ROBOTICS WELDING TRAINING

SOLDAMATIC®
ROBOTIC TRAINING
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01.
Worldwide growing trends

INDUSTRY 4.0 IS ACCELERATING AUTOMATION:
Automated tasks in factories are expected to grow from 5% to 8% by 2028. Collaboration between people and machines requires increased skills for operators.

GLOBAL SHORTAGE OF WELDERS:
Global demand for welders is increasing by 8% globally.
Existing welders are retiring.

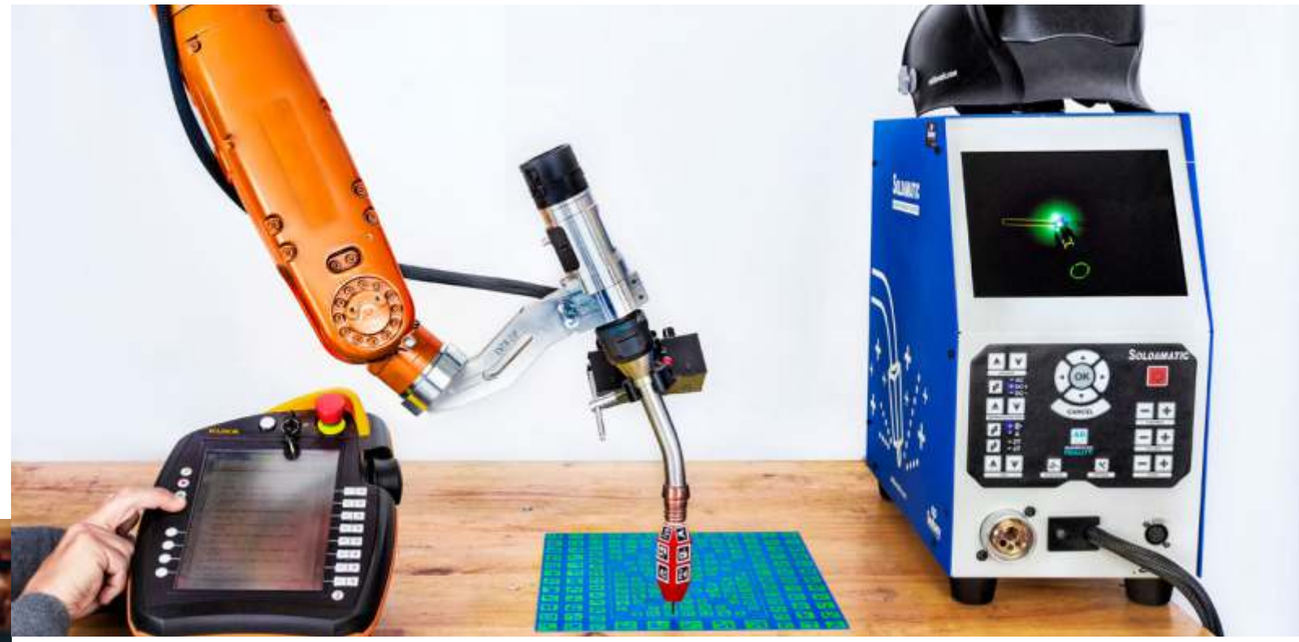
attract young **people**.

ROBOTICS ARE THE BACKBONE OF AUTOMATION:
Since 2009, the number of **manufacturing robots** has more than doubled.
Manufacturing Industrial Robots are expected to grow by **80% by 2026.**

ACCELERATION OF ROBOTICS WILL UNLOCK THE PRODUCTIVITY

ROBOTICS WELDING TRAINING IS THE OPPORTUNITY

02.
Robotic Welding Training



SOLDAMATIC®
ROBOTIC TRAINING

First-of-its-kind working with Augmented Reality and real components such as the robot and the Teach Pendant, and supported by a robotics welding curricula

FIRST OF ITS KIND WORKING WITH AUGMENTED REALITY

REAL COMPONENTS

SUPPORTED BY A ROBOTICS WELDING CURRICULA

02.

Robotics Welding Training

SOLDAMATIC®
ROBOTIC TRAINING
TESCA™

INNOVATE

State-of-the-art AR technology.

HyperReal·SIM

The most realistic training experience aside from actual welding.

SCALABLE

ADAPTABLE TO ANY EDUCATIONAL INSTITUTION

WELDING JOINTS FOR DIFFERENT LEVELS FLEXIBLE CURRICULUM

REAL TIME INTERACTION
Shared visibility of practices between trainer & students.

