary expertise ensures that every stage, from technical design to long-term maintenance, is executed with precision, safety, and efficiency in mind.

Signaling
Projects

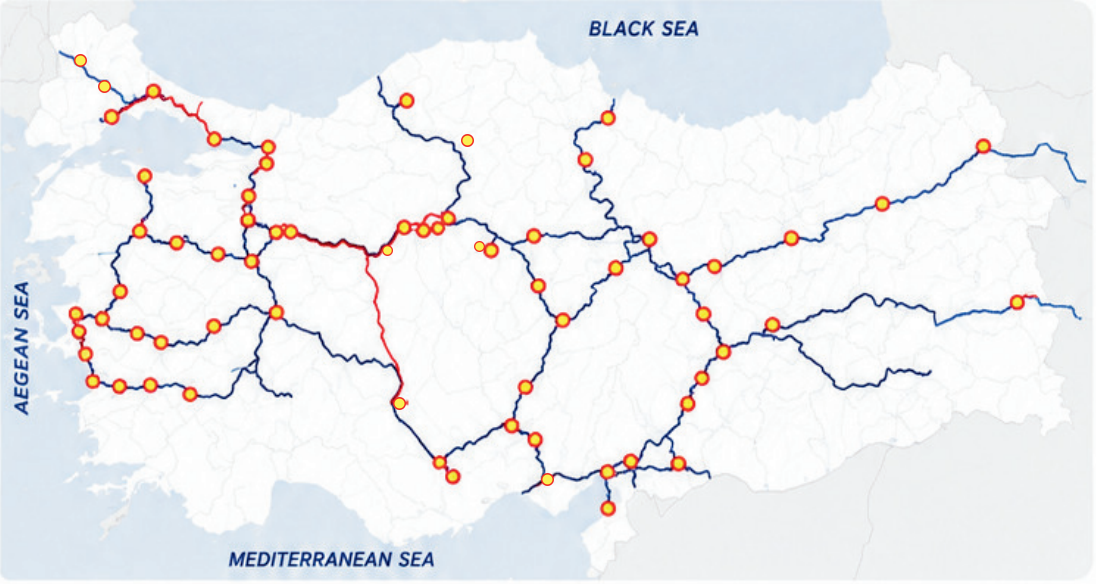
TCDD Teknik provides comprehensive preventive maintenance, repair and technical support services for railway signalling systems, ensuring safe, reliable and uninterrupted railway operations. Our expertise covers ERTMS/ETCS, CBTC, GSM-R and transmission systems, as well as supporting systems such as CCTV, fire alarm, access control and radio systems. With a strong focus on preventive maintenance, system reliability and operational continuity, we support high system availability and sustainable performance across the railway network.

37
PROVINCES
Signalling operations across Türkiye

85
OFFICES
Field operation offices

22
PROJECTS
Active signalling projects

500+
EMPLOYEES
Experienced and dedicated team



COVERAGE ACROSS TÜRKİYE

- High Speed Train Lines
- Conventional Lines (Double Track)
- Conventional Lines (Single Track)
- Under Construction
- Signalling Field Operation Offices

5508 KM OF SIGNALLISED RAILWAY LINES UNDER OUR SERVICE

OUR TECHNOLOGY PARTNERS

TÜBİTAK · HITACHI · ALSTOM · SIEMENS · NIPPON SIGNAL · PRAHA · Iskra · Westinghouse

2025 CONTRACT VOLUME

40 MILLION USD

Rolling Stock
Projects

TCDD Teknik provides engineering, preventive and predictive maintenance services for rolling stock. Our expertise covers ETCS on-board systems, ATS, wheel lubrication systems and Automatic Train Inspection Station (OTMI) operation and maintenance, supported by capabilities in system integration, testing, commissioning and certification to ensure vehicle safety, reliability and availability.

01 REVISION (OVERHAUL) SERVICES

- Locomotive Disassembly
- Diesel Engine Disassembly & Assembly
- Bogie Front Assembly
- Locomotive Testing
- Electrical Overhaul of DE36000 Locomotives
- ETCS – Camera Maintenance & Repair
- Overhaul of DE22000–DE33000 Locomotives (YGD & Marking Tasks)

We work on an average of 80 locomotives within the scope of overhaul services.

