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SFERA-III

Contributions to developing CST Standards

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SFERA-III

Final Event

December 13, 2023 | Madrid, Spain

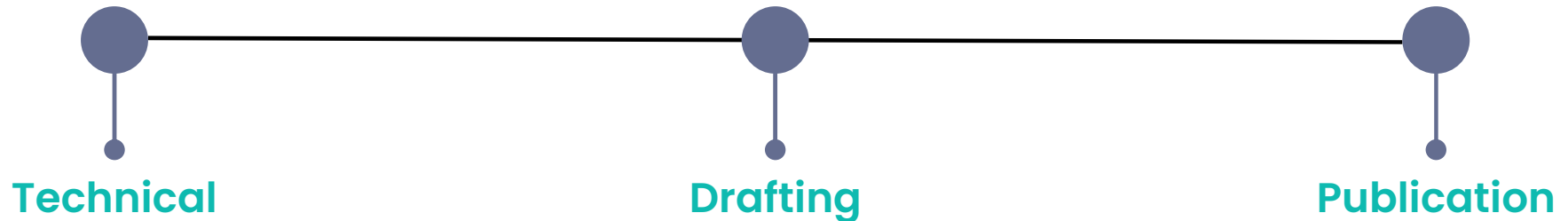


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Relevance of standardization for the development

- Standardization is an important milestone on the roadmap from technology development over prototypes and demonstrators and to market introduction.
- Standards document and publish the state of the art in technology and are a reference for manufacturing, installation and operation of technical products.
- SFERA-III partners have been actively contributing to the development of technical contents and to the writing for new standards or updates of existing ones.

Standards preparation stages



Technical

Technical and scientific preparation of the contents
→ Agreement in limited group

Options:

- Reviewed scientific publications
- Internal standard/rule
- International working group/technical guideline (here: SolarPACES!)

Drafting

- Proposing a standardization topic,
- forming project team of experts,
- drafting text (committee draft),
- commenting/enquiry stage

Publication

- Final approval and publication of the consensus as
- Standard, or
 - technical specification

International CST standardization



Spain

Spanish UNE (former AENOR) has published a total of 10 standards, of which some are predecessors of IEC work items.

The UNE project on CSP has been assigned a new number, now **CTN 224** (formerly CTN 206), led by the Spanish CSP association PROTERMOSOLAR



IEC

International Electrotechnical Commission IEC – Technical Committee **TC117** (on solar thermal electric plants), **IEC62862** series, has published

- 9 standards / technical specifications,
- 5 of them published during the project,
- 9 started new during these years.

Relevant standards during SFERA-III, status (1)

- IEC 62862-1-6
(Silicone-based heat transfer fluids)
FDIS (final draft) published
- IEC 62862-1-5
(Performance test for solar thermal electric plants) in publication (FDIS)
- IEC 62862-1-4
(Insulation materials) working draft in preparation
(but project leader unavailable)
- IEC 62862-1-1
(Terminology)
maintenance team added terms for next edition



Relevant standards during SFERA-III, status (2)

- IEC 62862-3-4
(parabolic trough field performance test) draft progressing well towards CD (committee draft)
- IEC 62862-3-5
(Laboratory reflectance measurement of solar reflectors) in preparation (draft)
- IEC 62862-3-6
(Accelerated aging tests of silvered-glass reflectors) well advanced, CD (committee draft) ahead
- PNE 224001
[...] uniones cinemáticas [...] Flexible pipe connectors for parabolic trough plants published, proposed for IEC



Relevant standards during SFERA-III, status (3)

- IEC 62862-4-2
(Heliostat field control system)
CDV (committee draft for vote) being finalized
- IEC 62862-4-3
(Heliostat requirements and tests)
working draft text writing in new project team organized by NREL
- IEC 62862-2-2
(molten salt)
text discussion and editing with Chinese lead started
- ISO TC180 SC1
on solar radiation measurement, pyranometers, pyrhemeters and spectra



Activities, Collaboration



SFERA-III has collaborated with:

- IEC TC117 Technical committees
- National mirror committees
 - Spain (UNE)
 - Germany (DKE/VDE)
- Project teams of experts
- SolarPACES Task-III guideline projects
- Moving standardization work to IEC/ISO's online standardization development (OSD) platform for enhanced online co-authoring and commenting in the IEC project teams



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Thank You

- To the project partners!
- For Your Attention!

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