

WEEE FIRES AND PRO'S ACTIONS IN FRANCE

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Slide 66

NKO

Format still needs to be updated

Nanett Kalapos, 2025-02-11T11:43:17.806



WEEE fires and ecosystem's actions in France

Batteries Roundtable

Brussels - February 2025

Slide 67

NKO

Do they have their slides in 16:9?

Nanett Kalapos, 2025-02-06T14:19:18.397

01

Overview of the general situation

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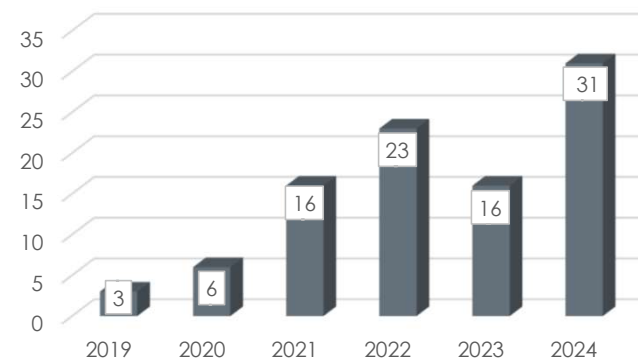
ecosystem's role : monitoring the situation

Fire-starting statistics in France

- Daily fire-starting from WEEE
- Once or twice a month, need firefighters' intervention
- Once a month, a truck burns
- One treatment facility burnt every 24 months

Monitoring fire events

- Number of fire departures
- Which kind of activity (log, treatment, etc.)
- Which step (storage prior treatment, during treatment, etc.)
- Which period of the year, which stream, which damage, etc.



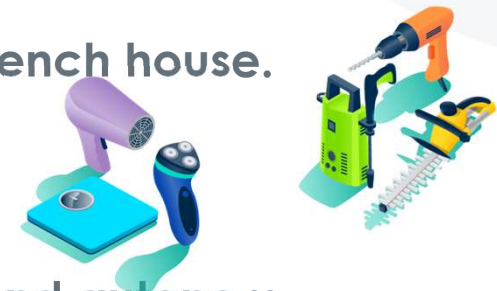
02

National WEEE fire roundtables

National WEEE fire roundtables 2022

Table 1 - Route of lithium batteries and batteries, from new equipments until they are recycled

- An average of one hundred batteries in a typical French house. More or less 1 battery by m²
 - Mostly based on Lithium technology
- Lithium battery have an increased energy density and autonomy compared to other technology. A quality that can also be a risk.
- Fire risk should be reduced at every step of its life-cycle.
 - From producer : by improving the **eco-design** (removability and recyclability of components) and implementing **Battery Management System** (which are generally not included in low-cost batteries).
 - From PRO : By developing the sorting of WEEE and batteries on the collection points, when consumers hand over WEEE. By reducing the damage of batteries during **transportation**.
 - From WEEE facilities



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Table 2 – Risk culture

- **Fire is a daily risk for the WEEE treatment facility**
 - Important investment are often done to protect facilities.
- **However, to invest against fire without an adequate organization isn't efficient.**
 - Facility's managers should : **analyze previous events**
improve communication between all shareholders
 - Employees should have **continuous training** to intervene instinctively and quickly
knowledge of critical area of the company
 - To develop an **Internal Operation Plan**, including :
 - An organizational part (e.g. : managing the trucks flow or separating batteries storage and production tools)
 - A technical part (e.g. : facility design and tools layout)
 - A human part (e.g. : appointing a fire safety referent)
- **Fire can also impact the company reputation**
 - Companies should be prepared to communicate publicly

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Table 4 – The insurance challenge

- **Fact : For some companies, the risk of fire weighs heavily on their possibility of being insured**
 - Insurance cost is higher / the coverage decrease
 - Insurance require more constraints
 - Insurer refusing to work with a treatment facility after a fire
 - The risk of not being insured may not be bearable for a stakeholder
- **How to prevent this situation ?**
 - Implementation of a prevention plan, defined in partnership with the insurer
 - Identify with the insurer the improvement opportunities of fire protection/prevention. Implementing them step by step.

=> Insurer is a key actor to involve in your action plan



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Table 4 – Extinguisher tests for SHA fires

Protocol

- At the very beginning of a fire outbreak, we used :
 - A class D fire extinguisher
 - A water+additive fire extinguisher (designed for lithium batteries' fire)
 - A vermiculite fire extinguisher (designed for lithium batteries' fire)
 - Armed fire hose



