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Contents:

- ✓ Eco design and Energy labelling
- ✓ Legionella issue
- ✓ Liaison's EPBD business

Updates and current status

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Introduction

- Presentation along the lines of relevant current affairs
  - Along the way, references to SCF projects
- Complex issues!
  - Limited time => only outline of issues at hand.

    - Related to SCF projects:
      - Legio 2010 & Leg-12
      - EPBD-12
      - Liaison project (2012): TC 164 / 228 / 371
      - Elab-12
    - Proposed SCF projects (waiting approval by SKNG):
      - Ecodes-12
      - CENmandates-12
      - Liaison project (2013): TC 164 / 228 / 371

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Eco design

Current status and CEN mandate 495

Eco design & energy labelling

- Regulations were adopted by commission (18/2/2013)
  - Space heaters / water heaters / combi's / heat storage
  - After further processing, into force > ½ 2015
  - Two years to prepare!
- The results for solar thermal are:
  - Lot 1 – space heating and combi-devices
    - Package label: space heater & solar device (+ other add-on's)
    - Package label: combi device & solar device (+ other add-on's)
  - Lot 2 – water heating and heat storage tanks
    - Product label: solar water heaters
    - Package label: water heater & solar device
    - Product label: heat storage tank

Energy labels in Lot 1

- Package label for 4 types of assemblies for space heating:

	Boilers	Cogeneration	Heat pumps	Heat pumps LT
Temperature control	Yes	Yes	Yes	Yes
Supplementary boiler	Yes	Yes	Yes	Yes
Solar device	Yes	Yes	Yes	Yes
Supplementary heat pump	Yes			
1) -	1)		2)	2)

2) + indication of eff. for colder / warmer climate

- Label classes: G to A^{+++} (best condensing boiler ≤ 'A')
- Package label for combi systems
  - Effectively the above label & the water heater label

Energy labels in Lot 2

- Product label: - solar water heater - (classes: G to A)
  - “Integrated” device of solar and heater
  - E.g. tank with electrical heater
  - Method has problems!
- Package label: water heater + solar device (classes: G to A^{+++})
  - Solar device is the only option!
- Product label: heat storage tank (classes: G to A)
  - Based on heat losses
  - Currently in solar thermal: class ‘C’
  - Effect for solar thermal: only tanks ≥ ‘G’

Energy labelling - evaluation

- What has been achieved:
  - Package label mechanism (first time in Eco design labelling)
  - Class ‘A’ is the best conventional
  - Methods according to our standards
  - Level playing field for all technologies
    - (almost. not for LT heat pumps)
- What has not been achieved:
  - Accurate method for space heating
  - Product label solar water heaters is not correct
    - Some work to do…
- Let’s see how it works out!

Eco design – next steps

- Transitional documents replacements by harmonized standards:
  - Documents describing details of methods and ref.;s to standards.
  - CEN Mandate 495 to harmonize standards
    (EN 1297 5/6/7 & EN 15316-4-3, B)
  - Be ready when regulation is published
  - SCF proposal vAConsult: (CENmandate-12)
    - To be accepted by SKNG
- Disseminating knowledge
  - Illustrative Excel model & PHP model (SCF-Elab-12)
    - Accepted previous SCF call, with remarks
  - Document & workshop for introduction (SCF EcoDes-12)
    - To be accepted by SKNG
    - Cooperation with ESTIF
    - More work needs to be done (IEEE program)

How it works…

- Technical documentation
  - Describing tests en results
- Fiches
  - Summarizing relevant data from TD in terms to be able to built a label
    - Product fiches
    - Package fiches
- Labels
  - Result that is communicated to the consumer
    - Product labels
    - Package labels

Illustrative Excel model (example)

vAConsult Date: 28-02-2013

Assemble the components of the package — Completements of SCF — Eco design — Version: V 3.0

Step 1 (to do): Select components of the package

Step 2 (informational): Values extracted from selected fiches

		Declared load profile:	Qref
Water heater:	'I' [%]	profile:	kWh/d]
Best available [L]	80	L	11.655 ▶

