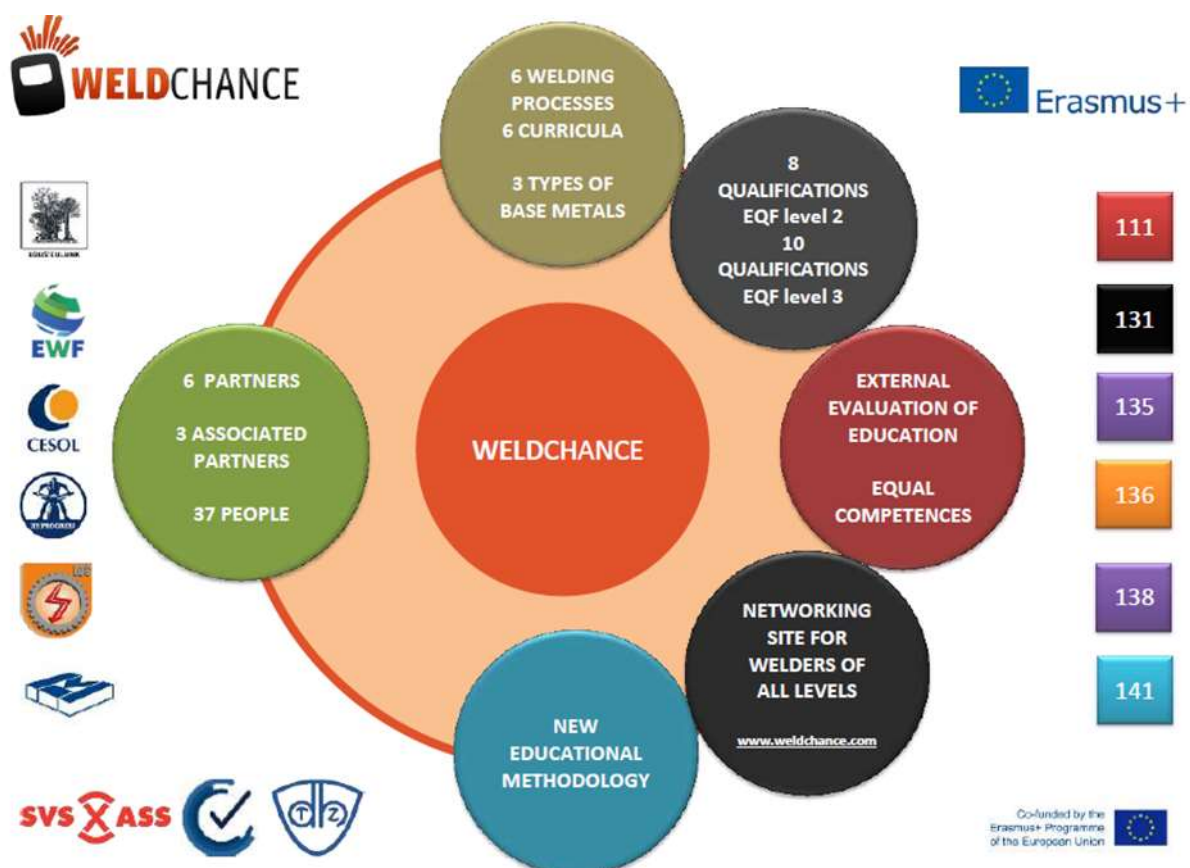


# 1

## Occupational standard ARC WELDER 2



Pula – Brussels / Porto Salvo – Madrid – Basel - Genova – Zagreb – Slavonski Brod

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## Occupational standard ARC WELDER 2

For Učilište ULJANIK Ustanova za obrazovanje odraslih:

Director: Goran Pikot

Project Manager: Željko Habek

Development Team:

Heliana Gaspar Bibas, Goran Burazer, Aránzazu Casero Perpiñá, Pietro Consoni, Dominik Gjuretek, Daniela Grüter, Jorge J. Huete Chugunowa, Željko Habek, Anja König, Marlena Lakić, Mario Lovrić, Edita Margeta, Giuseppe Mastrangelo, Dinis Garcia Nunes, Juan Vicente Rosell González, Mariano Santoro, Mirta Szügyi, Robert Vidas.

