



## Commission VI, Terminology WG-STAND, Standardization

### Report on ISO/TC 44/SC 7 Activities

### VI-1380-2024 / WG-STAND-0393-2024

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**Comments:** To be presented during the 2024 Annual Assembly meetings of C-VI and WG-STAND.

## 1 Introduction

The last ISO/TC 44/SC 7 was a hybrid meeting, with people attending face to face in Genoa, Italy, and others attending online, on 7<sup>th</sup> of November 2023; 11 countries were represented + IIW.

## 2 Matters linked to the activity of IIW Commission VI

For detailed overview on welding vocabulary normative documents, see Annex A.

### 2.1 ISO/PWI 25901-1: Welding and allied processes – Vocabulary – Part 1: General terms

ISO/TR 25901-1 was published on the 17<sup>th</sup> of March 2016 and was submitted to systematic review in late 2021-early 2022. 5 countries voted for confirmation, 5 for revision and 1 for withdrawal. Commission VI has started preliminary work on Part 1 at the 2019 Annual Assembly in Bratislava but did not progress further, partly due to non-availability of the project leader at web-meetings. Commission VI has reviewed the comments submitted during the 2022 Annual Assembly and has taken a resolution recommending ISO/TC 44/SC 7 to revise this document. This was agreed during the 2022 ISO/TC 44/SC 7 meeting, and the project was added to its work programme as a PWI (preliminary work item). Commission VI will provide a proposal to resolve the comments submitted during the systematic review and will develop a draft under Route I.

Note: ISO 17659:2002 ("Welding – Multilingual terms for welded joints with illustrations") is to be revised since 2018; its content may be beneficially incorporated in the next edition of ISO 25901-1.

### 2.2 ISO 25901-2: Welding and allied processes – Vocabulary – Part 2: Health and safety

This part is the first of the series having been developed as an International Standard (IS), as a result of the decision of the ISO Central Secretariat (ISO/CS) not to publish Vocabularies as Technical Reports (TR) anymore. It was published on 21<sup>st</sup> of December 2022 and will consequently be submitted to systematic review by the end of 2027.

### **2.3 ISO/TR 25901-3: Welding and allied processes – Vocabulary – Part 3: Welding processes**

This part was published on the 17th of March 2016 and was submitted to systematic review in late 2021-early 2022. 6 countries voted for confirmation, 3 for revision and 1 for withdrawal. Commission VI has reviewed the comments submitted during the 2022 Annual Assembly and has taken a resolution recommending ISO/TC 44/SC 7 to confirm this document. This was agreed during the 2022 ISO/TC 44/SC 7 meeting. Even systematic reviews are not mandatory for TRs, it will probably be submitted to a review in late 2026 or early 2027.

### **2.4 ISO/PWI 25901-4: Welding and allied processes – Vocabulary – Part 4: Arc welding**

This part was published on the 17th of March 2016 and was submitted to systematic review in late 2021-early 2022. 6 countries voted for confirmation, 4 for revision and 1 for withdrawal. Commission VI has reviewed the comments submitted during the 2022 Annual Assembly and has taken a resolution recommending ISO/TC 44/SC 7 to revise this document. This was agreed during the last ISO/TC 44/SC 7 meeting, and the project was added to its work programme as a PWI (preliminary work item). Commission VI will provide a proposal to resolve the comments submitted during the systematic review and will develop a draft under Route I.

### **2.5 ISO/AWI 25901-5: Welding and allied processes – Vocabulary – Part 5: Laser welding**

During the 2021 Annual Assembly, Commission VI agreed to forward its completed draft to ISO/TC 44/SC 7 in order register a new work item. The NP ballot resulted in 13 approvals, 0 disapproval and 6 abstentions. The comments submitted were reviewed by Commission VI during a web-meeting on 9<sup>th</sup> February 2023. Further discussions were needed afterwards and 5 web-meetings were held between September 2023 and May 2024. In the meantime, ISO/TC 44/SC7 took a resolution to allow a 9-months extension for the development of the project. An additional session is scheduled during the 2024 Annual Assembly in order to address remaining comments before converting the draft to the proper format and to proceed further with a CD ballot.

### **2.6 ISO/AWI 25901-6: Welding and allied processes – Vocabulary – Part 6: Resistance welding**

This part is being developed by ISO/TC 44/SC 6/WG 3. The NP ballot resulted in 8 approvals, 0 disapproval and 6 abstentions. The project leader expressed the need to discuss in C-VI the terms "power supply" vs. "power source" during the 2024 Annual Assembly.

### **2.7 Other parts**

Commission VI keeps on making progress on the thermal cutting term and definitions.

