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MAKE IT

Recognition of Prior Learning Guideline and Tools in the Welding Sector

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Foreword

The MAKE-IT project aims to develop a European sector-oriented qualification system into the Learning Outcomes (LOs) approach and establish a European harmonized scheme for Recognition of Prior Learning (RPL) in the Welding sector. A recognition and validation of competences model for the "European Welding Practitioner" profile will be used, applying the European Qualifications Framework (EQF) and the European Credit System for Vocational Education and Training (ECVET) methodologies to this curriculum. This aims at:

- Introducing this innovative training qualification among new EU partners;
- The introduction of a Recognition of Prior Learning Model (RPL) among EU partners that are already providing training, but do not have established processes for recognition of work-based learning and validation of qualifications;
- The identification of common procedures and gaps related to the "European Welding Practitioner" (EWP) qualification profile in the different EU countries;
- Establishing an operational framework to develop a model based on EQF levels, boosting the recognition and transfer of credits by applying ECVET methodology and tools;
- Enhancing skills and competences of trainers in the welding sector, by promoting the exchange of successful pedagogical methods and practices between teachers and trainers from VET;
- Developing an EU Network to stimulate future cooperation and mobility in the field of education and work and promoting the project results as a best practice to other sectors.

The establishment of a European harmonised scheme for RPL requires the definition of stages as well as tools for recognition. To define this stages and tools it was important the application of a survey that gathered information from the partners in each country (Hungary, Norway, Portugal and Spain), in order to support the design of the current RPL Guideline. In each of the different phases, besides the information gathering, it was also aimed to get the partners' overall view on how to apply each phase of the RPL in the welding sector.

The steps and tools contained in this Guide should not be considered as strict indications to be applied uniformly. They should, instead, be regarded as guiding references for the work to be developed.

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Background

Previously to this project, there was the B-PROF project that aimed to develop and validate an assessment methodology that would enable the recognition of knowledge, skills and competences that make up a welders' professional profile. Like MAKE-IT, that project designed a Guideline and gave a "step-by-step" description of the different stages, tools and actors involved in the Accreditation of Prior learning (APL), from the moment of the candidate's application to the awarding of a diploma.

The B-PROF results were the starting point for the RPL process in MAKE IT, meaning the welding/welder skills are assessed in the beginning of the candidate application for one welding process and material, before the RPL for the coordination role.

EWP should be able to perform at higher level, for more than one welding process or group of materials additional to those presented initially. In addition, the EWP has a coordination role, being expected to be able to supervise the welding activity. Learning outcomes standards for the Practitioner include a different and deeper knowledge regarding welding processes and equipment; material behaviour during welding, design and construction as well as fabrication, applications and engineering, when compared to the welder profile.

MAKE IT RPL model has been developed to allow the verification of the candidate's entry requirements by using demonstrations exercises whenever the candidate lacks evidences that prove his/her ability to weld. The model goes further in the implementation when compared to B-PROF, providing a more sustained support for the overall identification, recognition and assessment of both welding and coordination knowledge and skills, which is possible by applying concrete activities and questions for the candidate assessment, for instance during the practical welding simulation and the technical interview.

Thus, the welding RPL processes developed in B-PROF has been reviewed, updated and considerably improved during the MAKE IT project, allowing the implementation of an upskilling pathway from welder to welding coordinator. The MAKE IT project also developed the necessary tools for the implementation, at national level, of the RPL.

The European Welding Federation (EWF) alternative route to training was also an inspiration source for the development of the RPL scheme for the Welding sector. The alternative route targets individuals who may already have experience of the job function at a particular level without holding the appropriate qualification diploma. These individuals can demonstrate their capability to proceed to examination either directly without compulsory attendance of an approved training course or by attending only part of such a course.

Despite being known within the EWF system and its members, the alternative route needs to be streamlined and simplified so it can be used in all its potential. The MAKE IT RPL model intends to address this needs by introducing more flexibility and transparency in the way the prior experience is assessed. This is achieved through the clear definiton of stages, tools and actors involved in the process, also through the development and dissemination of harmonised tools that will support the implementation of the model across Europe.

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Introduction

Validation is about making the diverse and rich learning of individuals visible and to attribute value to that learning, regardless of the context in which the learning took place. The validation allows showing evidence and demonstrating formal (happening in an organized learning environment - education or training institution or job), informal (happening in a non-structured environment – daily activities related to work, family or leisure) and non-formal learning (happening in planned activities not explicitly designated as learning , which are developed by Trade Union, social groups or movements), previously acquired in the different contexts of a person's life, having as reference a specific standard of professional competences.

The design of a European harmonized scheme for the RPL in the Welding sector is possible because the Welding Guidelines for qualification and training are shifting into a learning outcomes approach, following the European Qualifications Framework (EQF) descriptors, identifying what the learner knows, understands and is able to do after the completion of a learning process.

The development of this scheme will allow professionals of the EWF member countries to entry and achieve a Welding Qualification, without needing to leave work to dedicate months to training in the conventional way. The RPL can be used for personal or career development, allowing professionals to have their know-how and skills recognised in a harmonised European Qualification system, thus reinforcing the concept of lifelong learning.

The present Guideline is a tool to support the validation processes of professional competences in the welding sector, considering the standardization of practices and the minimization of subjectivity that can result from the operationalization of these processes and the methodological instruments that are part of it.

This document is divided in five parts: part 1 defines the various stages of the RPL process, from the moment of the candidate's application to the awarding of a diploma; part 2 presents the range of tools that can be used either to extract evidence or documenting and presenting those evidences; part 3 explains how to implement the RPL model and tools; part 4 specifies the key players during the process; and part 5 presents the added value and challenges within the development and implementation of the RPL process. The final part of the guideline includes all the supporting documents as annexes.

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1. Stages of the validation process

The process of validation has four stages (according to the Recommendation of the Council of the EU, 2012):

a) Identification,
b) Documentation,
c) Assessment,
d) Certification.

In the EWF Education, Training and Qualification System an important clarification is needed between the concepts of **Certification and Qualification:**

- EWF Certification of Welding Personnel refers to the process of assessing and recognizing welding job competences in Welding Coordination, Plastics Welder and Welder, Welding Operators and Brazers. This process leads to the issuing of a Certificate with a validity period. As Certification is an industry requirement, certified persons have to apply for renewal well before the expiry date in order to ensure continuity of certification.
- Qualification of Welding Personnel refers to the process of providing training according to specific guidelines, thus covering all professional's levels in welding and related areas, such as Thermal Spraying, Adhesive Bonding, Plastics Welding and Underwater Welding. The EWF Qualification System assures harmonised knowledge, skills and competence for any holder of a diploma in any region of the world;

Thus, the EWF concept of Certification is distinct from the Certification phase of the Validation process. To avoid misunderstanding only the Council Recommendation definition will be used from now on when referring to the certification stage.

This Guideline is structured according to the above stages. However, for the purpose of this guide it was necessary to adapt the four stages to the context of EWF's performance, as presented in Figure 1, so the following designations have been adopted instead:

a) Hosting and Documentation,
b) Recognition,
c) Assessment and Validation,
d) Diploma Awarding.