COMPREHENSIVE

PROVEN CURRICULUM WITH HUNDREDS OF BUILT-IN PRACTICES

ON-PREMISE & REMOTE ACCESS
Transparent and consistent experience. Access anytime, from anywhere.

SOLDAMATIC COULD INTEGRATE WITH ANY ROBOT IN THE MARKET
On demand.

03.
How it works

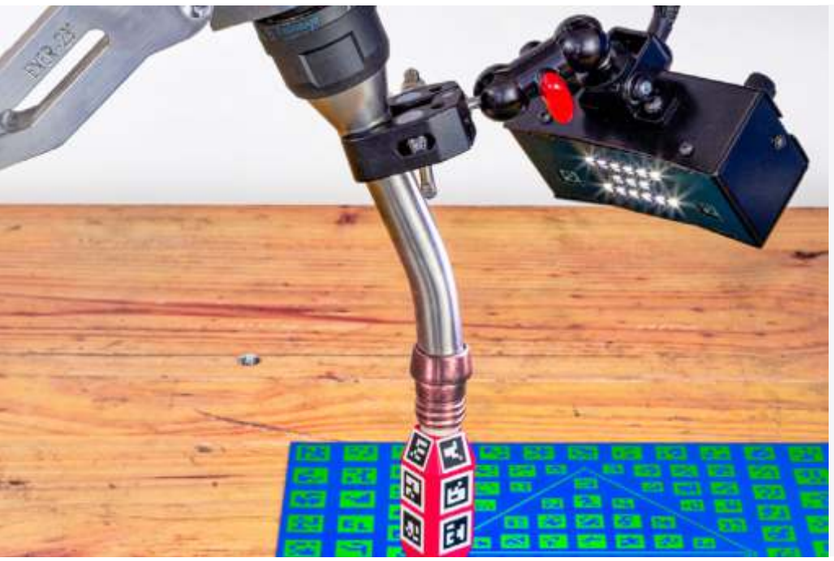
HARDWARE

SOLDAMATIC®
AUGMENTED TRAINING FOR WELDING BY SEABERY

SOLDAMATIC WELDING SIMULATOR

ROBOTICS WELDING TORCH OR VISION MODULE

EDUCATION WELDING JOINTS



WELDING JOINTS

Wide range of joints for robot welding.

03.
How it works

GMAW (MIG/MAG) WELDING PROCESS

CARBON STEEL WELDING MATERIAL

3, 6 & 10 MM THICKNESSES

TRAIN THE TRAINER SUPPORT

TECHNICAL SUPPORT

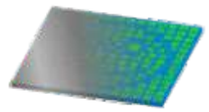
SOLDAMATIC E-LEARNING (LMS)

CONTENTS:

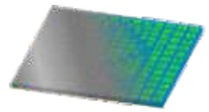
- Introduction to Robotics Welding
- Augmented Training Methodology course for welding teachers

1 YEAR WARRANTY (EXTENDABLE)

AWM-001 Foundational ambidex

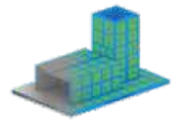


AWM-010 Robotic Foundational ?Face? ?



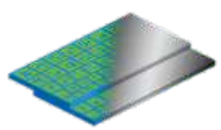
AWM-009 Robotic Foundational ?House?

