

Accreditation Scope

 Test TS EN ISO/IEC 17025 AB-0001-T	TSE DENEY LABORATUVARLARI MERKEZİ BAŞKANLIĞI Gebze Deney Laboratuvarları Accreditation Number: AB-0001-T Revision Number: 06 Date: 18 September 2009	
	Test Laboratory Address: Çayırova Tren İstasyonu Yanı 41410 KOCAELİ / TÜRKİYE Phone : 0 262 653 07 51 Fax : 0 262 653 08 06 E-Mail : ysm@kampus.tse.org.tr Website : www.tse.org.tr	

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
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MECHANICS LABORATORY

Metallic Materials	Rockwell Hardness Test 20 HRA-88 HRA 20 HRB-100 HRB 20 HRC-70 HRC 70 HR15N-94 HR15N 20 HR45N-77 HR45N 67 HR15T-93 HR15T 10 HR45T-72 HR45T	TS EN ISO 6508-1 EN ISO 6508-1 ISO 6508-1
	Vickers Hardness Test HV1 HV10 HV30	TS EN ISO 6507-1 EN ISO 6507-1 ISO 6507-1
	Tensile Test (Ambient Temperature) Max.1500 Kn	TS 138 EN 10002-1 EN 10002-1
	Charpy Impact Test (V- Notch) 300 J	TS EN 10045-1 EN 10045-1

NONDESTRUCTIVE TEST LABORATORY



-Metal and non-metal materials -Welding Seams -Welding Joints of Pressure Equipments -Pipes -Casting -Forging -Railway applications - Products acc. to 97/23/AT, 87/404/EEC and 99/36/AT scopes -Nuclear Energy Plants	Visual Testing	TS EN 970 EN 970 TS EN 12062 EN 12062 TS EN ISO 5817 EN ISO 5817 ISO 5817 TS EN 1370 EN 1370 TS EN 12454 EN 12454 TS EN 13018 EN 13018 TS EN 13981-1 EN 13981-1 TS EN 13674-1 EN 13674-1 KTA 3401.4 KTA 3401.3 KTA 3401.1
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
-Metal and non-metal materials -Welding Joints -Welding Seams -Welding Joints of Pressure Equipments -Pipes -Casting -Forging -Railway applications - Products acc. to 97/23/AT, 87/404/EEC and 99/36/AT scopes -Nuclear Energy Plants	Ultrasonic Testing	TS EN 1714 EN 1714 TS EN 12062 EN 12062 TS EN 1712 EN 1712 TS EN 10228-3 EN 10228-3 TS EN 12680-1 EN 12680-1 TS EN 10160 EN 10160 TS EN ISO 5817 EN ISO 5817 ISO 5817 TS 9911 ISO 5948 ISO 5948 TS EN 13261 EN 13261 TS EN 13262 EN 13262 TS EN 13981-4 EN 13981-4 TS EN 13981-2 EN 13981-2 TS EN 13674-1 EN 13674-1 KTA 3401.4 KTA 3401.3 KTA 3401.1

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 TÜRKAK  Test TS EN ISO/IEC 17025 AB-0001-T	TSE DENEY LABORATUVARLARI MERKEZİ BAŞKANLIĞI Gebze Denev Laboratuvarları Accreditation Number: AB-0001-T Revision Number: 06 Date: 18 September 2009
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
-Metal and non-metal materials -Welding Joints -Welding Seams -Welding Joints of Pressure Equipments -Pipes -Casting -Forging -Railway applications - Products acc. to 97/23/AT, 87/404/EEC and 99/36/AT scopes -Nuclear Energy Plants	Radiographic Testing	TS 5127 EN 1435 EN 1435 TS EN 12062 EN 12062 TS EN 12681 EN 12681 TS EN 444 EN 444 TS EN ISO 5817 EN ISO 5817 ISO 5817 TS EN 12517-1 EN 12517-1 TS EN 13981-3 EN 13981-3 KTA 3401.4 KTA 3401.3 KTA 3401.1 TS EN ISO 10042+AC EN ISO 10042 ISO 10042
-Ferromagnetic materials -Welding Seams -Welding Joints of Pressure Equipments -Pipes -Casting -Forging -Railway applications - Products acc. to 97/23/AT, 87/404/EEC and 99/36/AT scopes -Nuclear Energy Plants	Magnetic Particle Testing	TS EN ISO 9934-1 EN ISO 9934-1 ISO 9934-1 TS EN 12062 EN 12062 TS EN 1290 EN 1290 TS EN 1291 EN 1291 TS EN 1369 EN 1369 TS EN 10228-1 EN 10228-1 TS EN ISO 5817 EN ISO 5817 ISO 5817 TS EN 13261 EN 13261 TS ISO 6933 ISO 6933 TS EN 14200 EN 14200 KTA 3401.4 KTA 3401.3 KTA 3401.1