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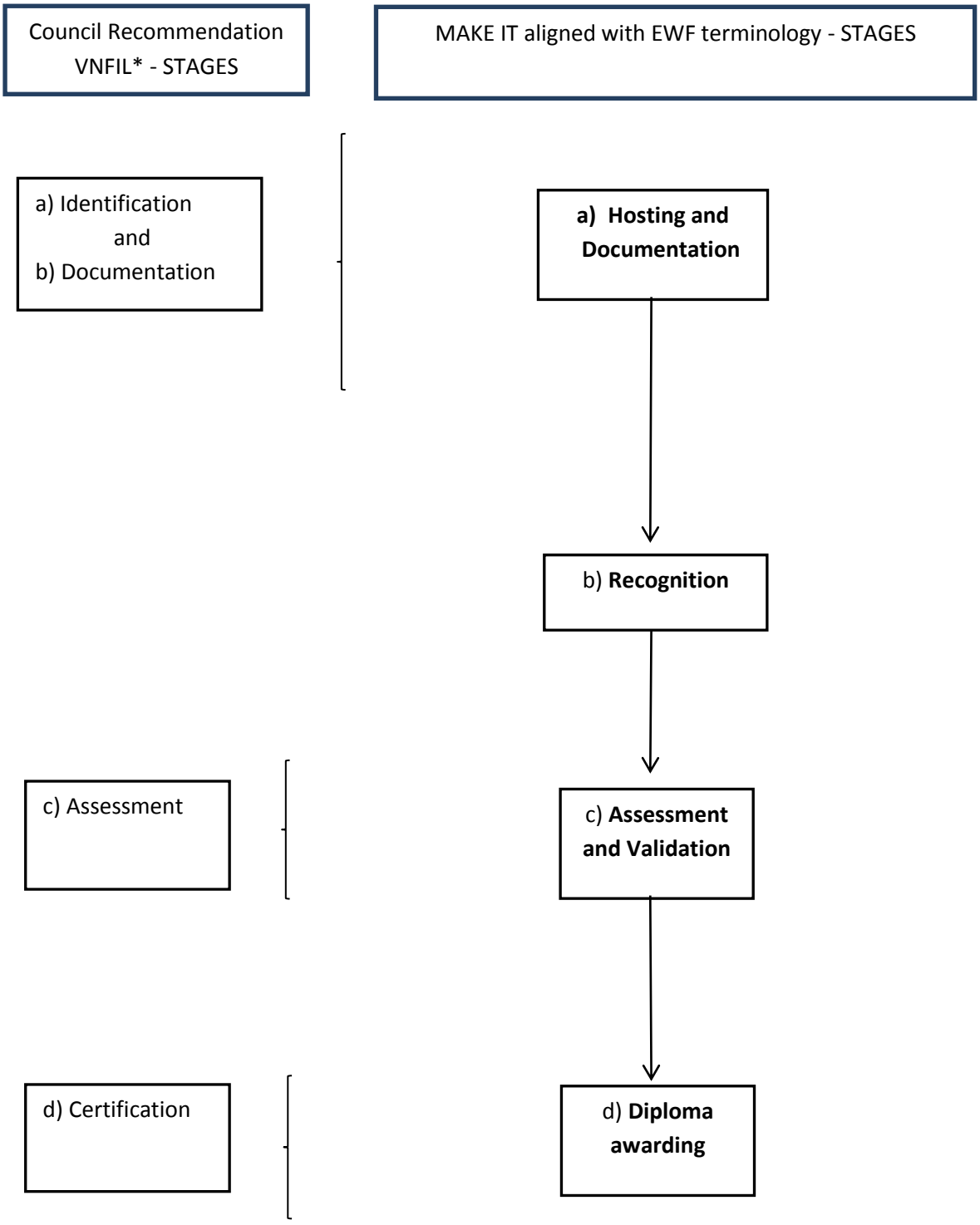
Figure 1 - Four stages and its relation with the EWF context:



*** VNFIL – "Validation of non-formal and informal learning" (further details are in the glossary)**

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1.1 Hosting and Documentation

This stage of Hosting and Documentation is very important for the candidates to make an informed decision about their participation in the process and to feel accompanied from the beginning. The information to be made available at this stage should include, among other elements:

- Information on the EWF Qualification System,
- Information on the EWF routes for Qualification,
- The requirements for applying to the EWF RPL Process,
- The rights and duties of the candidate,
- The steps that make up the process,
- The associated cost,
- The advantages of the process.

In this stage the candidate is informed about **the requirements** that he/she needs to comply with in order to start the RPL Process

Which tools can support the hosting and documentation stage?

The combination of the different instruments that can be used is an added value for the identification of the knowledge, skills and competences previously acquired by the individual:

Portfolio:
Welding Professional and Training Registration form (ANNEX 1);
Welding Professional and Personal Motivations form (ANNEX 2);
Welding Interview guide (ANNEX3);
Self-assessment grid (ANNEX 4).

The Portfolio is the preferred tool at this stage. It should include the information gathered with the Welding Professional and Training Registration form; the Welding Professional and Personal Motivational form; the Welding Interview guide and the Self-assessment grid with the relevant Certificates and Diploma. With these forms the candidate will be able to provide evidence of his/her professional achievements, including employer details, duration, roles and responsibilities, as well as the relevant qualifications education and training paths.

Which actors can be involved in the hosting and documentation process?

The actors involved in this phase are the ATB – EWF Authorised Training Body – and the candidate. The ATB will receive the candidate's application and provide detailed information about EWF qualifications.

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1.2 Recognition

The documentation gathered in the Portfolio must be validated so that the candidate may start the RPL Process. In this stage the candidate has to present evidence that he/she fulfills the requirements mentioned in the hosting and documentation phase so that they can start the RPL Process.

Which tools can support the recognition stage?

Portfolio Check-list (ANNEX 5).

A Portfolio Check-list (ANNEX 5) will be used by the candidate and ATB in order to verify the compliance with the requirements and the presentation of the mandatory and other relevant documents to the process.

Which actors can be involved in the recognition process?

The main actor involved in this stage is the ATB that has the following tasks:

- verify if the candidate complies with the requirements;
- verify if the candidate has valid evidences;
- fill in the header table of the portfolio check-list in accordance with its decision;

1.3 Assessment and Validation

The validation of professional competences focuses on the analysis and assessment of the Portfolio according to the learning outcomes standards, plus the technical interview and the examination. Based on this assessment, the competences to be validated and the competences still to be evidenced and/or developed are identified. More specifically, the following should be considered: the units of competence, the gathering of additional evidence of the competence, the comparison of the evidence with the corresponding standard and the formulation of a judgment based on the evidenced competence.

The **standards of competences** are built for each qualification and follow the same basic structure, which is characterized as follows:

- A set of Units of Competence (UC);
- A set of subjects;
- Each UC consists of one or more actions/achievements.

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Which tools can support the assessment and validation process, improve it and show evidence of the competences acquired?

Portfolio Technical Review document (ANNEX 6), Technical Interview guide (ANNEX 7), Examination.

Which actors can be involved in the assessment and validation process?

The actor involved in this phase is the ATB which is responsible for conducting the portfolio technical review and the technical interview guide. The results obtained by the candidate have then to be reported to the ANB – EWF Authorised Nominated Body- before the examination.

Whenever the candidate has to demonstrate welding skills, an authorised examiner approved by the ANB, which can be a welding trainer, must be designated to evaluate the candidate. Impartiality of the trainer has to be guaranteed according to the International Welder specific requirements addressed in the IAB 089 Guideline (latest edition).

The development and implementation of the examination system is a responsibility of the Examination board, under supervision of the ANB.

1.4 Diploma Awarding

The final stage of the RPL process consists in the awarding of the Diploma by the ANB to the candidate that has successfully passed the written and practical examination, thus fulfilling the intentionally established patterns, which reflect the demands of professional and individual performance.

Based on the candidate's performance and final decision of the Examination Board, two kinds of diploma can be issued, both intended to be valid for life:

- Full, whenever the candidate has successfully completed all the exams required to obtain a qualification.
- Partial, whenever the candidate has successfully completed only specific Units of Competence (parts of a qualification).