AWM-004 Automotive Chassis Assembly



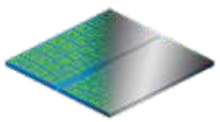
AWM-015 Robotic Foundational Assembly

T-Angled plate to plate

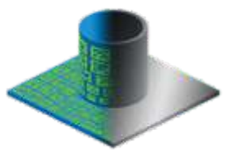


Overlapped Plate

V-Butt pipe



V-Butt Plate

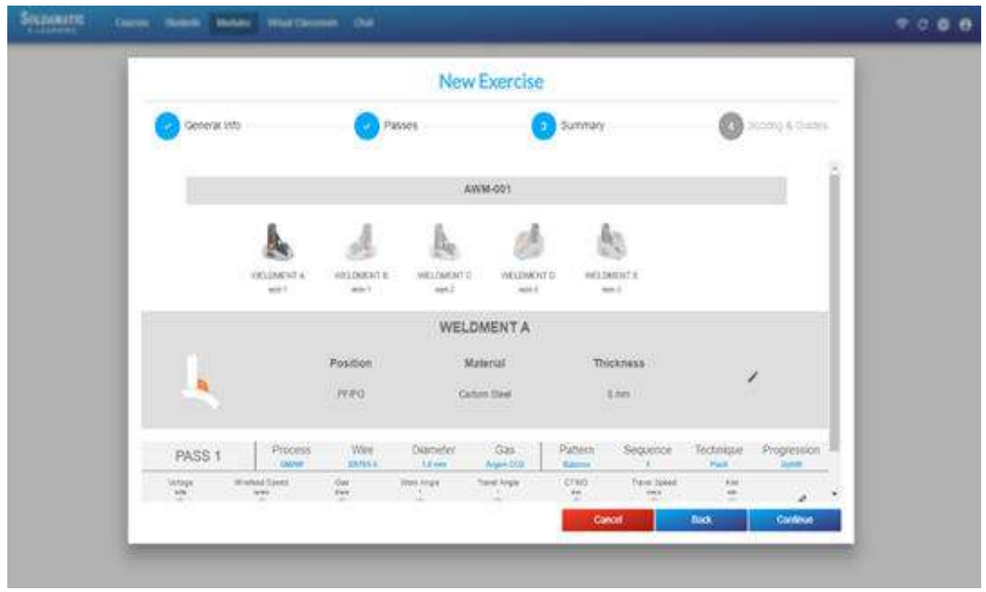


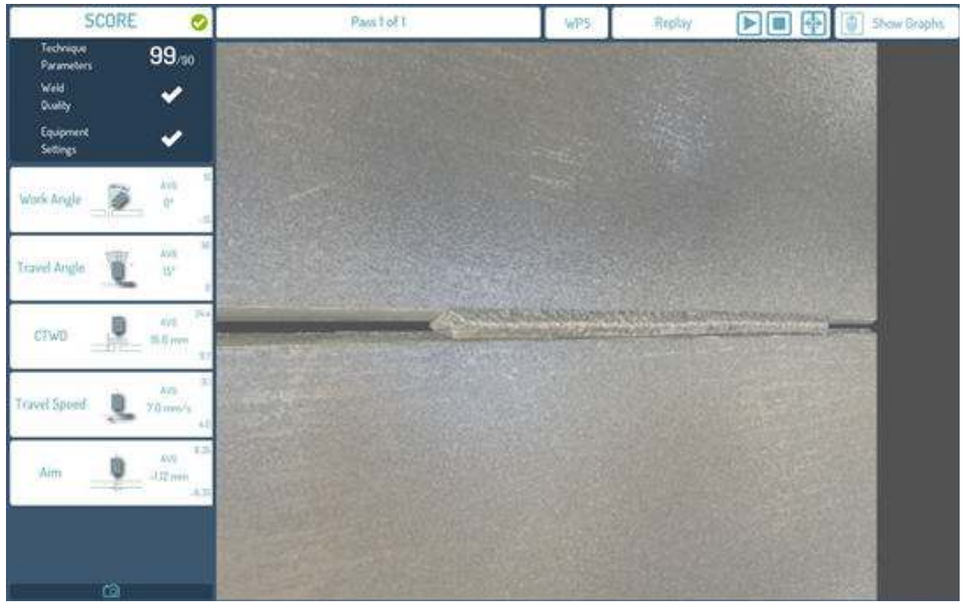
T-Angled pipe to plate

03.
Robotics Welding Curricula

INTRODUCTION TO ROBOTIC WELDING

It Includes 2 modules with tests and theorical (PDF and HTML5) aand practical contents with 15 practices