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
<ul style="list-style-type: none"> -Metal and non-metal materials -Welding Seams -Welding Joints of Pressure Equipments -Pipes -Casting -Forging -Railway applications - Products acc. to 97/23/AT, 87/404/EEC and 99/36/AT scopes -Nuclear Energy Plants 	Liquid Penetrant Testing	TS EN 571-1 EN 571-1 TS EN 12062 EN 12062 TS EN 10228-2 EN 10228-2 TS EN 1371-1 EN 1371-1 TS EN 1371-2 EN 1371-2 TS EN 1289 EN 1289 TS EN ISO 5817 EN ISO 5817 ISO 5817 TS EN 13981-4 EN 13981-4 KTA 3401.4 KTA 3401.3 KTA 3401.1

ELECTROTECHNICAL LABORATORY


PVC Insulated Cables	Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation -- Part 1: General requirements	TS 9756 HD 21.1 S4 HD 21.1 S4
	Electrical test methods for low voltage energy cables	TS EN 50395 EN 50395
	Non electrical test methods for low voltage energy cables	TS EN 50396 EN 50396
	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V part 3-Non-Sheathed cables for fixed wiring	TS 9758 HD 21.3 S3 HD 21.3 S3
	Polyinyl chloride insulated cables of rated voltages up to and including 450/750 V part 4-Sheathed cables for fixed wiring	TS 9759 HD 21.4 S2 HD 21.4 S2
	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 5: Flexible cables (cords)	TS 9760 HD 21.5 S3 HD 21.5 S3

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(PVC Insulated Cables Continued)	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V- Part 9: Single core non-Sheathed cables for installation at low temperatures	TS HD 21.9 S2 HD 21.9 S2
	Polyvinyl chloride insulated cables of rated voltages up to including 450/750 V- Part 11: Cables for luminaries	TS HD 21.11 S1 HD 21.11 S1
	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V- Part 12: Heat-Resistant Flexible cables (cords) <i>(Except Thermal Stability at 200 oC Test and Mechanical properties of completed cable Test)</i>	TS HD 21.12 S1 HD 21.12 S1
	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 13: Oil Resistant PVC sheathed cables with two or more conductors <i>(Except Measurement of the transfer impedance)</i>	TS HD 21.13 S1 HD 21.13 S1
	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V part 7: single core non-sheathed cables for internal wiring for a conductor temperature of 90°C <i>(Except Thermal Stability at 200 oC Test)</i>	TS HD 21.7 S2 HD 21.7 S1
	Flat polyvinyl chloride sheathed flexible cables	TS EN 50214 EN 50214
Rubber Insulated Cables	Cables of rated voltages up to and including 450/750 V and having cross-linked insulation - Part 1: General requirements	TS 9762 HD 22.1 S4 HD 22.1 S4
	Cables of rated voltages up to and including 450/750 V and having cross-linked insulation -- Part 3: Heat resistant silicone rubber insulated cables <i>(Except Solderability test)</i>	TS 9764 HD 22.3 S4 HD 22.3 S4

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Rubber Insulated Cables Continued)	Cables of rated voltages up to and including 450/750 V and having cross-linked insulation -- Part 4: Cords and flexible cables <i>(Except Solderability test, ageing in oxygen bomb, Ozone Resistance test, Wear resistance test, Resistance to heat of textile braid)</i>	TS 9765 HD 22.4 S4 HD 22.4 S4
	Rubber insulated cables of rated voltages up to and including 450/750 V Part 6: Arc welding cables	TS 9767 HD 22.6 S2 HD 22.6 S2
	Rubber insulated cables to rated voltages up to and including 450/750 V- Part 7: Cables with increased heat resistance for internal wiring for a conductor temperature of 110 C. <i>(Except ageing in air bomb)</i>	TS HD 22.7 S2 HD 22.7 S2
	Circular rubber insulated lift cables for normal use <i>(Except Solderability test, ageing in oxygen bomb, OzoneResistance test)</i>	TS 9766 HD 360 S2 HD 360 S2
Household And Similar Electrical Appliances	Household and similar electrical appliances - Safety - Part 1: General requirements	TS 2000 EN 60335-1 EN 60335-1 IEC 60335-1
	Household and similar electrical appliances - Safety Part 2-3: Particular requirements for electric irons <i>(Except cordless irons)</i>	TS 2002 EN 60335-2- 3 EN 60335-2-3 IEC 60335-2-3
	Household and similar electrical appliances - Safety - Part 2-5: Particular requirements for dishwashers	TS 11300 EN 60335-2-5 EN 60335-2-5 IEC 60335-2-5
	Household And Similar Electrical Appliances - Safety - Part 2-7: Particular Requirements For Washing Machines	TS 2004 EN 60335-2-7 EN 60335-2-7 IEC 60335-2-7
	Household and similar electrical appliances - Safety - Part 2.23: Particular requirements for appliances for skin or hair care <i>(Except sliding contact appliances)</i>	TS 374 EN 60335- 2- 23 EN 60335-2-23 IEC 60335-2-23