Which actors can be involved in the Diploma Awarding phase?

At this stage there is only one actor involved which is the ANB. The ANB is responsible for awarding the candidate's Diploma as the result of successfully completing the RPL Process for a qualification or Unit of Competence.

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2. Tools

The tools used in the RPL process are very important to the quality, validity and reliability of the process. There is a wide range of tools that can be used either to extract evidence or documenting and presenting those evidences.

Tools to **extract** evidence:

- ✓ **Tests and examinations** - Tests and examinations can be more easily connected to education and training standards than other methods but in areas where practical skills and competences are important, the result of the test can be inconclusive regarding the extent of knowledge and learning.
- ✓ **Conversational methods** - Interviews can be used to extract additional information about the knowledge, skills and competences that can be already documented. They can have an important role all through the RPL process, especially in the identification of acquired competences. Interviews can be useful to lead the applicant to a more "structured guidance session". However, it is necessary to implement an adequate protocol in order to assure that the result is reliable and fair. The assessors need to follow a methodological guide so that they can get the relevant and appropriate information about the applicant.
- ✓ **Declarative methods** - Based on individuals' independent identification and recording of competences and validated by a third party. However, it is important for the individuals to have a clear method or guideline to follow in the self-assessment of knowledge and skills. Guidance from the counselors can help in giving more transparency and reliability to the process. ex: CV; self-assessment questionnaire on acquired professional skills.
- ✓ **Observations** - Extracting evidence while the applicant is in the workplace. Observation can be a way of demonstrating the skills and competences otherwise difficult to validate.
- ✓ **Simulations** - They are used when observation in the workplace is not possible. Simulations can solve part of the problems of observations undertaken at work as they can place individuals in various contexts and increase assessment validity.
- ✓ **Evidence extracted from work or other practice** - A candidate gathers evidence of learning outcomes from work situations, voluntary activities, family or other activities. The evidence is used in the validation process of competences by the **assessor**.

Tools for **documenting and presenting** evidence:

- ✓ CVs (Professional and training form),
- ✓ Portfolios.

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In this part of the Guideline, we will give examples of some tools of evidence and evaluation of previously acquired competences for the "Welding Practitioner". The tools presented in the annex section of this document were designed according to the respective standard.

2.1 Welding Professional and training registration form

The Welding Professional and Training registration form is a general tool that must be used by all applicants who wish to recognise and validate their competences (ANNEX 1).

This is an additional document to the *Curriculum Vitae*, which allow to sum up the relevant professional career (e.g. workplaces, job functions, requirements for working, etc.) and training information (e.g. training actions attended).

The Form also includes a list indicating different types of documents which may constitute proof of performance of the required skills in practical training, and which aims to guide the candidate in gathering the evidences. These certificates may include the EW (European Welder) and /or Welder Certificates, issued by the EWF recognised awarding bodies or by technical colleges under careful control of the EWF awarding bodies, as well as other Certificates issued by recognised awarding entities not belonging to the EWF. These supporting documents must allow the confirmation of the domain of specific welding tasks/skills.

2.2 Welding Professional and personal motivational form

The Professional and Personal Motivational form intends to explore the candidate's motivations towards its enrolment in a validation process as well as his/her generic interest for technical areas. The Form also intends to collect information regarding the attitudes and expectations in terms of intended qualification and professional position/ function the applicant aims to obtain.

Based on the information taken from the Welding Professional and Training registration form and the Professional and Personal Motivational form, it is possible to understand which tasks are/can be validated and how to prepare the interview (ANNEX 2).

2.3 Welding Interview guide

The interview is an instrument that can be used in the various stages of the validation process, but with a greater incidence in the identification (hosting and documentation) and assessment stages (which refers to the Welding Technical interview Guide, described in the topic 2.7).

At the stage of hosting and documentation, the interview may come as a complement and confirmation of the information collected in the Professional and Training Registration form (ANNEX 1) and in the Professional and Personal Motivational form (ANNEX 2), namely

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regarding the needs and expectations, the strategies used to deal with successes and failures, among other subjects. The interview must be individual and follow a Guide adapted to each candidate taking into account the information previously collected (ANNEX 3).

The interview is not a mandatory tool, and the guide may not necessarily be fully applied, as long as the information and the supporting documents are considered enough to validate specific information.

According to the information previously collected, two types of interviews might be conducted:

- Semi-structured interview: to be used whenever there is few information on the candidate; suggesting topics should be provided leading the candidate to speak freely and the interviewer to ask more specific questions and draw conclusions.
- Structured interview: to be used whenever there is sufficient information on the candidate; the questions on the Welding Interview guide (ANNEX 3) should be asked, exploring the identified ambiguities and inconsistencies.

The interview can be conducted in the candidate's workplace, whenever it is considered as an added value for the candidate to demonstrate his/her ability to perform a certain task, using examples of documents/work done. Yet, it's important to highlight that this should not be Technical Interview Guide.

2.4 Self-Assessment Grid

The Self-assessment-grid (ANNEX 4) is an optional tool that might be used by the candidate during the hosting and documentation stage for self-diagnosis. Through this tool, the candidate can compare its own experience against LOs Standards and identify the context in which skills and knowledge were acquired (e.g. if through the performance of professional tasks or if through training). A detailed list and explanation of the evidences supporting its application should also be provided.

The cross-referencing of the information recorded in the self-assessment grid with the evidence identified in the Portfolio about the candidate is fundamental to reduce the subjectivity inherent to the self-assessment processes.

It should be noted that the self-assessment grid does not have an effective evaluative role, since its completion never determines, on its own, the validation or non-validation of competence units

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2.5 Portfolio and Portfolio check-list

The portfolio consists in the set of evidences and proofs regarding the acquired competences.

The portfolio, as well as being an assessment element, it is also the product of the whole process, which is constantly updated, since it not only integrates the evidence of competences previously acquired in training or professional contexts, but it also includes the reports that support the validation of the candidate's competences according to the professional skills reference.

The Portfolio begins to be created during the hosting and documentation stage, structuring itself with greater objectivity in the sequence of the information contained in the Professional and Training Form. The completed Professional and Training Form must always be a part of the Candidate's Portfolio.

The results of the technical interview, as well as the practical demonstrations carried out in the assessment stage, should also be part of the portfolio, as they themselves constitute a way of demonstrating the domain of the execution of certain tasks/evidence of certain competences.

In addition to these elements, reports, certificates and testimonies or other elements that justify the professional competence held, may also be attached.

Together with the Self-Assessment Grid, the Portfolio is examined, and it is from this point on that the Portfolio Check-List (ANNEX 5) can be completed. The analysis and further development of the information gathered with the Portfolio Check-list together with the data taken from interviews and the (self)completion of instruments will allow to validate according to the standard of professional competences.

2.6 Portfolio Technical Review document

If the candidate complies with the requirements, then the assessment begins with the technical review of the Portfolio. This document has the same structure as the self-assessment grid allowing the ATB to control the consistency between data of the self-assessment grid and Portfolio contents. The information collected with Portfolio Technical Review document (ANNEX 6) is important to prepare a targeted technical interview for the candidate.

2.7 Welding Technical Interview guide

The Welding Technical Interview guide (ANNEX 7) has a high evaluative role, in the sense that it confirms if the candidate has or not the required level of knowledge and skills to move to the next stage of the RPL process (validation through examination). This Guide should be used in

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this context as a tool to support the ATB personnel to conduct the interview. For the EWP Profile, at least 2 people are recommended to conduct the technical interview.