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## 1. Level, key purpose, occupation description

Table No. 1: Level, key purpose, occupation description

Level (EQF)	2
<p><b>Key purpose</b></p>	<p>Arc Welder 2 is competent to carry out fillet and plate welds in different welding positions applying one of the arc welding processes. Depending on the applied welding process, Arc Welders 2 are necessary in all secondary economy sectors: industry, construction, mining, power industry, shipbuilding and production trades.</p>
<p><b>Occupation description</b></p> <p>An Arc Welder 2 joins metallic parts into an inseparable whole with an arc welding process. During welding, the heat obtained from the arc is used to melt metals and in such a way a welded joint occurs. In doing so, the Arc Welder 2 requires corresponding welding technique (skills), welding technology (knowledge) and behavior (stability), especially because different arc welding processes require different level skills, knowledge and stability to avoid making defective welds.</p> <p>Welding is used extensively and in almost every sector of industry. Arc Welder 2 is an occupation high in demand in all economy production sectors using steel structures, in shipbuilding and other industrial sectors and trades. Welded products specific for Arc Welders 2 are: components for cars; ships; rail vehicles; simple metallic containers and steelwork for bridges, buildings and gantries. The above-mentioned products and many other demand a high level of technical and technological discipline and behavior from welders who have to take responsibility for quality and accuracy of their work. Arc Welders 2 are required to produce joints that satisfy basic quality standards in order to ensure that the finished products function correctly, contributing to the safety of all and the global quality of life.</p> <p>Educated, skillful and responsible welders who are internationally certified can work anywhere in the world and obtain substantial financial compensation for their work.</p>	

## 2. Job groups, key jobs, activities

Table No. 2: Job groups, key jobs, activities

Job groups	Job Functions	Activities
Analysis, planning and work organisation	Review and planning of parameters necessary for the course of production process	<ul style="list-style-type: none"> <li>- Review technical-technological documentation</li> <li>- Plan the execution of welding process for a specific task</li> <li>- Plan the work space</li> </ul>
Preparation of work place	Preparation of the work place, necessary equipment, tools and materials	<ul style="list-style-type: none"> <li>- Prepare, position and check the welding equipment.</li> <li>- Receive, handle and maintain consumables</li> <li>- Prepare, check and protect materials and work area ready for welding.</li> </ul>
Operative jobs	Execution of a welded joint in the chosen arc welding process, in accordance with the demands from Welding Procedure Specification (WPS)	<ul style="list-style-type: none"> <li>- Position the work piece for welding</li> <li>- Adjust welding parameters according to WPS</li> <li>- Prepare the edges of base metal for welding process</li> <li>- Control preheat and interpass temperature</li> <li>- weld the joint according to WPS and apply welding techniques when executing different types of welded joints in different welding positions</li> <li>- clean the weld, base metal and work place.</li> </ul>
Administrative jobs	Filling the work documentation	<ul style="list-style-type: none"> <li>- Fill in the work order</li> <li>- Fill in the delivery/return note for the material</li> <li>- Take records regarding the state of tools, equipment, machines and protective equipment</li> </ul>
Communication and cooperation with others	Professional communication	<ul style="list-style-type: none"> <li>- Exchange information with all stakeholders in work process</li> <li>- Take part in resolution of problems that occurred during job execution</li> <li>- use occupational terminology</li> </ul>

Quality assurance	Inspect the quality of welded joints applying visual inspection and dimensional control	<ul style="list-style-type: none"> <li>- Carry out visual inspection and dimensional control of welded joints</li> <li>- mark/label welds with their identification tag in accordance with the quality assurance system.</li> <li>- include elements of self-control in accordance with the quality assurance system.</li> <li>- Complete and check the finished weld ready for inspection and report into the production control system.</li> </ul>
Health and environment protection	Taking care of people and environment	<ul style="list-style-type: none"> <li>- Apply regulations and means for occupational safety, fire protection and environment protection</li> </ul>

### 3: Usual/desirable attitudes and behavior patterns

Table No.3: Usual/desirable attitudes and behavior patterns

<p>Arc Welder 2 will display the following behaviors:</p> <ul style="list-style-type: none"> <li>- A questioning attitude, to understand the processes and associated industrial applications. Maintaining competence with a commitment to Continuing Professional Development</li> <li>- Planning and preparation to ensure production and Continuing Professional Development goals are achieved.</li> <li>- Intervention, to challenge poor practices and channel feedback to the appropriate authorities to implement change.</li> <li>- Reliability and dependability to consistently deliver expectations in production, quality requirements, work ethics and self-development.</li> <li>- Accountability, to follow the specified procedures and controls and be personally responsible for their production work and personal development.</li> </ul>
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## 4: Other information