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Household And Similar Electrical Appliances Continued)	Safety of Household and similar electrical appliances -Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers <i>(Except appliances including flammable gas)</i>	TS 2225 EN 60335-2-24 EN 60335-2-24 IEC 60335-2-24
	Household and similar electrical appliance- Safety -Path 2-80: Particular requirements for fans	TS 433 EN 60335-2-80 EN 60335-2-80 IEC 60335-2-80
Luminaires	Luminaires - Part 1: General requirements and tests <i>(Except Annex P, UV radiation)</i>	TS EN 60598-1 EN 60598-1 IEC 60598-1
	Luminaires-Part 2: Particular Requirements-Section 1: Fixed General Purpose Luminaires	TS 8698 EN 60598-2-1 EN 60598-2-1 IEC 60598-2-1
	Luminaires - Part 2: Particular requirements - Section 2: Recessed luminaire	TS 8699 EN 60598-2-2 EN 60598-2-2 IEC 60598-2-2
	Luminaires - Part 2-3: Particular requirements - Luminaires for road and street lighting	TS 8700 EN 60598-2-3 EN 60598-2-3 IEC 60598-2-3
	Luminaires-Part 2:Particular requirements-Section 4:Portable General purpose Luminaires	TS 8701 EN 60598-2-4 EN 60598-2-4 IEC 60598-2-4
	Luminaires - Part 2-5: Particular requirements - Floodlights	TS 8702 EN 60598-2-5 EN 60598-2-5 IEC 60598-2-5
	Luminaires Part 2: Particular Requirements Section 6: Lumineires With Built-in Transformers For Flament Lamps	TS 8703 EN 60598-2-6 EN 60598-2-6 IEC 60598-2-6
	Luminaires-Part 2:Particular Requirements-Section 7: Specification for Partable Luminaires for Garden Use	TS 8704 EN 60598-2-7 EN 60598-2-7 IEC 60598-2-7
	Luminaires Part 2:Particular requirements Section 8:Handlamps	TS 44 EN 60598-2-8 EN 60598-2-8 IEC 60598-2-8
	Luminaires-Part 2: Particular requirements- Section 9- Photo and film Luminaires (Non-Professional)	TS 8705 EN 60598-2-9 EN 60598-2-9 IEC 60598-2-9

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Luminaires Continued)	Luminaires - Part 2-10: Particular requirements - Portable luminaires for children	TS EN 60598-2-10 EN 60598-2-10 IEC 60598-2-10
	Luminaires Part 2: Particular requirements section 17: Luminaires for stage lighting, television and fotografic studios (outdoor and indoor)	TS 8706 EN 60598-2-17 EN 60598-2-17 IEC 60598-2-17
	Luminaires - Part 2:Particular requirements - Section 23: Extra low-voltage lighting systems for filament lamps	TS EN 60598-2-23 EN 60598-2-23 IEC 60598-2-23
Lamp controlgear	Lamp controlgear - Part 2-8: Particular requirements for ballasts for fluorescent lamps (<i>Except Annex-B, Particular requirements for Thermal protected lamp controlgear</i>)	TS EN 61347-2-8 EN 61347-2-8 IEC 61347-2-8
	Lamp controlgear - Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps) (<i>Except Annex-B, Particular requirements for Thermal protected lamp controlgear</i>)	TS EN 61347-2-9 EN 61347-2-9 IEC 61347-2-9
Self-ballasted lamps	Self- Ballasted lamps for general lightning services- Performance requirements	TS EN 60969 EN 60969 IEC 60969
	Energy efficiency of electric lamps for household use- Measurement methods* (<i>*Only self-ballasted lamps</i>)	TS EN 50285 EN 50285 IEC 50285
Electricity meters	Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment (<i>Except Protection Against Solar Radiation, Shock Test, Test of Immunity to Electromagnetic RF Fields, Damped Oscillatory Waves Immunity Test</i>)	TS EN 62052-11 EN 62052-11 IEC 62052-11
	Particular requirements - Part 11: Electromechanical meters for active energy (classes 0.5, 1 and 2)	TS EN 62053-11 EN 62053-11 IEC 62053-11