To be approved in the interview the candidate has to score at least 50% in each Competence Unit. The criteria to be applied for scoring the candidate is the following:

- wrong or incomplete answer - the score is 0
- correct answer -correspondent maximum score *(please refer to the 'interview scoring sheet' in the Welding Technical Interview excel file).*

2.8 Welding demonstration

The Welding demonstrations (WD) (ANNEX 8) refer to the welding activity, which normally are contemplated in the EWP and European Welder (EW) practical training. A battery of 315 WD is provided, being each one of them related to specific preliminary Welding procedures (pWPS) and specific skills.

The proper WD has to be selected by the examiner, which can be a welding trainer, authorized by the ANB in order to:

- verifying if the candidates have or not the standards requirements, meaning the exact welding skills to access the RPL process.

- validating the candidate welding skills at the practitioner level, meaning being able to weld in the positions HL045/Butt weld or PA or PB/Fillet weld and PF/But weld in more than one welding process or group of materials according with the table below:

Welding process		**Practical Test**		
ISO 9606	**ISO 9606**	**Material Group (ISO TR 15608)**	**Welding Position**	**Test Dimension(s) Diameter/Thickness**
MMA	111	1	PF/BW	6,0 – 13,0
		3	PF/BW	6,0 – 13,0
		4, 5, 6	H-L045/BW	∅60,3 – ∅114.3/ 3.9 – 7.11
		7	PF/BW	6,0 – 13,0
		8	PB/FW	6,0 – 13,0
TIG	141	1	H-L045/BW	∅60,3 – ∅114.3 3.9 – 7.11
		3	PF/BW	2,0 – 6,0
		4, 5, 6	H-L045/BW	∅60,3 – ∅114.3 3.9 – 7.11
		7	PF/BW	2,0 – 6,0
		8	H-L045/BW	∅60,3 – ∅114.3 3.9 – 7.11
		22	PF/BW	2,0 – 6,0
MIG	131	22	PF/BW	6,0 – 13,0
MAG (and/or metal cored)	135 (136)	1	PF/BW	6,0 – 13,0
		8	PB/FW	6,0 – 13,0
FCAW (flux cored only)	136	1	PF/BW	6,0 – 13,0
		8	PF/BW	6,0 – 13,0

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		3	PA/FW	6,0 – 13,0
GAS	311	1	H-L045/BW	∅60,3 – ∅114.3 3.9 – 7.11

Source: Recommended test pieces and positions for practical examination (IAB Guideline 252r3-2016)

Each Welding demonstration includes an evaluation grid for the examiner/trainer to register the results from the candidate performance in each welding task. The evaluation of each task depends on the number of criteria fulfilled / observed, during the performance. Since the evaluation criteria have all the same weighting, a task is validated when at least half of the evaluation criteria have been fulfilled. If the candidate is not able to perform the previously selected WD, a practical welding training plan should be developed by the training provider in order to guarantee that the candidate acquires the intended welding skills. ISO 9606 (ISO 9606 -1-part: steel; ISO 9606 -2 part: Al and Alalloys etc; ISO 9606-3; ISO 9606 -4; etc) is recommended as a scheme for qualification testing of welders/welding.

- Weld quality acceptance criteria for practical proof requires the compliance with ISO 9606

2.9 Examination

The candidate examination is mandatory within the validation stage, in order to guarantee international harmonised and common standards to comply with the industry requirements.

This stage can be carried out as follows:

a) Written Examination: it can be carried out as a written test which consists of a series of essay questions or series of multiple-choice questions;
b) Oral Examination: it can be an interview between the candidate and all members of the examination board
c) Practical examination: the candidates' skills can be demonstrated by a practical demonstration.

The duration of the exam may vary according to the qualification standard and the number of UCs being evaluated.

For the EWP Profile, at least 2 people are recommended to conduct the oral examination.

Impartiality of the trainer has to be guaranteed to perform practical examination, according to the International Welder specific requirements addressed in the IAB 089 Guideline (latest edition).

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3. How to implement the RPL model and tools for the European Welding Practitioner Qualification

As explained previously, the candidate's welding experience will be verified using the following RPL tools:

- 1. Welding Professional and training registration form;
- 2. Welding Professional and Personal Motivational form;
- 3. Welding Interview guide;
- 4. Self-assessment grid;
- 5. Portfolio check-list;
- 6. Portfolio technical review document;
- 7. Technical Interview Guide.

In the first stage – hosting and documentation - the candidate is informed about the requirements that he/she needs to comply with in order to start the RPL Process. For instance, in case a candidate wishes to apply for the European Welding Practitioner qualification, he/she must:

1. Have a min. 3 years' experience as Welder (plate or tube) in the industry;
2. Have a min. 1 year in the job function as Welding Practitioner in the industry, namely in coordinating welding personnel;
3. Be able to weld according to ISO 9606 H-L045 ss nb in one of the welding processes listed in 5.1 of ISO 9606 OR be able to weld in the position PE ss nb or PC and PF ss nb, according to ISO 9606 at least in one process.

The RPL tools Welding Professional and Training Registration form (ANNEX 1), Welding Professional and Personal Motivational form (ANNEX 2), Welding Interview guide (ANNEX 3) and the Self-assessment grid (ANNEX 4) are integrated mostly, in the RPL hosting and documentation phase.

The RPL tool Portfolio check-list (ANNEX 5) is used during the recognition stage, while the Portfolio Technical Review document (ANNEX 6) and the Technical Interview guide (ANNEX 7) are integrated in the assessment and validation phase. The first three mentioned tools must be applied in the first place according to the given sequence, except for the Welding Professional and Training Registration form (ANNEX 1) and the Welding Professional and Personal Motivational form (ANNEX 2), which can be used aleatory.

A Portfolio Check-list (ANNEX 5) will be used in order to verify the compliance with the requirements and the presentation of the mandatory and other relevant documents to the process. If the candidate does not fulfill the requirements, he/she will have to go into training.

If the candidate is not a Certified Welder, then the skills to weld according to ISO 9606 HL045 ssnb OR PE or PC and PF ssnb for one welding process has to be assessed using specific Welding demonstrations (1-135) for Welders (ANNEX 7).

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If the candidate complies with the requirements, then the assessment begins with the technical review of the Portfolio. The information collected with the Portfolio Technical Review document (ANNEX 6) is important to prepare a targeted technical Interview for the Candidate. If the candidate does not pass the technical interview, he/she will have to go into training.

In the Assessment and Validation stage the candidate must reach at least 60% in the writing test so that he/she can go to the oral test. If the candidate does not reach the intended score, he/she will have to go into training.

The next step in the examination is the Practical test that corresponds to the test pieces using specific WD demo (1-315) and pWPS (ANNEX 8) for EWP, in which is intended to verify if the candidate is able to weld according to ISO 9606 positions HL045/Butt weld or PA or PB/Fillet weld and PF/Butt weld in more than one welding process or group of materials additional to those presented in the beginning of the process.

The candidate can waive the practical test if during stage 1 (hosting and documentation), he/she presents a valid Certificate as Welder Level 3, meaning for the positions HL045/Butt weld or PA or PB/Fillet weld in more than one welding process or group of materials additional to those presented in the beginning of the process.

The final stage of the process is the Diploma Awarding issued by the ANB as a result of successfully completing the RPL Process for a qualification or competence Unit.