Another project on plastics joining was developed in C-VI and is being handled by ISO/TC 61/SC 11/WG 14. A resolution by C-VI to forward it to that group as a Route 1 project is expected during the 2024 Annual Assembly.

Since none of the ISO committees seems to work or plans to work neither on electron beam welding nor on brazing and soldering, IIW Commission VI may propose drafts on these subjects. ISO 857-2 ("Welding and allied processes - Vocabulary - Part 2: Soldering and brazing processes and related terms") was

subjected to systematic review in late 2021-early 2022 and was clearly confirmed (13 votes for confirmation, 0 for revision, 0 abstention).

The gas welding vocabulary is under the responsibility of ISO/TC 44/SC 8 which decided to retain ISO 15296 as their vocabulary standard. The 2017 edition was confirmed after its systematic review which ended on the 12th of April 2023.

Regarding friction, friction stir and friction stir spot welding, there is no urgent need, or maybe no need at all for a specific part in the ISO/TR 25901 series, since the related terms and definition are clearly and respectively covered by ISO 15620, ISO 25239-1 and ISO 18785-1.

Finally, according to the structure and work program of ISO/TC 44 and its SCs, other parts of the 25901 series could also cover welding consumables, destructive and non-destructive testing of welds, mechanical joining, underwater welding and welding in aerospace.

## **2.8 OBP problems and suggested solutions**

The document drafted by Glenn Ziegenfuss and which was already discussed and approved in both IIW C-VI and WG-STAND was forwarded to ISO/TC 44/SC 7 for consideration, which decided to endorse it. A resolution was taken in 2020 to request ISO/CS to follow-up, respond and resolve the identified problems. After years of silence from ISO regarding these issues, an answer from the ISO digital publishing manager was finally received at the end of June 2021 and will have to be thoroughly examined to determine whether further actions are still needed.

## **3 Other matters**

### **3.1 ISO 2553, Welding and allied processes – Symbolic representation on drawings – Welded joints**

The latest edition of the standard was published on the 1st of March 2019. Some errors seemed to imply the publication of a corrected version or amendment, but ISO/CS indicated that the required changes were not worth such a corrected version or amendment. ISO/TC 44/SC 7 disapproved this approach and took a resolution to request ISO reconsidering this, by publishing an amendment or by starting a minor revision. A corrected version was finally published in September 2021.

Systematic review was launched in the beginning of 2024 and results will be addressed in November 2024.

### **3.2 ISO 4063, Welding, brazing, soldering and cutting – Nomenclature of processes and reference numbers**

The new edition was published on the 7th of March 2023. A consultation is being held by the time this report is circulated to decide whether or not an amendment or revision is needed to address possible errors in the published version (especially regarding inclusion of thermal joining processes for plastics).

### **3.3 ISO 6947, Welding and allied processes – Welding positions**

4th edition published in October 2019.

Systematic review was launched in the beginning of 2024 and results will be addressed in November 2024.

### **3.4 Systematic reviews 2025**

The following documents are due to systematic review in 2025:

- ISO 6520-1:2007, Welding and allied processes - Classification of geometric imperfections in metallic materials - Part 1: Fusion welding
- ISO 9692-2:1998 Welding and allied processes – Joint preparation – Part 2: Submerged arc welding of steels
- ISO 9692-3:2016 Welding and allied processes – Types of joint preparation – Part 3: Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys

## **4 Next Meeting**

ISO/TC 44/SC 7 will meet on 7<sup>th</sup> of November 2024 in Paris (France), in conjunction with ISO/TC 44 and other SCs on the same week. Remote participation will be available for those wishing to participate online..

## ANNEX A – WELDING AND ALLIED PROCESSES VOCABULARIES - Status on 2023-07-12

This table provides a quick overview of the welding vocabulary normative documents. It is periodically updated according to the ongoing work carried out in the different working units concerned. The documents that are highlighted:

- in green are currently under development and registered in ISO Projects;
- in yellow are currently under development but not yet registered;
- in red are currently pending;
- in blue are currently published with no work anticipated in the near future. The table below provides an overview of the standardized vocabularies related to welding and allied processes. It is periodically updated according to the ongoing work carried out in the different working units concerned.