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Electricity meters Continued)	Electricity metering equipment (a.c.) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2) (<i>Except Limits of Error Due to Influence Quantities, Electromagnetic RF Fields, Damped Oscillatory Waves Immunity</i>)	TS EN 62053-21 EN 62053-21 IEC 62053-21
	Electricity metering equipment (a.c.) - Particular requirements - Part 22: Static meters for active energy (Classes 0,2 S and 0,5 S) (<i>Except Limits of Error Due to Influence Quantities, Electromagnetic RF Fields, Damped Oscillatory Waves Immunity</i>)	TS EN 62053-22 EN 62053-22 IEC 62053-22
	Particular requirements - Part 23: Static meters for reactive energy (Classes 2 and 3) (<i>Except Limits of Error Due to Influence Quantities, Electromagnetic RF Fields, Damped Oscillatory Waves Immunity</i>)	TS EN 62053-23 EN 62053-23 IEC 62053-23
	Alternating current static watt-hour meters for active energy (classes 1 and 2) (<i>Except Clause 5.3.4 Protection Against Solar Radiation, Clause 5.2.2 Shock Test</i>)	TS EN 61036 EN 61036
	Alternating current static watt-hour meters for active energy (classes 0,2 and 0,5S) (<i>Except Clause 5.2.2 Shock Test</i>)	TS EN 60687 EN 60687
	Alternating current static var-hour meters for reactive energy (classes 2 and 3) (<i>Except Clause 5.3.4 Protection Against Solar Radiation, Clause 5.2.2 Shock Test</i>)	TS EN 61268 EN 61268
	Class 0,5; 1 and 2 Alternating-Current watt-hour meters	TS 461 EN 60521 EN 60521
	Var-Hour (Reactive Energy) Meters	TS 786 IEC 60145 IEC 60145
Electromagnetic compatibility Residential, Commercial And Light-Industrial Environments	Mains Terminal Disturbance Voltage (Frequency range 150kHz-30MHz)	TS EN 61000-6-3 EN 61000-6-3 IEC 61000-6-3

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Electromagnetic compatibility Residential, Commercial And Light-Industrial Environments Continued)	Disturbance Emission (The limit values which we can perform for this test are frequency range of 30MHz - 1GHz. Remark: Antenna distance is 3 m)	TS EN 61000-6-3 EN 61000-6-3 IEC 61000-6-3
	Electrostatic Discharge Immunity Test (Air Discharge: 2 - 16.6kV, Contact Discharge :1 - 8kV)	TS EN 61000-6-1 EN 61000-6-1 IEC 61000-6-1
	Radiated, Radio- Frequency, Electromagnetic Field Immunity Test (Remark:The limit values which we can perform for this test are frequency range of 80MHz - 1GHz and electric field severity of 1-3-10V/m)	TS EN 61000-6-1 EN 61000-6-1 IEC 61000-6-1
	Electrical Fast Transient/Burst Immunity Test (On Power Ports: 0.5 - 4kV, 2.5kHz - 5kHz On I/O Signal, Data and Control Ports: 0.25-2kV, 5kHz)	TS EN 61000-6-1 EN 61000-6-1 IEC 61000-6-1
	Surge Immunity Test (Voltage range 0.5kV - 4kV Open-Circuit Voltage Rising : 1.2/50µs, Short-Circuit Current Rising : 8/20µs)	TS EN 61000-6-1 EN 61000-6-1 IEC 61000-6-1
	Immunity To Conducted Disturbances, Induced By Radio-Frequency Fields (Frequency range 150kHz-80MHz at levels 1, 3, 10 V)	TS EN 61000-6-1 EN 61000-6-1 IEC 61000-6-1
	Power Frequency Magnetic Field Immunity Test (at levels 1, 3, 10, 30, 100 A/m)	TS EN 61000-6-1 EN 61000-6-1 IEC 61000-6-1
Electromagnetic Compatibility - Industrial Environments	Mains Terminal Disturbance Voltage (Frequency range 150kHz-30MHz)	TS EN 61000-6-4 EN 61000-6-4 IEC 61000-6-4

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Electromagnetic Compatibility - Industrial Environments Continued)	Disturbance Emission (The limit values which we can perform for this test are frequency range of 30MHz - 1GHz. Remark:Antenna distance is 3 m.)	TS EN 61000-6-4 EN 61000-6-4 IEC 61000-6-4
	Electrostatic Discharge Immunity Test (Air Discharge: 2 - 16.6kV, Contact Discharge : 1 - 8kV)	TS EN 61000-6-2 EN 61000-6-2 IEC 61000-6-2
	Radiated, Radio- Frequency, Electromagnetic Field Immunity Test (Remark:The limit values which we can perform for this test are frequency range of 80MHz - 1GHz and electric field severity of 1-3-10V/m)	TS EN 61000-6-2 EN 61000-6-2 IEC 61000-6-2
	Electrical Fast Transient/Burst Immunity Test (On Power Ports: 0.5 - 4kV, 2.5kHz - 5kHz On I/O Signal,Data and Control Ports: 0.25-2kV, 5kHz)	TS EN 61000-6-2 EN 61000-6-2 IEC 61000-6-2
	Surge Immunity Test (Voltage range 0.5kV - 4kV Open-Circuit Voltage Rising : 1.2/50µs, Short-Circuit Current Rising : 8/20µs)	TS EN 61000-6-2 EN 61000-6-2 IEC 61000-6-2
	Immunity To Conducted Disturbances, Induced By Radio-Frequency Fields (Frequency range 150kHz-230MHz at levels 1, 3, 10 V)	TS EN 61000-6-2 EN 61000-6-2 IEC 61000-6-2
	Power Frequency Magnetic Field Immunity Test (at levels 1, 3, 10, 30, 100 A/m)	TS EN 61000-6-2 EN 61000-6-2 IEC 61000-6-2
Electromagnetic Compatibility - Household Appliances, Electric Tools And Similar Apparatus	Mains Terminal Disturbance Voltage (Frequency range 150kHz-30MHz)	TS EN 55014-1 EN 55014-1 CISPR 14-1
	Mains Terminal Disturbance Power (Frequency range 30MHz - 300MHz)	TS EN 55014-1 EN 55014-1 CISPR 14-1