Table No.4: Other information

<p><b>4.1. International standards directly connected to the occupation</b></p> <ol style="list-style-type: none"> <li>1. EWF/IIW Guideline – European/International Welder. Minimum Requirements for the Education, Examination and Qualification. IAB-089 r5-15.</li> <li>2. ISO 9606-1. Qualification testing of welders. Fusion welding. Steels. And ISO 9606-2. Qualification test of welders. Fusion welding. Aluminium and aluminium alloys.</li> <li>3. ISO/IEC 17024 - Conformity assessment - General requirements for bodies operating certification of persons.</li> <li>4. AWS SENSE QC10 Specification for qualification and certification of Level 1 – Entry Welder</li> <li>5. AWS SENSE QC11 Specification for qualification and certification of Level 2 – Advanced Welder</li> </ol>
<p><b>4.2. Perspectives in occupation - continuance of education, career</b></p> <p>There are numerous pathways for Arc Welders 2 who may wish to pursue higher level careers in welding. These include progression to: Arc Welder 3, European/International Welding Practitioner, Welding Instruction and Teaching, Welding Inspection and Managing and Supervising Welding Operations.</p>
<p><b>4.3. Occupations with which this occupation often and closely collaborates</b></p> <p>Arc Welder 2 is an occupation closely connected to following occupations:</p> <ul style="list-style-type: none"> <li>- management</li> <li>- European/International Welding Engineer, European/International Welding Technologist, European/International Welding Specialist</li> <li>- mechanical engineer</li> <li>- engineers in lines of work where welding is carried out</li> <li>- auxiliary staff</li> <li>- maintenance staff</li> </ul> <p>Occupations close to Arc Welder 2: metal/steel fabricator, steel structures fitters, pipeline-fitters and ship-fitters.</p>
<p><b>4.4. Health risks in occupation</b></p> <p>Arc Welder 2 is exposed to following hazards:</p> <ol style="list-style-type: none"> <li>1. Smoke gases, fumes and dust hazards</li> <li>2. Radiation hazards</li> <li>3. Electrical current hazards</li> <li>4. Slag and molten metal hazards</li> <li>5. Working in tight, restricted, closed spaces, tanks and at a height</li> <li>6. Noise hazards</li> <li>7. Heat hazards</li> <li>8. Electromagnetic field hazards</li> </ol>

#### 4.5. Typical work environment and working conditions

Arc Welder 2 carries out jobs in closed spaces (factory shops, workshops, welding booths) and in an open space (ships, bridges, buildings and other structures). Welding is sometimes carried out in forced bodily positions.

Specific qualities of this occupation demand consistent application of occupational safety.

Due to a large number of hazards they are exposed to during execution of work, they have to use personal protective equipment such as welding helmet/goggles, protective leather apron, protective gloves, steel cap shoes, ear plugs.

The following conditions are dependent on national regulations:

- Welder working hours;
- Welder daily schedule;
- Welder minimum age;
- Classification of working conditions for welders;
- Health ability check.

## 5. Document references

### 5.1. Reference numbers

2016-1-HR01-KA202-022187 – OSAW3

### 5.2. Members of work groups who participated in creation of Occupational standard

Heliana Gaspar Bibas, Goran Burazer, Aránzazu Casero Perpiñá, Pietro Consonni, Dominik Gjuretek, Daniela Grüter, Jorge J. Huete Chugunowa, Željko Habek, Anja König, Marlena Lakić, Mario Lovrić, Edita Margeta, Giuseppe Mastrangelo, Dinis Garcia Nunes, Juan Vicente Rosell González, Mariano Santoro, Mirta Szügyi, Robert Vidas.

### 5.2. Contact persons:

[zeljko.habek@uciliste-uljanik.hr](mailto:zeljko.habek@uciliste-uljanik.hr)

[jrosell@cesol.es](mailto:jrosell@cesol.es)

[Pietro.Consonni@iisprogress.it](mailto:Pietro.Consonni@iisprogress.it)

[Daniela.Gruetter@svs.ch](mailto:Daniela.Gruetter@svs.ch)

[hgbibas@ewf.be](mailto:hgbibas@ewf.be)

[mirta.szugyi@gmail.com](mailto:mirta.szugyi@gmail.com)

[Robert.Vidas@koncar-mk.hr](mailto:Robert.Vidas@koncar-mk.hr)



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