Part	Subject	Responsibility	Current status	Timeframe	Next step	Comment
ISO/TR 25901-1	General terms	ISO/TC 44/SC 7	00.00 (PWI) since 2022-11-30	PWI valid for 3 years	Develop draft for revision	Developed in IIW C-VI under Route 1. Preliminary work for the revision started in C-VI in summer 2019. RESOLUTION 8/2022 Revision of ISO/TR 25901-1 and ISO/TR 25901-4 (PWI) as IS in response to SR ballot. PWI registered for revision of ISO/TR 25901-1 :2016 and conversion from a TR to an International Standard: 2022-11-30 Note: NWIP ballot will be required to register IS work item
ISO 25901-2	Health and safety	ISO/TC 44/SC 7	60.60 (published) since 2022-12-20	-	Next SR: 2027-10-15	Of interest to ISO/TC 44/SC 9 “Health & safety”Project initiated in ISO/TC 44/SC 9 in 2010. 1 <sup>st</sup> draft circulated in 2012. Project transferred and registered in the work program of ISO/TC 44/SC 7 on 2014-01-28. Decision to have a new draft developed in IIW C-VI under Route 1 on 2015-07-07. Projected cancelled because of target date for publication not met, but immediately registered again on 2017-05-09.



					<p>DTR ballot initiated 2017-05-19, closed 2017-06-23: approved with comments.</p> <p>Proposed comments resolution from IIW C-VI approved by ISO/TC 44/SC 7 on 2017-07-05. New draft developed in order to have the document published in a three-column format (English-French-German) and to incorporate other significant technical and editorial changes.</p> <p>Second DTR ballot initiated 2017-10-30, closed 2018-01-10: approved with comments.</p> <p>Ballot to approve proposed comments resolution from IIW C-VI and progression to publication initiated 2018-07-04, closed 2018-08-08: Approved</p> <p>Refusal at the publication stage from ISO/CS to publish the approved draft; vocabularies cannot be published as technical reports anymore. Also, additional issues especially regarding the rendering of the "source" paragraphs in the draft.</p> <p>Ballot to cancel TR project and launch NWIP ballot initiated 2019-11-10, closed 2019-12-10: Approved</p> <p>NWIP ballot for full ISO initiated 2019-12-18, closed 2020-02-12: Approved.</p> <p>Project registered: 2020-04-14</p> <p>ISO editorial comments on TR resolved to create full ISO to proceed directly to DIS ballot</p> <p>DIS opened 2021-02-17 and closed 2021-05-13.</p> <p>Most comments were resolved in July 2021 by IIW C-VI, but an additional meeting, preferably with experts from C-VIII and/or ISO/TC 44/SC 9, is needed before it is submitted for the FDIS (as there will be technical changes to the draft).</p>
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						<p>ISO/CS agreed to have this standard published in a three-column format, but affirmed this is an exception, and that this layout is very likely to be prohibited in the next revision of the ISO Directives.</p> <p>FDIS opened 2022-09-05 and closed 2022-11-01.</p> <p>ISO 25901-2:2022 published: 2022-12-20</p> <p>Published in a three-column format in English, French and German.</p>
ISO/TR 25901-3	Welding processes	ISO/TC 44/SC 7	60.60 (published) since 2016-03-17	-	Next (optional) SR: late 2026 / early 2027	<p>Developed in IIW C-VI under Route 1.</p> <p>RESOLUTION 9/2022 Confirmation of ISO/TR 25901-3:2016 in response to SR ballot.</p> <p>Revision project will not go ahead yet, due to lack of resources, the need for significant work to be undertaken on the figures and the prioritisation of other projects.</p>
ISO/TR 25901-4	Arc welding	ISO/TC 44/SC 7	00.00 (PWI) since 2022-11-30	PWI valid for 3 years	Develop draft for revision	<p>Developed in IIW C-VI under Route 1.</p> <p>RESOLUTION 8/2022 Revision of ISO/TR 25901-1 and ISO/TR 25901-4 (PWI) as IS in response to SR ballot.</p> <p>PWI registered for revision of ISO/TR 25901-1 :2016 and conversion from a TR to an International Standard: 2022-11-30</p> <p>Note: NWIP ballot will be required to register IS work item</p>
ISO/AWI 25901-5	Laser welding	ISO/TC 44/SC 7	20.00 (New project registered in TC/SC work programme) since 2022-05-26	57 months	CD or DIS ballot	<p>First registered project cancelled in September 2018 (Resolution 4/2018) as unable to keep the project to schedule.</p> <p>New WI registered to SC 7 on 2022-05-26.</p> <p>Resolution ISO/TC 44/SC 7 6/2023 : 9-month extension</p> <p>Next step: CD ballot</p>
ISO/PWI 25901-6	Resistance welding	ISO/TC 44/SC 6/ WG 3	00.00 (Proposal for new	-	First draft to be finalized	<p>ISO/TC 44/SC 6/WG 3 has started to work on the vocabulary for resistance welding and will probably register a new work item latter on in 2020 or in 2021.</p>