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Electromagnetic Compatibility - Household Appliances, Electric Tools And Similar Apparatus Continued)	Discontinuous Interference (150kHz, 500kHz, 1,4MHz, 30MHz)	TS EN 55014-1 EN 55014-1 CISPR 14-1
	Disturbance Emission <i>(Remark: The limit values which we can perform for this test are frequency range of 30MHz - 1GHz Antenna distance is 3 m.)</i>	TS EN 55014-1 EN 55014-1 CISPR 14-1
	Electrostatic Discharge Immunity Test (Air Discharge: 2 - 16.6 kV, Contact Discharge: 1-8 kV)	TS EN 55014-2 EN 55014-2 CISPR 14-2
	Radiated, Radio- Frequency, Electromagnetic Field Immunity Test <i>(Remark: The limit values which we can perform for this test are frequency range of 80MHz - 1GHz and electric field severity of 1-3-10V/m)</i>	TS EN 55014-2 EN 55014-2 CISPR 14-2
	Electrical Fast Transient/Burst Immunity Test (On Power Ports: 0.5-4kV, 2.5kHz -5kHz On I/O Signal, Data and Control Ports: 0.25-2 kV, 5 kHz)	TS EN 55014-2 EN 55014-2 CISPR 14-2
	Surge Immunity Test (Voltage Range 0.5 - 4kV; Open-Circuit Voltage Rising: 1.2/50 µs, Short-Circuit Current Rising: 8/20 µs)	TS EN 55014-2 EN 55014-2 CISPR 14-2
	Immunity To Conducted Disturbances, Induced By Radio-Frequency Fields (Frequency range 150kHz - 230MHz at levels 1, 3, 10 V)	TS EN 55014-2 EN 55014-2 CISPR 14-2
	Voltage Dips, Short Interruptions And Voltage Variations Immunity Tests (Between levels %0.UT - %100.UT ; time periods 0.05 - 9999ms)	TS EN 55014-2 EN 55014-2 CISPR 14-2

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Electromagnetic Compatibility - Information Technology Equipments	Mains Terminal Disturbance Voltage (Frequency range 150kHz-30MHz)	TS EN 55022 EN 55022 CISPR 22
	Disturbance Emission (The limit values which we can perform for this test are frequency range of 30MHz - 1GHz Remark:Antenna distance is 3 m.)	TS EN 55022 EN 55022 CISPR 22
	Electrostatic Discharge Immunity Test (Air Discharge: 2 - 16.6kV, Contact Discharge :1 - 8kV)	TS EN 55024 EN 55024 CISPR 24
	Radiated, Radio- Frequency, Electromagnetic Field Immunity Test (Remark:The limit values which we can perform for this test are frequency range of 80MHz - 1GHz and electric field severity of 1-3-10V/m)	TS EN 55024 EN 55024 CISPR 24
	Electrical Fast Transient/Burst Immunity Test (On Power Ports: 0.5-4kV, 2.5kHz -5kHz On I/O Signal,Data and Control Ports: 0.25-2kV, 5kHz)	TS EN 55024 EN 55024 CISPR 24
	Surge Immunity Test (Voltage Range 0.5 - 4kV; Open-Circuit Voltage Rising: 1.2/50 µs, Short-Circuit Current Rising: 8/20 µs)	TS EN 55024 EN 55024 CISPR 24
	Immunity To Conducted Disturbances, Induced By Radio-Frequency Fields (Frequency Range 150kHz - 230MHz at levels 1, 3, 10 V)	TS EN 55024 EN 55024 CISPR 24
	Power Frequency Magnetic Field Immunity Test (at levels 1, 3, 10, 30, 100 A/m)	TS EN 55024 EN 55024 CISPR 24