Conclusion

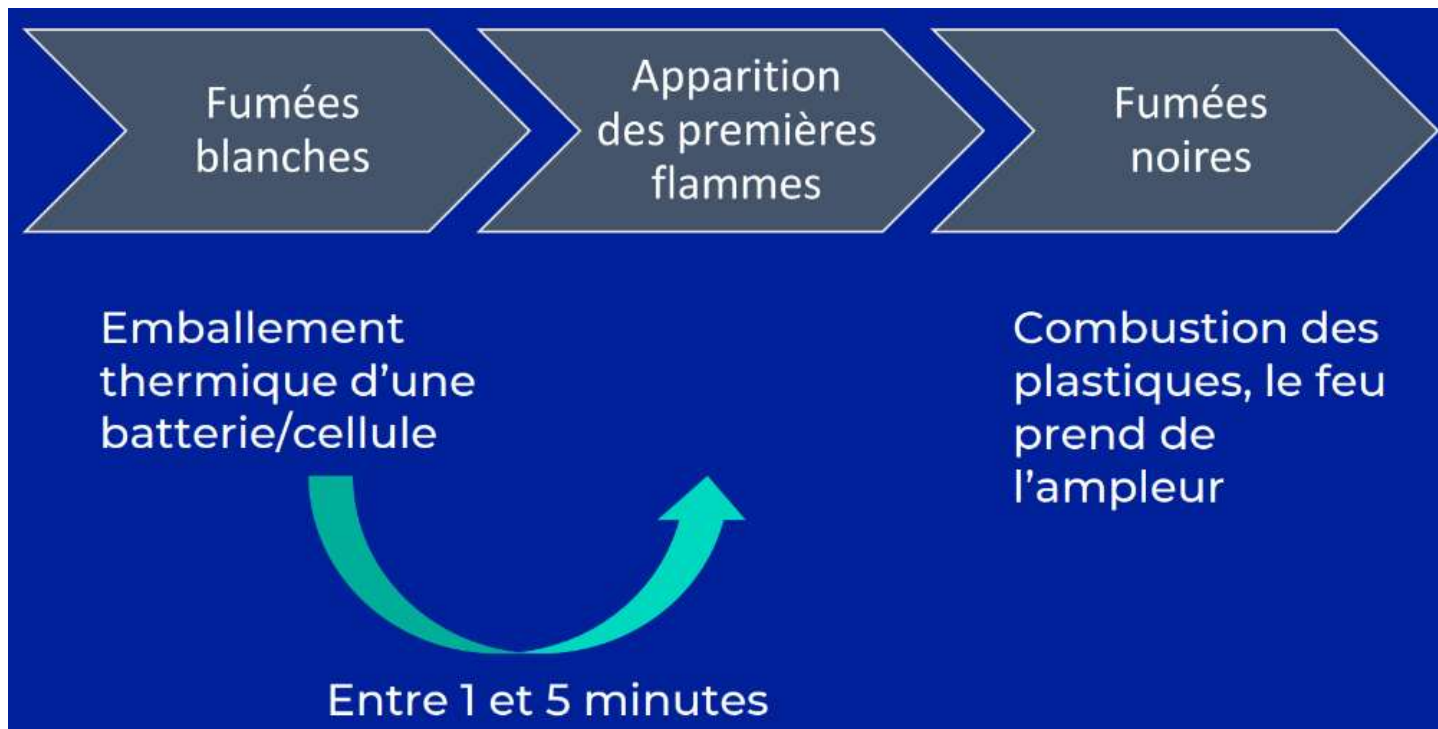
- Fire extinguishers, alone, **do not guarantee** that the fire will be extinguished (even small one).
- However, they can be used to contain it until the Armed Fire Hose is deployed (always efficient).
- **SHA fire are not lithium fire** or battery lithium fire.





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Table 4 – Extinguisher tests for SHA fires



03

Stress test of logistic and treatment facilities

Stress test

Raise awareness & Train automatism

Often the major fire outbreaks are a succession of little misfortunes

Feedback to the company

- Employees aren't aware of the test
- We create a succession of events that will put the company under pressure
- We have to learn and grow all together

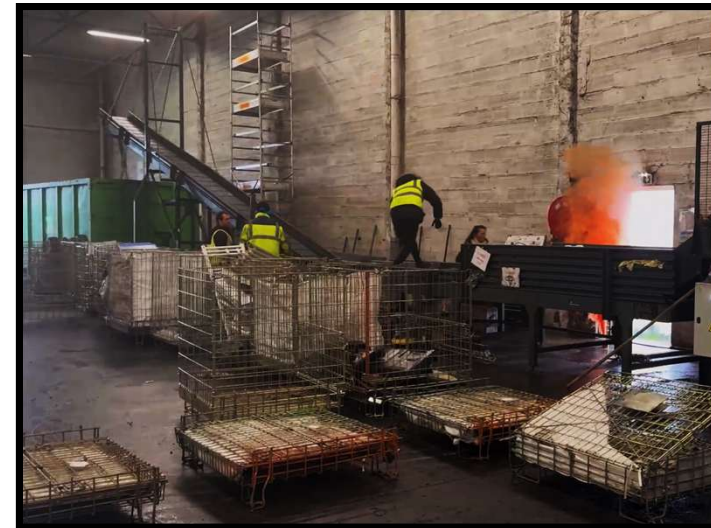
• Example :

Tools and training propositions

1. Smoke bomb in an inside storage of SHA
 2. Tools : to have immediately all needed documents to inform firefighters
 3. A dummy in respiratory distress is put on the ground
 4. Fire Chief, (played by a PRO member) ask questions
 5. Training : with specialized french organism.
- Training : with specialized french organism.

Binding of ecosystem :

- Companies are mostly well equipped **BUT**
- Monitoring the situation
- Employees aren't always aware of the instructions
- Share with all shareholders
- Sometimes the equipment isn't tested :
- Propose training
 - The alarm is out of battery
 - The fire hose doesn't reach the outside stock





A picture is worth a thousand words

<https://www.youtube.com/watch?v=Zl8m3wUBE-w>

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