VISION TECHNOLOGY	AUGMENTED REALITY
WELDING PROCESSES SUPPORTED	MANUAL: GMAW (MIG/MAG) &FCAW G/S, SMAW (MMAElectrode), GTAW (TIG) ROBOTICS: GMAW (MIG/MAG) &FCAW G/S
WELDING POSITIONS	PA, PB, PC, PD, PF/PG, PE, PH/PJ, HL045/JL045 - 1F, 2F, 3F, 4F, 5F, 6F, 1G, 2G, 3G, 4G, 5G, 6G HL045 (6G) available in AWM-002, AWM-008, AWM-011, AWM-012 and AWM-016. 6GR available in AWM-011 (Pipeline 6GR)
DEFAULT WELDING JOINTS INCLUDED	
ADDITIONAL WELDING JOINTS AVAILABLE	20 Additional Advanced Welding Multijoints available for manual and robot welding based on Foundational, Automotive, Railway, Shipbuilding and Oil&Gas industries Manual: AWM001, AWM002, AWM003, AWM004, AWM005, AWM006, AWM007, AWM008, AWM011, AWM012, AWM013, AWM014, AWM020 available for AWS training content Robotics: AWM001, AWM004, AWM009, AWM010, AWM015, AWM016, AWM017, AWM018, AWM019
WELDING JOINTS FOR SPECIFIC INDUSTRIAL NEEDS	With Industrial Welding Services
ON DEMAND TAILOR MADE COUPONS	Including the physical workpiece. Industrial Welding Services
PIECE CAN BE MANIPULATED SEPARATELY	It can be manipulated at any time during the exercise to perform a visual inspection of the welding bead. The
REAL WELDING TORCHES	MANUAL: YES, by Abicor Binzel
REAL ADVANCED WELDING TORCHES	Handle ergonomics by Abicor Binzel
HAPTICS	Advanced GMAW/FCAW torch includes vibration feature
WELDING SOUNDS	Recorded in a real welding lab
REAL WELDING MASK	YES
VOLTAGE SELECTION	ROBOTICS: in job selection
SHIELDING GAS SELECTION	
WIRE SPEED SELECTION	during the exercise ROBOTICS: in job selection
PLUG WELDING	In AWM-005 (Automotive Thin Plates) and Industrial Services
COUPON MATERIAL SELECTION	Carbon Steel, Stainless Steel, Aluminium
GAS COMPOSITION	MATERIAL / GMAW / GTAW / FCAW Carbon Steel / Argon - Co^2, CO^2 / Helium* / Argon - Co^2, CO^2 Aluminium / Argon / Argon / - Stainless Steel / Argon - 0^2 / Argon / -
COUPON THICKNESS SELECTION	YES: 3mm, 6mm, 10mm 1mm, 2mm, 7mm, 8mm, 15mm, 16mm, 20mm, 25mm available with Advanced license
POSSIBILITY TO USE OTHER THICKNESSES	On demand with Industrial Welding Services

	<table><tr><th>MATERIAL</th><th>GMAW</th><th>SMAW</th><th>GTAW</th></tr><tr><td>Carbon</td><td rowspan="2">0.8mm, 1mm, 1.2 mm</td><td rowspan="2">2.5mm, 3.25mm, 4mm</td><td rowspan="2">2mm, 2.4mm, 3.2 mm</td></tr><tr><td>Stainless Steel</td></tr><tr><td>Aluminium</td><td>1mm, 1.2mm</td><td>-</td></tr></table>
	<table><tr><th>MATERIAL</th><th>GMAW</th><th>SMAW</th><th>GTAW</th><th>FCAW</th></tr><tr><td>Carbon Steel</td><td>ER70S-6</td><td>E7018, E6010, E6013</td><td>ER70S-6</td><td>E71T-1, E71T-7</td></tr><tr><td>Stainless Steel</td><td>E316LSi</td><td>E316L</td><td>ER316L</td><td></td></tr><tr><td>Aluminium</td><td>ER5356</td><td>-</td><td>ER5356</td><td></td></tr></table>
POSSIBILITY TO TRY DIFFERENT SETTINGS DURING THE EXERCISE AND THEIR EFFECTS IN THE WELDING BEAD	YES
MULTIPASS EXERCISE WITH DIFFERENT WELDING PROCESSES	YES
WELDING TECHNIQUE	Push / Drag
	Straight, Triangle, Convex, Circle, Zigzag
WELDING DIRECTION	ROBOTICS: Right to left/ Left to right
OPEN ROOT WELDING	In AWM-006, AWM-008, AWM-011, AWM-012, AWM-013 and AWM-015
TRANSFER MODES	Short circuit, globular, spray, pulsed-arc (available for AWM welding joints)
UNDO WELDING	It is possible to undo a pass or weldment repeating only a certain part of the exercise
	They can be added/removed
POSSIBILITY TO CONNECT THE UNIT TO A ROBOTIC ARM	Robotics license needed
ANALYSIS MODULE	YES
ADVANCED ANALYSIS MODULE	Included in Advanced licenses. Mechanical Resistance and Cross Section
DEFECTS ANALYZED	AWM welding joints)