02 PREVENTIVE MAINTENANCE SERVICES

- ATS
- ETCS ON BOARD
- Air Conditioning Systems
- Camera Systems
- Wheel Lubrication Systems

03 AFTER SALES & DOCUMENTATION SERVICES

AFTER SALES SERVICES

- National EMU (TURASAŞ)
- GAZİRAY
- E5000 (TURASAŞ)

DOCUMENTATION SERVICES

- System Description
- User Manual
- Maintenance Manual
- Emergency Cases

04 HOMOLOGATION TESTS

- TURASAŞ National EMU
- TURASAŞ E5000
- GAZİRAY
- EMU 225
- Sleeping Coach

DELIVERING SERVICE ACROSS TÜRKİYE

22 WORKSHOPS
Across Türkiye

27 PROJECTS
Successfully Delivered

200+ EMPLOYEES
Experienced and Dedicated Team



NATIONWIDE SERVICE
Reliable. Efficient. Always On Track.

TCDD TEKNİK



Our Services

Test & Measurement

TCDD Teknik delivers integrated measurement solutions that enhance the efficiency, reliability, and sustainability of railway systems. Through advanced inspection technologies and precise data analysis, we ensure the integrity of rail infrastructure, while our energy management services focus on optimizing consumption and supporting the transition to sustainable, eco-friendly operations.

Ultrasonic & Eddy Current Inspection

- Internal Rail Defects
- Surface & Micro-Crack Detection

Rail Profile & Corrugation Measurement

- Rail Profile
- Corrugation
- Equivalent Conicity

Track Geometry Measurement

- Level
- Cant
- Gauge
- Alignment

Absolute & Tunnel Clearance Measurement

- Absolute Track Measurement
- Tunnel Clearance
- Structure Gauge



Catenary Measurement

Static & Dynamic Catenary Measurement

Independent Safety Assessment (ISA)

Independent Safety Assessment & Certification

9,500+ km/year
Ultrasonic Rail Inspection

28,000+ km/year
Track Geometry Measurement

2000 + km total
Eddy Current

TCDD TEKNİK



U ŞARJ

Our Services

Energy

*Committed to a sustainable future, TCDD Teknik develops projects focused on energy efficiency and renewable energy generation. Our services include energy efficiency consulting, energy audits, environmental and greenhouse gas management system installation and certification, as well as ISO 50001 process consulting. Under the **"U-Şarj"** brand, we also install and operate electric vehicle charging stations. In addition, we provide comprehensive investment services for power generation facilities — covering sectoral analysis, licensing, supervision, and certification.*

RENEWABLE ENERGY

High efficiency solar power projects.

200 MW
SOLAR PROJECT

Planned for the first half of 2026.

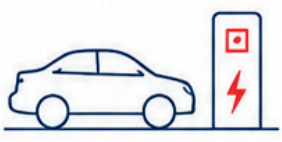


EV CHARGING INFRASTRUCTURE

Expanding electric mobility with reliable charging solutions.

150+
LOCATIONS

to be operational by the end of the year across Türkiye.



FUEL FACILITIES & REHABILITATION

Rehabilitation and operation of fuel facilities in line with national standards.

41
FACILITIES

- Modern infrastructure upgrade
- Improved safety and efficiency
- Continuous maintenance and compliance



ENERGY MANAGEMENT & OPERATIONS

Integrated operations and management to maximize performance and minimize cost.

- Operational excellence
- Preventive maintenance and monitoring
- Energy efficiency optimization
- Compliance with national and international standards



ENGINEERING WITHOUT BORDERS.

TAKING RAILWAY EXPERTISE **BEYOND TÜRKİYE.**

We deliver integrated engineering and consultancy solutions
for railway projects around the world.
With our technical expertise, advanced tools and experienced teams,
we add value to railway networks and communities across borders.

7 COUNTRIES
International Experience

700+ KM
Ultrasonic Inspection
in Zambia

4 SERVICE AREAS
Measurement • Engineering
Training • O&M

Shortlisted for tenders in 17 countries



OUR SERVICE AREAS

MEASUREMENT
Advanced measurement technologies for safe and efficient railway operations.

ENGINEERING
Design, analysis and engineering solutions for modern railway infrastructure.

TRAINING
Technical training and capacity building for sustainable knowledge and performance.

O&M
Operation and maintenance solutions for reliable and continuous railway services.



Global experience. Local impact.
Engineering the future, together.

TCDD TEKNİK

Thank You!



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