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Electromagnetic Compatibility - Information Technology Equipments Continued)	Voltage Dips, Short Interruptions And Voltage Variations Immunity Tests (Between levels % 0. UT - % 100. UT; time periods 0.05 - 9999 ms)	TS EN 55024 EN 55024 CISPR 24
Electromagnetic Compatibility - Industrial, Scientific And Medical (ISM) Radio-Frequency Equipment	Mains Terminal Disturbance Voltage (150kHz - 30MHz Frequency Range)	TS EN 55011 EN 55011 CISPR 11
	Disturbance Emission (The limit values which we can perform for this test are frequency range of 30 MHz - 1 GHz Remark:Antenna distance is 3 m.)	TS EN 55011 EN 55011 CISPR 11
Electromagnetic Compatibility - Sound And Television Broadcast Receivers And Associated Equipment	Mains Terminal Disturbance Voltage (150kHz - 30MHz)	TS EN 55013 EN 55013 CISPR 13
	Antenna Mains Terminal Disturbance Voltage (30MHz-1GHz)	TS EN 55013 EN 55013 CISPR 13
	Disturbance Emission (The limit values which we can perform for this test are frequency range of 30MHz - 1GHz. Remark:Antenna distance is 3 m.)	TS EN 55013 EN 55013 CISPR 13
Electromagnetic Compatibility - Electrical Ligthing And Similar Equipment	Mains Terminal Disturbance Voltage (9kHz - 30MHz)	TS EN 55015 EN 55015 CISPR 15
	Magnetic Field Disturbance Emission (9kHz - 30MHz)	TS EN 55015 EN 55015 CISPR 15
Electromagnetic Compatibility - Equipment With Rated Current Current up to 16 A Per Phase	Harmonics (Between harmonics 2-40.)	TS EN 61000-3-2 EN 61000-3-2 IEC 61000-3-2
	Voltage Changes, Fluctuations And Flicker (transient and prolonged)	TS EN 61000-3-3 EN 61000-3-3 IEC 61000-3-3
Electromagnetic Compatibility - Electrical And Electronic Equipment Subjected To Static Electricity Discharges, From Operators Directly, And To Adjacent Objects	Electrostatic Discharge Immunity Test (Air Discharge: 2 - 16.6kV, Contact Discharge :1 - 8kV)	TS EN 61000-4-2 EN 61000-4-2 IEC 61000-4-2

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Electromagnetic Compatibility - Electrical And Electronic Equipment Subjected To Radio-Frequency, Electromagnetic Field	Radiated, Radio- Frequency, Electromagnetic Field Immunity Test <i>(Remark: The limit values which we can perform for this test are frequency range of 80MHz - 1GHz and electric field severity of 1-3-10V/m)</i>	TS EN 61000-4-3 EN 61000-4-3 IEC 61000-4-3
Electromagnetic Compatibility - Electrical And Electronic Equipment Subjected To Electrical Fast Transient/Burst	Electrical Fast Transient/Burst Immunity Test (On Power Ports: 0.5-4kV, 2.5kHz -5kHz On I/O Signal, Data and Control Ports: 0.25-2kV, 5kHz)	TS EN 61000-4-4 EN 61000-4-4 IEC 61000-4-4
Electromagnetic Compatibility - Electrical And Electronic Equipment Subjected To unidirectional surges caused by over voltages from switching and lightning transients	Surge Immunity Test (Voltage Range 0.5 - 4kV Open-Circuit Voltage Rising: 1.2/50µs, Short-Circuit Current Rising: 8/20µs)	TS EN 61000-4-5 EN 61000-4-5 IEC 61000-4-5
Electrical And Electronic Equipment Subjected To Conducted Disturbances, Induced By Radio-Frequency Fields From 9 kHz to 80 MHz	Immunity To Conducted Disturbances, Induced By Radio-Frequency Fields (Frequency Range 150kHz - 230MHz at levels 1, 3, 10 V)	TS EN 61000-4-6 EN 61000-4-6 IEC 61000-4-6
Electromagnetic Compatibility - Electrical And Electronic Equipment Subjected To Power Frequency Magnetic Field (permanent and transient)	Power Frequency Magnetic Field Immunity Test (at levels 1, 3, 10, 30, 100 A/m)	TS EN 61000-4-8 EN 61000-4-8 IEC 61000-4-8
Electromagnetic Compatibility - Electrical And Electronic Equipment Subjected To Pulse Magnetic Disturbances	Pulse Magnetic Field Immunity Test (at levels 100 - 300 - 1000 A/m , 6.4/16µs ± %30)	TS EN 61000-4-9 EN 61000-4-9 IEC 61000-4-9
Electromagnetic Compatibility - Electrical And Electronic Equipment Connected To Low Voltage Power Supply	Voltage Dips, Short Interruptions And Voltage Variations Immunity Tests (Between levels %0.UT - %100.UT; time periods 0.05 - 9999ms)	TS EN 61000-4-11 EN 61000-4-11 IEC 61000-4-11
Electromagnetic Compatibility - Sound And Television Broadcast Receivers And Associated Equipment	Screening Effectiveness (S4) (0-1GHz)	TS EN 55020