			project received)		and registered as NWIP	Related terms and definitions are also available in IIW C-VI which is willing to contribute to the project.
ISO/PWI 472-3	Thermal joining of plastics	ISO/TC 61/SC 11 /WG 14	00.00 (proposal for new project received) since 2023-09-27	PWI valid for 3 years	First draft finalized, to be registered as NWIP	<p>In 2016, ISO/TC 44 decided to authorize a new part of ISO/TR 25901 on this subject under the responsibility of ISO/TC 44/SC 7.</p> <p>After clarification of the respective scopes of ISO/TC 44, ISO/TC 61 and ISO/TC 138, it is ISO/TC 61/WG 4 which has taken the responsibility to process the draft.</p> <p>Work has started in 2018 in IIW C-VI and is on-going.</p> <p>In 2023, ISO/TC 61/WG 4 was transferred to ISO/TC 61/SC 11/WG 14 (SC 11 is Plastic Products), which registered the project as part 3 of a new series of ISO 472 entitled "Plastics - Vocabulary - Part 3: Thermal joining of plastics", using the IIW C-VI document as the draft. The first meeting of ISO/TC 6021/SC 11/WG 14 took place (virtually) on 12 September 2023.</p> <p>The draft was converted to the ISO template. Further processing will be discussed in C-VI during the 2024 IIW Annual Assembly.</p>
	Thermal cutting	-	Not registered	-	First draft to be finalized and registered as NWIP.	<p>In 2016, ISO/TC 44 decided to authorize a new part of ISO/TR 25901 on this subject under the responsibility of ISO/TC 44/SC 7.</p> <p>Work started in 2017 in IIW C-VI and is on-going.</p>
	Electron beam welding	-	Not registered	-	-	<p>Project registered as preliminary work item: 2016-11-23 (Note a PWI needs to progress to the proposal stage within 3 years, otherwise ISO automatically deletes it from the SC 7 work programme in line with its procedures.)</p> <p>RESOLUTION 5/2018 Cancellation of PWI for project ISO/PWI TR 25901-8</p> <p>Project deleted: 2018-09-11</p> <p>No active work currently under progress.</p>





						Related terms and definitions are available in IIW C-VI which is willing to contribute to the project.
	Brazing	-	Not registered	-	-	<p>SR of ISO 857-2 started 2017-07-15, ended 2017-12-06 resulting in confirmation. The terms and definitions it contains should be the basis for the two parts of the series covering respectively brazing and soldering; the comments submitted on the SR ballot of ISO 857-2 should be taken into account.</p> <p>Related terms and definitions are also available in IIW-C VI which is willing to contribute to the project.</p> <p>It is the intention of SC 7 to register the part on soldering in the SC 7 work programme, when resources to undertake the drafting become available.</p> <p>ISO 857-2:2005 SR ballot closed 2022-03-14 – 0 withdraw, 0 revise/amend, 15 confirm. ISO 857-2:2005 was confirmed in line with the ballot result.</p>
	Soldering	-	Not registered	-	-	<p>In 2015, ISO/TC 44/SC 12 decided to pass the responsibility of this project to ISO/TC 44/ SC 7. However, no modification was made in the ISO Project Portal.</p> <p>As the PWI did not progress to the proposal stage within 3 years, ISO automatically deleted it from the SC 12 work programme (2017-08-05) in line with its procedures.</p> <p>SR of ISO 857-2 started on 2017-07-15 in ISO/TC 44/SC 7; the terms and definitions it contains should be the basis for the two parts of the series covering respectively brazing and soldering.</p> <p>Related terms and definitions are also available in IIW C-VI which is willing to contribute to the project.</p> <p>SC 12 also advised that SC 7 refer to all SC 12 standards for existing terms and definitions as given in their terms and definitions clauses.</p> <p>It is the intention of SC 7 to register the part on soldering in the SC 7 work programme, when resources to undertake the drafting become available.</p>



						ISO 857-2:2005 SR ballot closed 2022-03-14 – 0 withdraw, 0 revise/amend, 15 confirm. ISO 857-2:2005 was confirmed in line with the ballot result.
	Friction welding	-	Not registered	-	-	<p>One of the parts (Part 5) was originally allocated to gas welding. In 2013, ISO/TC 44/SC 8 decided to retain ISO 15926 as the vocabulary standard for gas welding.</p> <p>In 2014, ISO/TC 44 decided to allocate this part number to friction welding. However, no modification was made in the ISO Project Portal. It is also unclear whether Part 5 was incorrectly assigned to SC 8 rather than to SC 10, when the numbering of Parts was amended in 2014.</p> <p>As the PWI did not progress to the proposal stage within 3 years, ISO automatically deleted it from the SC 8 work programme (2017-08-24) in line with its procedures.</p> <p>It is the intention of SC 7 to register a Part on friction welding in the SC 7 work programme, when resources to undertake the drafting become available.</p>