Figure 2 illustrates the implementation of the RPL model and tools applied to EWP Qualification:

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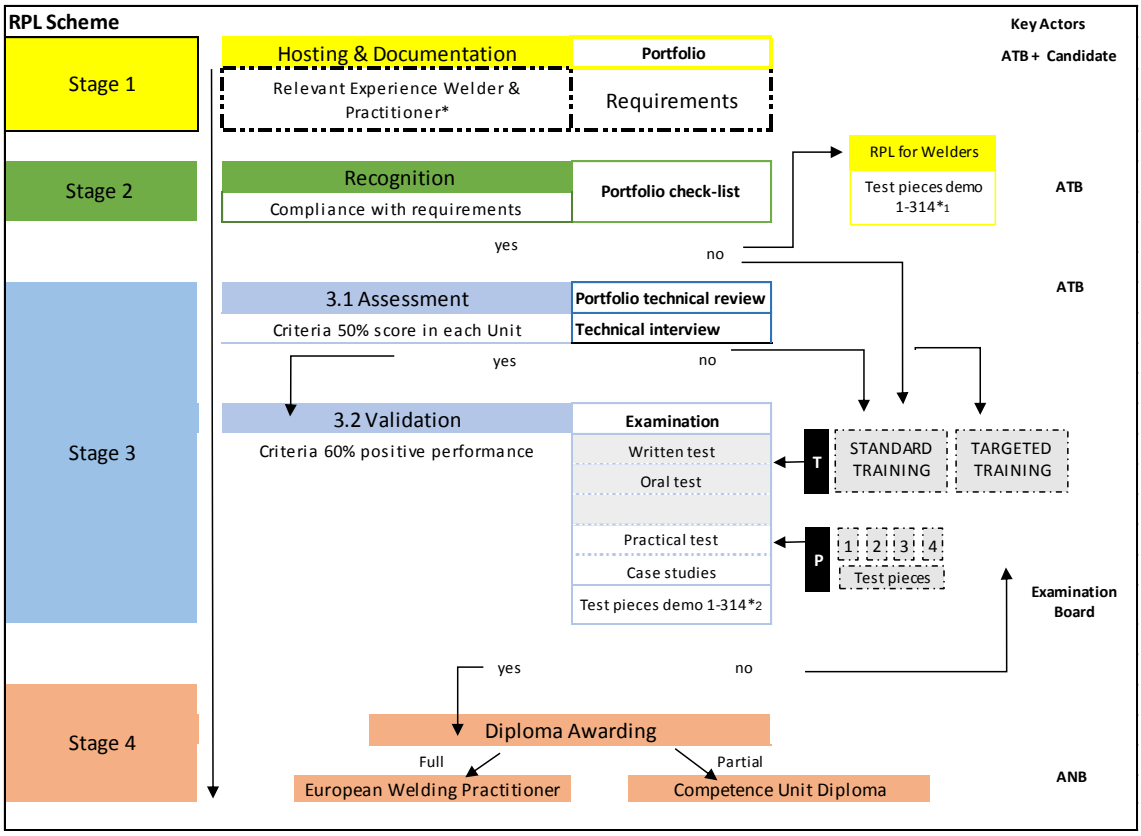

*1If the candidate is not a Certified Welder, he/she has to prove the ability to Weld according ISO 9606 HL045 ss nb OR PE or PC and PF ssnb for one welding process). This ability has to be assessed using specific WD demo (1-314) for Welders

*2 **Practical test** mentioned in stage 3 (Validation) - correspond to the test pieces using specific WD demo (1-314) for EWP, meaning to verify if he/she is able to weld according ISO 9606 positions HL045/ Butt weld or PA or PB/ Fillet weld and PF/Butt weld in more than one welding process or group of materials additional to those presented in the begining of the process

The candidate can **waive the test piece examination (part 2)/welding demonstrations**, if during stage 1 (hosting and documentation), he/she presents a valid Certificat as Welder Level 3 , meaning for the positions HLO45 /Butt weld or PA or PB/Fillet Weld in more than one welding process or group of materials additional to those presented in the beginning of the process.

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4. Key actors in the process

The validation process should be developed by a group of professionals who work together. Some of these professionals assume a more central and structuring role in the process as described next.

a) ATB

The ATB is an organisation that has been assessed and approved by an ANB in accordance with EWF rules for training organisations. By awarding ATB status, the ANB confirms that the ATB fulfils the requirements for delivering training in accordance with one or more EWF Guidelines. It shall be an organization independent from the ANB or clearly separated from it.

The ATB in charge with the RPL process must check the authenticity and validity of the evidences presented by the candidate, as well as the compliance with the access requirements. A designated technician with relevant knowledge in welding approved by the ANB, including EWF Qualification System and the RPL process, and a dedicated team of experimented welding trainers approved by the ANB will perform the assessment in each stage of the process.

b) ANB

The ANB is an organization that has been assessed and authorized by EWF in accordance with EWF rules and is responsible for ensuring that the standards of implementation of the EWF education, examination and qualification systems are maintained.

In the RPL process the ANB is responsible for ensuring the quality in the implementation of the RPL process, according to rules defined, for designating the Examination board and for issuing the Diploma.

c) Examination board

An Examination Board, acting on behalf of the ANB supervises the ATB National part of the examination process.

In this way, independence, integrity and fairness of the examination system are maintained.

The examination board is composed by the following elements:

- chairman (ANB member and independent from the ATB(s));
- representatives from the industry;
- representative from the ATBs and/or from the Vocational and educational and training.

The team of Examiners is appointed by the ANB and is composed by the minimum two persons.

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Examiners responsibilities are to:

a) Organise the examination (written and practical);

b) Set the examination questions (written and oral as applicable);

c) Conduct and mark the written, practical and oral examinations;

d) Decide on borderline results;

e) Decide the result of the examination.

Requirements to be examiners are:

a) Be familiar with the EWF qualification scheme;

b) Have a thorough knowledge of the relevant examination methods and examination documents;

c) Have appropriate knowledge and competence in the field to be examined;

d) Be fluent, both in writing and orally, in the language of examination;

e) Be free from any interest so that they can make impartial and non-discriminatory judgments.

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5. Added value and challenges

The design of a European harmonized scheme for the RPL in the Welding sector has several positive points and added-value for the professionals of the EWF member countries and for the RPL process.

Briefly, it is possible to mention some of these points.

For the professionals:

- It allows to entry and achieve a Welding Qualification, without needing to leave work to dedicate months to training in the conventional way. So, RPL can be used for personal or career development, allowing professionals to have their know-how and skills recognised in an harmonised European Qualification system;
- In this sense, it can accelerate the process of achieving qualifications through the validation;
- It enhances employability (potential access to jobs or fields of employment), improving the functioning of the labour market;
- It Increases motivation for lifelong learning as it provides progression opportunities for further learning, allows the identification of competence areas and areas requiring further study and also allows the development of career plans.

For the RPL process:

- It promotes the involvement of the (the same or other) stakeholders in the process and in different stages;
- It allows the standardization of validation procedures across Europe (following the same elements in arrangements for the VNFIL – validation phases), giving more transparency to the process.

But the RPL in the Welding sector is not free of challenges. It is possible to mention some of them related with the RPL value, capacity building, stakeholders' involvement and quality assurance.

Valuing RPL:

- One of the main challenges relates with the social recognition of RPL. RPL is generally seen as a "second" route to obtain a qualification because it is perceived as inferior in quality to those delivered by formal education and training. In order to overcome this belief, it is necessary to strengthen the trust and credibility of RPL.
- Other way of strengthening the value and currency of validation is based in the fact that qualifications obtained by means of non-formal and informal learning experiences must comply with the same or equivalent standards as those used for qualifications obtained through formal education and training. Different standards implicitly signal differences in value and status of the resulting qualification or certification.

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Capacity building:

- The development of staff involved in validation processes is crucial for the success of the RPL process. This staff is the “front line” of validation and trust largely depends on the work carried out by them. Such staff should be equipped not only with professional skills but also with soft skills.

Stakeholders involvement:

- The stakeholders involvement is very important for the RPL process. As validation is a complex process, it requires the involvement of many stakeholders. But more important is the involvement between stakeholders in the education, training, employment and other sectors (open to civil society).