REPORT FEATURES	CTWD, Travel Speed, Work Angle, Travel Angle, Trajectory, Voltage, Wirefeed Speed, Technical Parameters, Equipment
AUGMENTED TRAINING CONTENT	Developed by Seabery: Augmented Training Soldamatic Welding Course; Augmented Training Methodology; Introduction to Robot Welding; MAG position PF / PD / PH
INTERNATIONAL PUBLISHERS CONTENT	AWS, CESOL, DVS, Ludo Breemans
LMS APPLICATION	Soldamatic e-Learning for Teachers and Students
LMS APPLICATION:TEACHER ACCESS	Easy web access and also desktop application
LMS APPLICATION:STUDENTS ACCESS	Web access. Visualize contents, progress, take tests, live chat
LMS APPLICATION:LIVE CHAT	Available for teachers and students
LMS APPLICATION:SHAREVIEW	Teachers can see what the students see in real time in their laptop, either within the same classroom or online
	Synchronous and asynchronous options centers online, seeing in real time their progress and the welders point of view while welding
STUDENT PERSONALIZED PROFILE	Practices report and progression
REPORTS	Exercises, courses, students and diploma reports. Also CSV format available for end-user custom reports
CUSTOMIZED PRACTICES	Customized in Soldamatic E-Learning
REAL ENVIRONMENT DURING SIMULATION	YES
SUBSCRIPTION OPTIONS	Anual or Lifetime
UPDATES	 the license with no additional cost New system versions included in the anual license with no additional cost
REMOTE MAINTENACE	YES
SPECIFIC CUSTOMER ADAPTATIONS ON DEMAND	YES
REGULATIONS	CE and FCC
CERTIFICATIONS	ISO 9001 Quality Management System ISO 14001 Environmental Management System
WARRANTY	1 year by default, up to 2 more years optional
SOLDAMATIC SIMULATOR	
	442,5x239,5x457,5mm (17.42x94.29x18.72 in.)
	9.46 Kilograms (20.85 lbs.)
	10.5 Kilograms (23.15 lbs.)
ACCESORIES	 ROBOTICS: Vision Module, Robotics educational torch and Robotics advanced torch OPTIONAL: GTAW (TIG) Pedal, Workstand, Augmented Lab

POWER SUPPLY	100V-240V
PROCESSOR	Intel® Core i5 10th gen
CHIPSET	Intel® Q470E
RAM	16 GB (2 x 8GB Dual-Channel) DDR4 2400Mhz
GRAPHIC CARD	NVIDIA Quadro T1000
HARD DISK	M.2 SSD 128GB
AUDIO	
OPERATING SYSTEM	Seabery Operating System optimized for Soldamatic 2023
AUTOMATIC SHUTDOWN	
DISPLAY SIZE	9.7
DISPLAY RESOLUTION	HD LCD 1024 x 768 XGA
BACK PANEL PORTS	Screen: HDMI/Display Ports USB: 4 x USB 3.2 Gen 1 Connection: 2x LAN 2x Antennas Intel® WiFi6 Dual Band Audio: microphone &speakers ports Others: Robotics port
FRONT PANEL PORTS	1 X USB type A, 1 X USB type B
AR VISION MODULE RESOLUTION	MIPI LCD 4,7 HDMI Display input up to 1280x720 Ultra-low video distortion 24-bit True Colour
	640x480 / 800x600 Autofocus
UNIT CAN BE USED WITH GLASSES	YES
OPERATING TEMPERATURE	0 - 45°
HUMIDITY	10 - 80%

SOLDAMATIC SERVER	
INSTALLATION TYPE	ON-PREMISE OR CLOUD
RAM MEMORY	8GB DDR4 3200MH
MOTHERBOARD	Asus H110M-E
MICROPROCESSOR	Intel Core i3-12100
POWER SUPPLY	Fuente 500w
HARD DISK 1	SSD 240GB SATA3
	1TB SATA3
NETWORK CARD	TP-Link TG-3468

WINDOWS	MacOS
WINDOWS 10 64 BITS Processor: Intel I5 2.5GHz RAM: 8GB	OS Min: High Sierra 10.13 Processor: Intel I5 1.86GHz RAM: 8GB Graphic card: Intel Iris Plus Graphics 640

MADE IN SPAIN

SOLDAMATIC®

AUGMENTED TRAINING FOR WELDING

Seabery is the international leader in professional skills training with augmented reality-based simulation training solutions for the 21st century workforce, with partners and presence in more than 80 countries.

Soldamatic is leading welding training with a State-of-the-art, Turn-Key, and Scalable solution to create the next generation

Seabery

AUGMENTED TECHNOLOGY

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