



Istanbul
GEDİK University

WELDING TRAINING PROGRAM

SUBMERGED WELDING



Contact Information

Ankara Caddesi No: 306 Şeyhli 34906 Pendik - Istanbul / TURKEY

P. +90 216 378 50 00 • M. +90 535 018 72 96

www.gedik.edu.tr • weldingtraining@gedik.com.tr



Joining. For life.



WELDING TRAINING PROGRAM SUBMERGED WELDING

INTRODUCTION

This program aims to provide theoretical education and practical training of the Manuel Metal Arc (MMA) welding process (MODULE 1) with Five Days Program organised by the Istanbul Gedik University, Turkey. Istanbul Gedik University works together with Gedik Welding Company who is one of the leading welding consumable producer in the world since 1963. Under this program all major arc welding processes are covered as following;

MODULE 1: MMA Process, MODULE 2: MIG / MAG, MODULE 3: FLUX CORED WIRE (FCW), MODULE 4: SUBMERGED ARC WELDING (SAW)

Manuel Metal Arc (MMA) welding process is still one of the most commonly used welding process for fabrication and repair of many major applications. This program will cover fundamentals of the MMA, its power sources, principles and international standards of MMA process, equipment and its commonly used parameters and their selection criteria by the welders.

Courses are designed for the participation of 20 Persons each day/6 hours (Total of 300 hours) to be trained using 7 welding machines/cells and steel plates prepared in cutted pieces ready to use 125mm x 75mm x 4.0mm sizes for all position weldings.

WHO SHOULD ATTEND

This course is designed to provide needed education and practical training for the persons to be a skilled welder and also provide new information for the welders to upgrade their skills for welding with Rutile, Basic and Cellulosic electrodes for all welding positions in Butt and Fillet welding configurations of the structural steels. Companies working with welding processes can send their workers for their qualification as certified welder. Furthermore, governmental offices can open a course together with the Istanbul Gedik University to qualify the workers with technical skill, improve their employment chances and also provide needed skilled workers for their national, regional industries and projects.

CERTIFICATE

After successful completion of the Five Days Program, course participants will receive "GEDİK WELDING CERTIFICATE FOR MMA WELDERS"

DURATION

Five days with working six hours/day.

Day 1: Theoretical Education,

Day 2: Practical Training with Rutile Electrodes (Butt and Fillet weldings, PB, PG and PA Positions),

Day 3: Practical Training with Rutile Electrodes (Butt Welding, PG, PC and PF Positions),

Day 4: Practical Training with Basic Electrodes (Fillet and Butt Weldings, PA, PB, PC, PD, PE and PF Positions),

Day 5: Practical Training with Cellulosic Electrodes of pipe welds (Optional)

COURSE FEE

The program costs 1750 - USD / per participant for 5 days, provided 20 people are registered. This fee includes the costs of the course documents and certificates.

The lunch and coffee / tea will be sponsored by the local partner institution / company.

WORKSHOP

This course will be conducted in a partnership with the local partner institution / company who will provide workshop to accomodate maximum 20-25 people to conduct theoretical education and practical welding training. The workshop should have adequate structure and equipment as well as it should satisfy the health and safety requirements. The workshop should have minimum of seven welding cells with seven welding machines, as shown in this program.

The layout and detailed technical plan of the workshop can be provided by the Istanbul Gedik University, if needs to be newly built. The seven pieces of MMA welding In short; Welding Workshop, minimum of seven Welding Machines and test materials (about 800 pieces of cutted steel plates of 4.0 mm thickness with given sizes) should be provided by the host / partner organisation in respective country. The welding electrodes of all three types will be sponsored by the Gedik Welding.

DAY 1 / Theoretical Education

- SAW process principles and arc characteristics
- Power source characteristics applicable to SAW (open circuit voltage, static and dynamic charac., types of current,)
- Equipment and accessories
- Process application range, typical problems and how to solve them
- Consumables (functions of the flux and wire -solid or flux cored-, types of flux and wire, wire-flux combination, slag-metal and gas-metal reactions).
- Handling and storage of consumables (storage environment, re-drying)
- Welding parameters: current, voltage, travel speed, type of flux and particle size, stick-out, etc
- Relationship between the wire-flux combination and the characteristics of deposited material
- Single-wire and multi -wire techniques

6 Hours

DAY 2 / Practical Wire Electrode Fillet Welding

- PA Position

6 Hours





DAY 3 / Practical Wire Electrode Butt Welding

- PB Position
- PA Position

6 Hours

NOTES:

Material Thickness:15 mm

Traniess: Max 6 Person

Welding Machines: 1

Material size and quantity: 1250*150*15 mm: 60 pieces





 **Gedik Welding**



Ankara Cad. No: 306
Şeyhli 34906
İstanbul / Turkey
T +90 216 378 50 00
F +90 216 378 20 44
www.gedikwelding.com

 **Gedik Casting and Valve**



Ankara Caddesi No: 306
Şeyhli 34906
İstanbul / Turkey
T +90 216 307 12 62
F +90 216 307 28 68-69
Factory
Sakarya 2.OSB 11 No'lu Yol
No: 6 54300 Hendek Sakarya/
Türkiye
T +90 264 290 12 00
F +90 264 290 12 21
www.gedikcastingandvalve.com

 **Gedik Education Foundation**



Ankara Caddesi No: 306
C Blok Şeyhli 34906
İstanbul / Turkey
T +90 216 378 50 00
F +90 216 378 20 44
www.gedikegitimvakfi.org.tr

 **Gedik Test Center**



Ankara Cad. No: 306
Şeyhli 34906
İstanbul / Turkey
T +90 216 378 79 41
F +90 216 378 20 44
www.gediktest.com

 **İstanbul GEDİK University**



Cumhuriyet Mahallesi,
İlkbahar Sk. No: 1-3-5
34876 Yakacık / Kartal
İstanbul/ Turkey
T +90 216 452 45 85
444 5 438
F +90 216 452 87 17
www.gedik.edu.tr



İstanbul
GEDİK University

Cumhuriyet Mahallesi İlbahar Sokak No: 1-3-5 Yakacık 34876 Kartal / İstanbul
P. +90 216 378 50 00 • M. +90 535 018 72 96
www.gedik.edu.tr • weldingtraining@gedik.com.tr