Quality assurance:

- In order to ensure the trust and credibility in validation processes, it is fundamental to have transparent documented procedures for the development of qualifications, for the assessment of learners, for the maintenance of the qualification and information to learners. Ensuring and improving quality is complex but needs to be applied gradually and following the principles of the quality circle (plan, do, check and change).

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Annexes

Annex 1 – Welding Professional and Training Registration form

Annex 2 – Welding Professional and Personal Motivational form

Annex 3 – Welding Interview guide

Annex 4 – Self-assessment grid

Annex 5 – Portfolio Check-list

Annex 6 – Portfolio Technical Review document

Annex 7 – Technical Interview guide

Annex 8 – Welding Demonstrations

Annex 9 - Preliminary Welding Procedure Specification

Annex 10– Glossary

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Annex 1

Welding professional and training registration form

1. PERSONAL DATA

Name_____

Identification card number _____

valid until ____ / ____ /____ , issued by_____

2. IDENTIFICATION OF THE HIGHEST EDUCATION OR TRAINNG LEVEL

Qualification/ Course_____

Grade awarded _____Level of Qualification (EQF)_____

3. IDENTIFICATION OF PROFESSIONAL TRAINING

(Describe the main training acquired. You should describe the training courses taken, both in training entities and companies, as well as internships, seminars and other events that you deem relevant).

Date of realisation (*)	Name of the Training Activity/Course	Provider	Total duration (in hours)	Grade awarded	Acquired Knowledge	Evaluation methods (ex: project, tests)

(*) From the most recent to the oldest.

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4. IDENTIFICATION OF PROFESSIONAL ACTIVITIES

(Describe all the jobs you have had so far, regardless of whether they are related to the application for certification. It is important that you describe your entire career path. In this field, you should mention only your employment experience).

Period (*)	Duration (years/ months)	Employer/ Company (**)	Branch of Activity	Professional Category	Positions held	Tasks/ Responsibilities (***)
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						
From:__/__/__ To: __/__/__						

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(*) From the most recent to the oldest.
(**) In this field you should also mention the self-employment experience.
(***) In this field you should include information about conditions of work performance: a) Information received to carry out the tasks - type of information, who gives it and how it is transmitted; b) Information transmitted to others in the course of their tasks - what kind of information it gives, whom, how and why it does it; c) Professional relations with the outside of the company, for example, with clients or suppliers; d) Control of your work (by whom, how and when this is done, who decides the organization of your work).

5. IDENTIFICATION OF NON-PROFESSIONAL ACTIVITIES/ EXPERIENCES

(Indicate the information that you consider useful for the evaluation of your professional experience. You should mention in this field the activities/ tasks/ functions performed on a voluntary basis).

Identification of work developed	Duration (years/ months)

6. Other relevant info (e.g. languages proficiency, certifications, licenses, etc)

Languages proficiency	
ICT proficiency	
Certifications/Licenses	
Other:	

7. Attachments (Checklist of proofs)

(You should seek to gather evidence to demonstrate that you are able to perform the tasks you have pointed out)

8. Remarks

_____
_____
_____
_____

Annex 2

Welding Professional and Personal Motivational Form

Name
_____

Identification card number _____ Expiration date ____ / ____ / _____

Attitude towards application

- What reasons led you to enrol in a validation of competences' process?

- What do you expect to achieve with this process?

- Which professional position/ function do you intend to hold (coordinator, inspector, bonder …)?

- Which qualification do you intend to get?

- From the areas listed below and based on your experience, please indicate areas you have higher and lower preference. The non-ticking of an area means that it is not of your preference:

Welding Areas		Higher preference	Lower preference
Welding Coordination	Welding processes and equipment		
	Materials		
	Welding construction and design		
	Fabrication, applications engineering		
Welding Inspection	Quality Assurance/Quality Control		
	Testing of welds and reporting		
Mechanised, orbital and robot welding	Robot		
	Mechanized		
	Orbital		
Welding in railways	Railway		
Manufacturing processes	Laser processing		
	Resistance welding		
	Thermal spraying		
	Arc welding		
	MIG with solid wire electrode (131)/MAG welding with solid wire electrode (135) and MAG welding with flux cored electrode (136)		
	Manual Metal Arc Welding (111)		
	Tungsten Inert Gas Welding with Solid Filler Material (wire/rod) (141)		
	Submerged Arc Welding (12)		
	Adhesive bonding		

Annex 3

Welding Interview guide *(Optional)*

A. Explain the purpose of the interview
(remark: The interview should not be a stage of exhaustive collection of information)

B. What is the intended aim of the validation of skills previously acquired

C. Education background
- Reasons for choosing the course
- Areas/subjects of higher and/or lower preferences and their reasons
- Areas/subjects with less or with greater difficulty of accomplishment and their reasons

D. Training activities, professional qualification courses, workshops, etc.
For each one of the courses attended, ask the candidate about:
- Reasons for attending the course
- Reasons for dropping out of the course, if applicable
- Usefulness of each of the training activities
- Preferred tasks/subjects and their reasons
- Tasks/ themes less preferred and their reasons
- Tasks/ topics where you had /have greater difficulty of accomplishment and their reasons
- Tasks/ topics where you had /have less difficulty of accomplishment and its reasons

E. Professional career
For each one of the professional positions, ask the candidate about:
- Reasons for choosing activity
- Reasons for the completion of the activity
- Preferred tasks/subjects and their reasons
- Less preferred tasks/ themes and their reasons
- Tasks/ themes where you had/ have greater difficulty of accomplishment and their reasons
- Tasks/ topics where you had/ have less difficulty of accomplishment and their reasons
- Concerning welding:
    - Knowledge about welding
    - Welding processes used ((TIG Welding with solid filler material (wire/rod) (141), MIG welding with solid wire electrode (131)/MAG welding with solid wire electrode (135), Manual Metal Arc Welding (111), other)
    - Materials used (carbon steel, stainless steel, aluminium alloys, other)

- Type of product used (plates, tubes, beams, other)
- Type of weld used (fillet welds, but welds, branches)

F. Non-professional activities/ experiences

For each one of the activities/ experiences, ask the candidate about:

- Reasons for choosing that activity
- Reasons for the completion of the activity
- Preferred tasks/ subjects and their reasons
- Less preferred tasks/ themes and their reasons
- Tasks/ themes where you had/ have greater difficulty of accomplishment and their reasons
- Tasks/ topics where you had/ have less difficulty of accomplishment and their reasons

G. Interests by area of activity

- Identifying areas of more and less interest (ask for concrete examples of daily life that support the self-assessment)
- Ask the candidate to rank the interests in order of preference

H. Competences

H1. Information and Communication Technologies (ICT)

- Applications used and in which contexts
- Classification as a user

H2. Foreign languages

- 1st language, 2nd language
- Proficiency level and domains of application
- Classification as a user (in the field of oral and written comprehension)