	Qnonsol	Load	Qaux
Solar device:	[kWh/a]	profile	[kWh/a]
SHW 50% [L]	1400	L	150 ▶

Calculated value η_{sys} = 143% ◀

Value from fiche

Class: A+ ◀

Figure 1: Fiche for a package of water heater and solar device indicating the water heating energy efficiency of the package offered.
AND
Figure 5: For preferential boiler combination heaters and preferential heat pump combination heaters, element of the fiche for a package of combination heater, temperature control and solar device indicating the water heating energy efficiency of the package offered

'I': the water heating energy efficiency of the water heater
'II': (220 · Qref)/Qnonsol,
'III': (Qaux · 2,5)/(220 · Qref)
Load profile: One of daily load profiles: M, L, XL or XXL

Part:	Water heaters (lot 2) & Space heaters (lot 1)
Document ref.:	Lot 2: Annex IV, par. 4, fig. 1, Lot 1: Annex IV, par. 6, fig. 6
Label:	Package water heaters and solar device
	Package combination heater (water heater part)

Package fiche to be printed — *Do not edit!*

Water heating energy efficiency of water heater (1) 'I' 80 %

Declared load profile: L

Solar contribution
From fiche of solar device

(1.1 x 'I' 80 - 10%) x 'II' 1.83 - 'III' 0.15 - 'I' 80 = (2) 63 %

Water heating energy efficiency of package under average climate (3) 143 %

		F	E	D	C	B	▼ A+	A++	A+++
	M	≥27%	≥30%	≥33%	≥36%	≥39%	≥100%	≥130%	≥163%
▶	L	≥27%	≥30%	≥34%	≥37%	≥50%	≥115%	≥150%	≥188%
	XL	≥27%	≥30%	≥35%	≥38%	≥55%	≥123%	≥160%	≥200%
	XXL	≥28%	≥32%	≥36%	≥40%	≥60%	≥131%	≥170%	≥213%

Water heating energy efficiency under colder and warmer climate conditions

Colder: (3) 143 - 0,2 x (2) 63 = 130 %

Warmer: (3) 143 + 0,4 x (2) 63 = 168 %

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Legionella

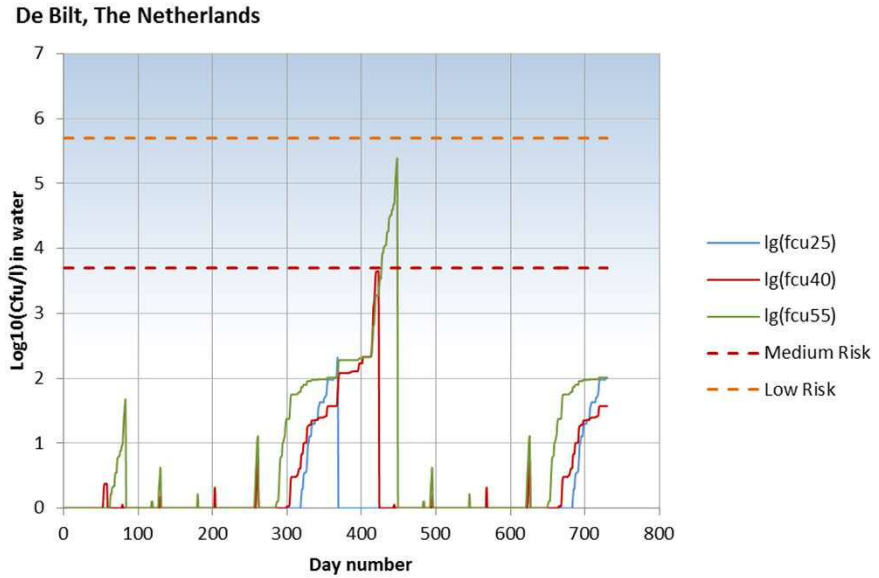
Solar water heaters

Legionella (part 1)

- SCF project: 'Legio 2010'
  - Code of Practice Legionella and solar water heaters
    - Building on the TC164 WG2 Technical report
  - Recommendations on solar water heaters to minimize risk on Legionella hazard
  - Some values needed to be added by second SCF Legio-12

