

	KIT for Engineering Innovation Training Programs	Address: 8 Riyad Shams - 8th area - Nasr city Website: www.kit.egy.com Phone: 01012000780 – 01012000760 Email: info@kit-egy.com
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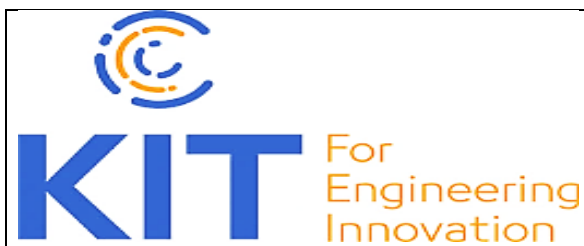
Course Title	Eddy Current Testing (ET) level 1
Product Sector	C: Castings, T: Tubes, incl. fl at products for the manufacture of welded tubes and tubes, W: Welded Products , F: Forgings, WP: Rolled Products
Category	DIN EN ISO 9712 Non-Destructive Testing (NDT)
Course Number	KIT-ISO 257
Duration	5 Days
Certificate	Expert for Personnel of non-destructive testing according to DIN EN ISO 9712:2022-09 with TUV Rheinland Certified Qualification
Exams Elements	1- General Exam: 40 Questions (MCQ) 2- Specific Exam 2.1-Multi sectors 30 Questions (MCQ) 2.2-One Sector 20 Questions (MCQ) 3- Practical Exam: Shall passed for at least 2 specimens & reporting 4- Procedure Exam

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Day 1	Day 2	Day 3	Day 4	Day 5
Welcome, organization, instruction, qualification and certification according to DIN EN ISO 9712	Knowledge test 1 followed by ,Discussion (discussion) Repetition of the previous day	Knowledge test 2 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 3 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 4 followed by a knowledge test Discussion (discussion), Repetition of the previous day
Electricity Voltage, Current and Resistance Ohm's Law	Magnetism B-H Curve Permeability	Generation of Eddy Currents Standard Depth of Penetration	Impedance Plane – Surface Inspection Conductivity Curve	ECT Instrumentation Impedance Displays Strip Charts Absolute and Differential Modes Portable Surface Inspection Equipment
Electricity Inductance Impedance	Electromagnetism Faraday's Law Lenz's Law	Generation of Eddy Currents Effect of frequency, conductivity and Permeability	Impedance Plane – Surface Inspection Lift Off Curve	Eddy Current Probes Surface Probes Encircling Probes Tubing Probes
Magnetism Magnetism	Electromagnetism Mutual Inductance	Impedance Plane – Surface Inspection Conductivity Curve	Impedance Plane – Surface Inspection Permeability	Surface Inspection and Applications Probe Selection Frequency Selection Setting the Display Edge Effect
Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test

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Course Title	Eddy Current Testing (ET) level 2
Product Sector	C: Castings, T: Tubes, incl. fl at products for the manufacture of welded tubes and tubes, W: Welded Products , F: Forgings, WP: Rolled Products
Category	DIN EN ISO 9712 Non-Destructive Testing (NDT)
Course Number	KIT-ISO 258
Duration	6 Days
Certificate	Expert for Personnel of non-destructive testing according to DIN EN ISO 9712:2022-09 with TUV Rheinland Certified Qualification
Exams Elements	1- General Exam: 40 Questions (MCQ) 2- Specific Exam 2.1-Multi sectors 30 Questions (MCQ) 2.2-One Sector 20 Questions (MCQ) 3- Practical Exam: Shall passed for at least 2 specimens & reporting 4- Procedure Exam



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Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Knowledge test 5 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 6 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 7 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 8 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 9 followed by a knowledge test Discussion (discussion), Repetition of the previous day	Knowledge test 10 followed by a knowledge test Discussion (discussion), Repetition of the previous day
Eddy current theory (1) Generation of eddy currents by means of an AC field (2) Effect of fields created by eddy currents (impedance changes)	Properties of eddy current (a) Travel in circular direction (b) Strongest on surface of test material	Have properties of compressible fluids	Effective permeability variations when induced in magnetic materials	Flux leakage theory Terminology and units	Principles of magnetization Magnetic field
Effect of change of impedance on instrumentation	Zero value at center of solid conductor placed in an alternating magnetic field	Small magnitude of current flow	Effect of discontinuity orientation	Principles of magnetization) B-H curve	Magnetization - electromagnetism theory Oersted's law
Conductivity Curve, Lift Off Curve, Permeability	Strength, time relationship, and orientation as functions of test-system parameters and test-part characteristics	Relationship of frequency and plane with current in coil	Magnetization - electromagnetism theory Faraday's law	Principles of magnetization (b) Magnetic properties	Magnetization - electromagnetism theory Electromagnetics
Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test	Eddy Current Presentation of test equipment, test equipment and execution of the test	Eddy Current Presentation of test equipment, test equipment and execution of the test	Eddy Current Presentation of test equipment and execution of the test