H3. Communication and managing abilities

- Giving and explaining work instructions
- Coordinating a team work

I. Other data

Annex 4

Self-assessment grid *(optional)*

(Example for CU 2 – Welding and cutting processes

EWP LOs Standard	Self-assessment grid *(Optional)*			
To be use as reference for RPL process	CANDIDATE NAME AND SURNAME:			DATE AND PLACE:
	With my **signature** I confirm the autenticity of the information and attachments:			
Actions	**PROFESSIONAL EXPERIENCE**	**CERTIFICATE or DIPLOMA**	**N.A**	**EVIDENCES**
Competence Unit 2- Welding and Cutting Processes	Indicate where you gain knowledge and skills to perform the Action			List the relevant evidence (e.g. Welder Certificate, recommendation letter, etc.)
2.3 - Apply basic knowledge of TIG Welding with solid filler material (wire/rod) (141) Fundamentals, equipment, applications, main variables, safety and specific problems				
2.4.1 - Apply basic knowledge of the MIG welding with solid wire electrode (131)/MAG welding with solid wire electrode (135) fundamentals, including equipment, applications, main variables, safety and common problems.				
2.4.2 Apply basic knowledge of the MAG Welding with flux cored electrode (136) fundamentals, including equipment, applications, main variables, safety and common problems.				
2.5 Apply basic knowledge of the Manual Metal Arc Welding (111) fundamentals, including equipment, applications, safety and common problems.				
2.6 Apply basic knowledge of the Submerged -Arc Welding (12) fundamentals, including equipment, applications, main variables, safety and common problems.				
2.7.1 Apply basic knowledge of Plasma; Electron Beam; Laser, their application, main variables and most common problems.				
2.7.2 Apply basic knowledge of the fundamentals and the field of application of electro-slag welding (72), friction welding (42), explosion welding (441); diffusion welding (45); aluminothermic welding (71); high-frequency resistance welding; cold-pressure welding (48). Including equipment, main variables and most common problems.				
2.8 Apply basic knowledge of the basic principles and the fields of application of the most common cutting and edge preparation processes used in weld construction, including equipment, main variables, safety and common problems.				

Annex 5

Welding check-list portfolio

Candidate name and surname:		
Compliance with requirements for applying Recognition of Prior Learning Scheme (*[1]) *(to be filled in by the Authorised Training Body - ATB)*	**Yes**	**No**
Min. 3 years' experience as Welder (plate or tube) in the industry		
Min. 1 year job function as Welding Practitioner in the industry, namely in coordinating welding personnel and tasks		
Weld according to ISO 9606 HL045 ss nb + PE or PC and PF ssnb in one Welding process		
The candidate fulfils the access requirements		
ATB Signature_____Date and place_____		

(*[1]) *The ATB should verify the authenticity and validity of the evidences, as well as the compliance with the entry requirements.*

Type of documents	**Yes**	**No**
Welding Professional and Personal Motivations Form ([2])*		
Welding professional and training registration form ([2])*		
Self-assessment grid		
School diplomas ([2])*		
Diplomas for training courses ([2])*		
Diplomas of participation in seminars		
Certification documents (e.g. Valid Welder Qualification Certificate) ([2])*		
Performance evaluations		
Statements from previous employers		
Previous job descriptions ([2])*		
Recommendation Letters		
Photography's/videos related with performed jobs		
Awards/ rewards		
Report about Welding Demonstrations ([2])*		
Result of the Technical Interview ([2])*		
Others. Which? _____ _____		

(*[2]) *The presentation of these documents is mandatory*

Annex 6

Portfolio technical review document

(Example for CU 2 - Welding and cutting processes)

EWP LOs Standard	Technical Review of Portfolio		
To be use as reference for RPL process	Authorised Training Body (ATB) identification:		
	DATE AND PLACE:		
Actions	In the portfolio assessment, the ATB should identify candidate knowledge and skills in each Competence Unit		
Competence Unit 2- Welding and Cutting Processes	YES	NO	REMARKS
2.3 - Apply basic knowledge of TIG Welding with solid filler material (wire/rod) (141) Fundamentals, equipment, applications, main variables, safety and specific problems			
2.4.1 - Apply basic knowledge of the MIG welding with solid wire electrode (131)/MAG welding with solid wire electrode (135) fundamentals, including equipment, applications, main variables, safety and common problems.			
2.4.2 Apply basic knowledge of the MAG Welding with flux cored electrode (136) fundamentals, including equipment, applications, main variables, safety and common problems.			
2.5 Apply basic knowledge of the Manual Metal Arc Welding (111) fundamentals, including equipment, applications, safety and common problems.			
2.6 Apply basic knowledge of the Submerged -Arc Welding (12) fundamentals, including equipment, applications, main variables, safety and common problems.			
2.7.1 Apply basic knowledge of Plasma; Electron Beam; Laser, their application, main variables and most common problems.			
2.7.2 Apply basic knowledge of the fundamentals and the field of application of electro-slag welding (72), friction welding (42), explosion welding (441); diffusion welding (45); aluminothermic welding (71); high-frequency resistance welding; cold-pressure welding (48). Including equipment, main variables and most common problems.			
2.8 Apply basic knowledge of the basic principles and the fields of application of the most common cutting and edge preparation processes used in weld construction, including equipment, main variables, safety and common problems.			

Annex 7
Technical interview guide

(Example of questions for the CU 5 Construction and Design)

Technical Interview Guide						
Authorised Training Body (ATB) identification:						
DATE AND PLACE:						
After the Portfolio analysis, a technical interview is conducted with focus on the key actions/themes addressed in each Unit. To be approved in the interview the candidate has to score at least 50% in each Competence Unit.						
ACTIONS		**QUESTION**	**TYPE OF ANSWER**	**SCORING**	**WEITHNING**	**NEXT STEPS**
Competence unit 5- Construction and design						Validation
5.1 Apply basic knowledge of the design of weld details related to a given material, wall thickness, accessibility, loading, welding process, welding position, welding symbols, available equipment, tolerances.	**1**	Give examples of different joint types according to ISO 9692?			**5**	
	2	Discuss the position of the throat dimension and bead length dimentions in welding symbology.				
	3	Draw a representation for a single V butt welding joint, to be welded with the Submerged Arc Welding (12) process, having a removable backing plate. The bead is 500 mm long.				
	4	Draw a representation for a single bevel butt welding joint, to be welded with the Manual Metal Arc Welding (111) process in the PC position and having a backing weld. The weld cap should be flat-finished. The bead is 80 mm long.				
	5	Consider a fillet weld joint, and the welding symbols and details. Draw the welding joint representation according to the System A of EN ISO 2553.				
5.2 Apply basic knowledge of identification of joints and relevant details of welded metallic structures.	**1**	Between a butt joint and an overlap joint, which one resist better to a tensile load?			**4**	
	2	What are the advantages of having a double V butt weld compared to a single V butt weld in a component where low deformations are one of the acceptability criteria?				
	3	Discuss the major load types associated with a cable, a bar and a beam.				
	4	Consider the lamellar tearing problem: explain how it can occur, and give one example of a bad and good joint design.				
	5	Compare a bolted joint to a welded joint, by giving examples of advantages and disadvantages of each one.				
5.3 Apply basic knowledge of fatigue and the influence of notches and their avoidance.	**1**	Give examples of a welded structure that can suffer from fatigue problems due to its design, and give suggestions to improve its design.			**2**	
	2	How is the life of a component influenced by the presence of a notch?				
	3	Give examples of dynamically loaded components.				
	4	Identify mechanical methods to improve the fatigue life of a welded component.				
	5	Identify other methods to improve the fatigue life of a welded component.				
				Unit 5 ∑ candidate score	11	

Annex 8

Welding demonstration

(Example of WD 06 Perform a T joint fillet weld in t>3 in PF position with SMAW process with single pass technique in Carbon Steel)