Legionella (part 2)

- SCF project: 'Legio-12'
  - Model calculations aimed on Legionella behaviour in solar water heater (preheater and solar-only)
    - Model of solar water heater + Legionella behaviour
    - Limits to maximum concentration Legionella
  - Much knowledge gained on the issue
    - Dynamic process + / -
    - Design criteria supported
    - Rules on application
  - (draft) report ready
    - Results literature study
    - Results on calculations



Legionella and TC's

- TC312:
  - Results of both studies has been presented
    - New work item to make it a CEN TR (Jan 2013 meeting)
    - Discuss it with TC164 – WG2 (April 2013 meeting)
- TC164 WG2 (SCF TC164-2010)
  - Last meeting: WG 2 accepted to discuss Code of Practice
  - Further business:
    - Discuss reports during April 2013 meeting TC164 WG2
    - Preparations to revise EN 806 1 & 2
    - Both for SCF 'Lias TC164-12', to be accepted by SKNG

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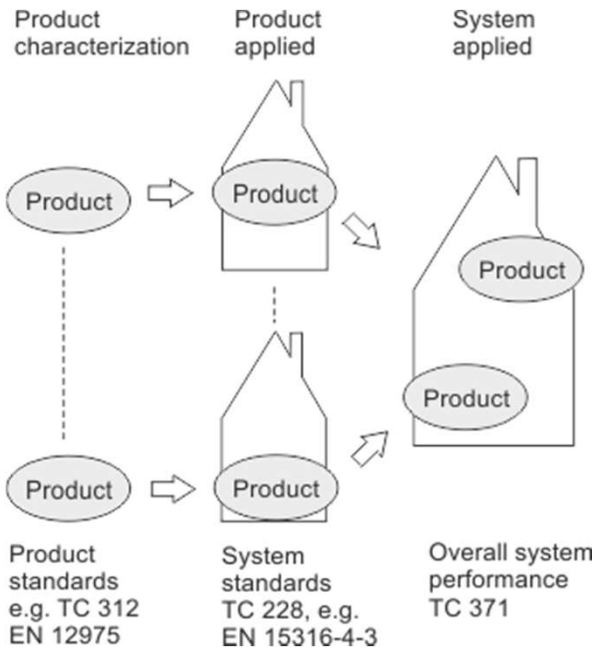
EPBD business

CEN mandate 480

EPBD TC228 & TC371

- Main focus on CEN mandate 480
- Work is structured according to:
  - TC 371 overall system performance
    - Horizontal coordination
  - TC 228 system standards
    - Systems applied in buildings
    - Current: EN15316-4-3
  - TC 312 product standards
    - Product performance
    - Current: EN 12975 /6 /7
- Secondary issue: mandate 495
  - Harmonization of Eco design
  - EN 15316-4-3



Liaison tasks

- Preparation work for mandates 480 & 495
  - Up to now:
    - Attending workshops in preparation of mandates
    - Representing TC312 interests
  - Further work in this context: SCF proposal CenMandes12
    - To be accepted by SKNG
    - Limited to adding expertise (no secretary tasks)
- TC 371 current status
  - Documents drafted
    - How standards are incorporated & and which standards relevant
    - Basic principles of calculation
    - To be evaluated by liaison officer

Liasion tasks

- TC 228 current status
  - Start work now (after results of TC 371)
  - Revision of EN 5316-4-3 added to the work program
  - Liaison task: introduce revision of EN 15316-4-3

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Revision of EN15316-4-3

SCF EPBD-12

SCF EPBD-12

- Proposals for revision of EN15316-4-3
  - Report drafted, with proposals inline with SOLCAL method Ecodesign
    - Improvements based on latest revisions on Fchart method
    - Added: calculation of non-solar heat needed
    - Added: correction for heat storage losses + evaluation
      - Formula (almost) as in Eco design
      - Added correction for decrease output
    - Added: correction of auxiliary heater efficiency
  - Offer to EN15316-4-3