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Electrical and electronic equipment or other articles for use and storage under conditions of high humidity when combined with cyclic temperature changes and, in general, producing condensation on the surface of the specimen	Damp Heat, Cyclic (12+12-hour cycle) (Db) (Temp.:+10 oC ~ +90 oC, Hum.: 10% - 98% rH, Load: 150kg max, 30 kg/shelf)	TS EN 60068-2-30 EN 60068-2-30 IEC 60068-2-30
Electrical and electronic equipment or other articles for use and storage under conditions of high relative humidity	Damp Heat, Steady State (Ca) (Temp.:+10 oC ~ +90 oC, Hum.: 10% - 98% rH, Load: 150kg max, 30 kg/shelf)	TS EN 60068-2-78 EN 60068-2-78 IEC 60068-2-78
Electrical and electronic equipment or other articles to withstand under sinusoidal vibration	Vibration, Sinusoidal (Fc) (Freq. Range: 2-1000Hz, Max. Acc.: 14,5g (with Table), 87g (without Table). Max. Disp.: 18mm-pp. Load: 200kg max)	TS 2090 EN 60068-2-6 EN 60068-2-6 IEC 60068-2-6
Electrical and electronic equipment or other articles for use and storage under conditions of low temperature	Cold (Ab) (Temp.: up to -50 oC, Load: 200kg max.)	TS EN 60068-2-1 EN 60068-2-1 IEC 60068-2-1
Electrical and electronic equipment or other articles for use and storage under conditions of high temperature	Dry Heat; Test (Bb) (Temp.: 5 oC ~ 220 oC, Load: 30 kg/shelf, 100kg max.)	TS EN 60068-2-2 EN 60068-2-2 IEC 60068-2-2
Telephones used in public telephone switched Networks	Sending Sensitivity/Freq. response (100 - 8000Hz)	TS 12628 EN 300001 TBR 38
	Receiving Sensitivity/Freq. response (100 - 8000Hz)	TS 12628 EN 300001 TBR 38
	Sending Loudness Rates	TS 12628 EN 300001 TBR 38
	Receiving Loudness Rates	TS 12628 EN 300001 TBR 38
	Side Tone Masking Ratio	TS 12628 EN 300001 TBR 38

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Telephones used in public telephone switched Networks Continued)	Sending Total Harmonic Distortion	TS 12628 EN 300001 TBR 38
	Receiving Total Harmonic Distortion	TS 12628 EN 300001 TBR 38
	Side Tone Total Harmonic Distortion	TS 12628 EN 300001 TBR 38
	Sending Power Handling	TS 12628 EN 300001 TBR 38
	Receiving Power Handling	TS 12628 EN 300001 TBR 38
	Sending Linearity	TS 12628 EN 300001 TBR 38
	Receiving Linearity	TS 12628 EN 300001 TBR 38
	Sending Noise	TS 12628 EN 300001 TBR 38
	Receiving Noise	TS 12628 EN 300001 TBR 38
	Echo Return Loss	TS 12628 EN 300001 TBR 38
	Instability	TS 12628 EN 300001 TBR 38
	Maximum signal	TS 12628 EN 300001 TBR 38
	Acoustic Shock	TS 12628 EN 300001 TBR 38
	Outband Signalling (sending)	TS 12628 EN 300001 TBR 38

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 TÜRKAK <small>Test</small> <small>TS EN ISO/IEC 17025</small> <small>AB-0001-T</small>	<p>TSE</p> <p>DENEY LABORATUVARLARI MERKEZİ BAŞKANLIĞI</p> <p>Gebze Denev Laboratuvarları</p> <p>Accreditation Number: AB-0001-T</p> <p>Revision Number: 06 Date: 18 September 2009</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Telephones used in public telephone switched Networks Continued)	Outband Signalling (receiving)	TS 12628 EN 300001 TBR 38
	Impedance at Ringing (off-hook)	TS 12628 EN 300001 TBR 38
	DP On/Off Rate	TS 12628 EN 300001 TBR 38
	DP Time Between Keying	TS 12628 EN 300001 TBR 38
	DP Pulse Sending Rate	TS 12628 EN 300001 TBR 38
	DP Redial Memory	TS 12628 EN 300001 TBR 38
	DTMF Frequency Deviation	TS 12628 EN 300001 TBR 38
	DTMF Output Levels	TS 12628 EN 300001 TBR 38
	DTMF Tone Sending and Time Between Keying	TS 12628
	DTMF Tracing (min: -36dBPa)	TS 12628
	DTMF Redial Memory	TS 12628
	Ring Operating range (20-50Hz, 40-105V)	TS 12628
	Endurance to Ringing Signals	TS 12628