NQF level:	**Qualification: European Welding Practitioner**	
EQF level:		
Candidate name:		
	Practical exercise to be used during the Welding Demonstration (WD)	
	WD 06 - Perform a T-joint fillet weld in t>3 in PF position with the SMAW process with single-pass technique in Carbon Steel.	
1. GOAL	Perform SMAW (111) fillet welding in plates in PF position according to the applicable EWF / IIW specifications, standards and directives.	
2. DURATION		
3. RESOURCES (equipment, materials, tools, etc)	Preliminar Welding Procedure Specification -pWPS, welding power source for SMAW, parent material according to pWPS, filler material according to pWPS, safety equipment (welding mask, welding gloves, safety boots, etc.), welding gauges for weld evaluation/equipment for cleaning the weldment.	
INSTRUCTIONS (these instructions can/or not be available for the candidate)	Read the WPS 06-Group 1.1 welding procedure specification provided; Select the appropriate filler material; Regulate the parameters in the power source; Assemble the test coupon according to the information; Perform the welding with the sequence described in the base document; Ensure that the morphology of the weld beads meets the acceptance criteria; Verify the cleanliness between weld beads; Apply the appropriate welding technique (String or Weave Bead); Ensure proper overlapping of weld bead.	
5. ASSESSMENT GRID (performance during the Welding demonstration	**Weighting**	4
	1. Time spent in the execution	
	2. Compliance with health and safety rules	
	3. Ability to take decisons and solve problems	
	4. Work planning	
	5. Compliance with the appropriate sequence of work	
	6. Adequate demonstration of conceptual and technical knowledge	
	7. Selection and correct use of spaces, equipment, tools and materials	
	8. Skill to perform the task	
	9. Optimization of time and materials	
	10. Innovation/criativity	n.a
	11. Quality of the final product/result	
	12. Team work ability	n.a

Annex 9

Preliminary Welding Procedure Specification (Example WD 06)

pWPS no.	06 – Group 1.1
pWPQR no.	NA
Company/Training Institution	

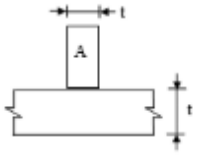
JOINT

Joint Type	Fillet			
Backing	YES	-	NO	-
Welding Position	PF			

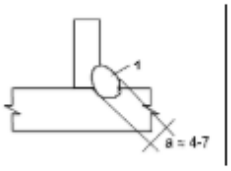
TECHNIQUE

String/Weave Bead	String / Weave
Oscillation: amplitude, frequency, dwell time	$\leq 4 \times \phi$ *filler material*
Pulse Welding Details	NA

SCHEME



SEQUENCE



PREPARATION

Joint preparation	Oxy-gas cutting
Cleaning	-
Single/ both side	ss
Back Gouging	-
Tack Welding procedure	-

REMARKS

Designation Gas/Flux (Shielding) [l/min]	-
Designation Gas/Flux (Backing) [l/min]	-
Tungsten Electrode Type / [Symbol] [mm]	-
Electrode/Torch Angle [[Symbol]]	-
Distance contact tube/work piece [mm]	-
Nozzle Diameter [mm]	-
Mode of Metal Transfer	-
Plasma details (gases, nozzle)	-

PARENT METAL	A	B
Type/ Designation / Material Standard	Plates / -	- / -
Group according to ISO/TR15608	1.1	-
Metal Thickness [mm] / Outside Diameter [Symbol] [mm]	t>3 mm / -	- / -

NOTE: Only fill in column B if different from column A

FILLER MATERIALS

Run	Designation/Standard	Trade Mark	[Symbol] [mm]	Consumable Type
1	EN ISO 2560-A-E 38 2 RB 1 2	-	2,5	Electrode
1	EN ISO 2560-A-E 42 5 B 4 2 H5	-	2,5	Electrode

WELDING PARAMETERS

Run	Process/Type	Current/ Polarity	Welding Speed [mm/min]	Wire Feed Speed [mm/min]	Current Intensity [A]	Voltage [V]	Heat Input [kJ/mm]	Shielding Gas [l/min]	Purging Gas [l/min]
1	111	DC +	-	-	-	-	-	-	-
1	111	DC +	-	-	-	-	-	-	-

Pre-heating/ Maintenance Temperatures [[Symbol] C]	Post-heating [[Symbol] C]	Interpass Temperature [[Symbol] C]	PWHT and/or Ageing (Time/Temperature/Method/ Heating/Colling Rate) [[Symbol] C/h]
-	-	-	-

OTHER

Welder Qualified according to EN ISO 9606-1.

Date	Issued	Approved	Description	Reference
___/___/___			Perform a T-joint fillet weld in t>3 in PF position with the SMAW process with single-pass technique in Carbon Steel.	Sheet 1/1

Annex 10

Glossary

Alternative Route - Is aimed at individuals who may already have experience of the job function at a particular level without holding the appropriate qualification diploma. These individuals will have already gained full or part knowledge of the syllabus defined in this guideline and can demonstrate their capability to proceed to examination either directly without compulsory attendance at an ANB approved training course or by attending only part of such a course.

Source: Rules for the Implementation of EWF Guidelines for the Education, Examination, Qualification and Certification of Welding Personnel. Approved: November 2016.

Assessment of learning outcomes - Process of appraising knowledge, know-how, skills and/or competences of an individual against predefined criteria (learning expectations, measurement of learning outcomes). Assessment is typically followed by validation and certification.

Comment:

In the literature, 'assessment' generally refers to appraisal of individuals whereas 'evaluation' is more frequently used to describe appraisal of education and training methods or providers.

Source: Cedefop, 2008c.

Certification of learning outcomes - Process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, know-how, skills and/or competences) acquired by an individual have been assessed and validated by a competent body against a predefined standard.

Comment:

Certification may validate the outcome of learning acquired in formal, non-formal or informal settings.

Source: Cedefop, 2008c.

Certification of Welding Personnel - The procedure leading to a written testimony of an individual's competence demonstrated by examination and assessment of experience and subsequent surveillance to confirm that the competence has been retained. This process leads to the issue of a Certificate with a validity period.

Source: Rules for the Implementation of EWF Guidelines for the Education, Examination, Qualification and Certification of Welding Personnel. Approved: November 2016.

Formal learning - Learning that occurs in an organised and structured environment (in an education or training institution or on the job) and is explicitly designated as learning (in terms of objectives, time or resources). Formal learning is intentional from the learner's point of view. It typically leads to validation and certification.

Source: Cedefop, 2008c.

Informal learning - Learning resulting from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, time or learning support. Informal learning is in most cases unintentional from the learner's perspective.

Comments:

• informal learning outcomes do not usually lead to certification but may be validated and certified in the framework of recognition of prior learning schemes;

• informal learning is also referred to as experiential or incidental/random learning.

Source: Cedefop, 2008c.

Learning outcomes - Means statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence.

Source: RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning.

Non-formal learning - Learning which is embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner's point of view.

Comments:

• non-formal learning outcomes may be validated and lead to certification;

• non-formal learning is sometimes described as semi-structured learning.

Source: Cedefop, 2008c.

Qualification of Welding Personnel - A demonstration in accordance with the EWF Guidelines and rules, conducted by the Authorised Nominated Body, involving an examination of the knowledge and skill related to specified criteria. Success in this examination leads to the issue of the related EWF diploma gained. Such diplomas remain valid for the lifetime of the holder.

Source: Rules for the Implementation of EWF Guidelines for the Education, Examination, Qualification and Certification of Welding Personnel. Approved: November 2016.

Recognition of prior learning - means the validation of learning outcomes, whether from formal education or non-formal or informal learning, acquired before requesting validation.

Source: COUNCIL RECOMMENDATION of 20 December 2012 on the validation of non-formal and informal learning.

Validation of non-formal and informal learning (VNFIL) - a process of confirmation by an authorised body that an individual has acquired learning outcomes measured against a relevant standard and consist of the four distinct phases: Identification through dialogue of particular experiences of an individual, Documentation to make visible the individual's experiences, Formal assessment of these experiences, and Certification of the results of the assessment which may lead to a partial or full qualification.