CHEMISTRY LABORATORY


Ceramic tiles	Determination of dimensions and surface quality	TS EN ISO 10545-2 EN ISO 10545-2 ISO 10545-2
	Determination of water absorption apparent porosity, apparent relative density and bulk density	TS EN ISO 10545-3 EN ISO 10545-3 ISO 10545-3

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 <p style="text-align: center; font-size: small;">Test TS EN ISO/IEC 17025 AB-0001-T</p>	<p>TSE DENEY LABORATUVARLARI MERKEZİ BAŞKANLIĞI Gebze DeneY Laboratuvarları</p> <p style="text-align: center;">Accreditation Number: AB-0001-T Revision Number: 06 Date: 18 September 2009</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Ceramic tiles Continued)	Determination of modulus of rupture and breaking strength (Tile dimension : ≥95mm Stick diameter (d): 20mm Rubber thickness (t): 5±1 mm Overspill of tile from edge basis (/):10 mm)	TS EN ISO 10545-4 EN ISO 10545-4 ISO 10545-4
	Determination of crazing resistance for glazed tiles	TS EN ISO 10545-11 EN ISO 10545-11 ISO 10545-11
Liquid chemical products for industrial use	Determination of density at 20 °C	TS 781 ISO 758 ISO 758
Petroleum and non-petroleum product mixtures which has Reid vapour pressure under 100kPa under normal conditions	Laboratory determination of density or relative density-Hydrometer method	TS 1013 EN ISO 3675 EN ISO 3675 ISO 3675
Burning liquids, liquids which contain suspended solid materials, lubricants, liquids which are tended to make tension film under experimental conditions, liquids like these	Pensky-Martens closed cup method	TS EN ISO 2719 EN ISO 2719 ISO 2719
Petroleum products	Determination of distillation characteristics at atmospheric pressure (with automatic device)	TS 1232 EN ISO 3405 EN ISO 3405 ISO 3405
Thermoplastic pipes	Thermoplastics pipes - Longitudinal reversion - Test method and parameters (Method B)	TS EN ISO 2505 EN ISO 2505 ISO 2505
Thermoplastic materials	Plastics - Determination of the melt mass - Flow rate (MFR) and the melt volume - Flow rate (MVR) of thermoplastics (Method A)	TS EN ISO 1133 EN ISO 1133 ISO 1133
Vulcanized Rubber Materials	Rubber, vulcanized; determination of density (Method A)	TS 2827 ISO 2781 ISO 2781
Unleaded gasoline Diesel Lubricants	Corrosiveness to copper strip test	TS 2741 EN ISO 2160 EN ISO 2160 ISO 2160
	Determination of kinematic viscosity	TS 1451 EN ISO 3104 EN ISO 3104 ISO 3104

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Unleaded gasoline Diesel	Determination of total sulfur content of automotive fuels	TS EN ISO 20846 EN ISO 20846 ISO 20846
Diesel	Determination of cold filter plugging point	TS EN 116 TS EN 116 A/C EN 116 EN 116 A/C
	Calculation of cetane index of middle- distillate fuels by the four-variable equation	TS EN ISO 4264 EN ISO 4264 ISO 4264
	Determination of the oxidation stability	TS EN ISO 12205 EN ISO 12205 ISO 12205
Diesel Lubricants	Petroleum products - Determination of ash	TS EN ISO 6245 EN ISO 6245 ISO 6245
Unleaded gasoline	Gum content of light and middle distillate fuels	TS EN ISO 6246 EN ISO 6246 ISO 6246
	Determination of air saturated vapour pressure (ASVP)	TS EN 13016-1 EN 13016-1
	Determination of low lead concentration	TS EN 237 EN 237
Petroleum Products	Determination of density - Oscillating U- tube method	TS EN ISO 12185 EN ISO 12185 ISO 12185

CONSTRUCTION MATERIALS LABORATORY

Wood-Based Panels	Determination Of Moisture Content	TS EN 322 EN 322
	Determination Of Density	TS EN 323 EN 323
	Determination of Modulus of Elasticity In Bending And of Bending Strength (Max. 5000 N)	TS EN 310 EN 310
	Particleboards - Surface Soundness of Particleboards - Test Method (Max. 5000 N)	TS EN 311 EN 311
Particleboards And Fibreboards	Determination of Swelling In Thickness After Immersion In Water	TS EN 317 EN 317

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
(Particleboards And Fibreboards Continued)	Determination of Tensile Strength Perpendicular to The Plane of The Board (Max. 5000 N)	TS EN 319 EN 319
Wood-Based Panels	Determination of Dimensions of Boards - Part 1: Determination of Thicknes, Width And Length	TS EN 324-1 EN 324-1

End of Scope

Atakan BAŞTÜRK
Secretary General