

“KEEPING PACE” - #52

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UNCOMMON CAUSES

4 WATT NIGHTLIGHT FIRE:

The arrow in the photograph below shows the remains of a 4 watt nightlight next to a child’s bed where a fire originated. I could find no evidence of a short circuit arc in the nightlight or anywhere else around the bed.

To test whether a 4 watt nightlight could cause a fire, I purchased a similar one and put a blanket around it. A thermocouple meter indicated that the temperature reached 260° F. in one hour. I terminated the test at that point to avoid a fire, but I have no doubt that the temperature could have reached the 400° F. required to ignite most combustibles. Because of this, I concluded that this fire occurred when the child’s blankets accidentally covered the nightlight. That trapped enough heat from the 4 watt nightlight to cause a fire.



The child’s mother woke up one minute before the smoke detector activated, and rescued this child unharmed from the fire.

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9 WATT CURLING IRON FIRE:

The photograph below shows a curling iron which caused a fire in a bathroom about two hours after a lady left her house. Again, I could find no evidence of a short circuit arc anywhere in the bathroom. I measured the normal surface temperature of this 9 watt curling iron to be 230° F. From past experience, I opined that a towel or something else in the bathroom fell onto the curling iron to trap its heat and raise its temperature to the 400° F. temperature required to ignite most combustibles.



ELECTRIC BLANKET FIRES:

Speaking of trapped heat, it is my experience that the only way electric blankets can cause a fire is when they are balled up so that their heat becomes trapped. In some of these cases, the insured has used the electric blanket as a pillow. To view a video which illustrates that the wires in electric blankets are too tiny to cause a short circuit fire, please go to www.PaceForensic.com/Videos and watch Video #4.

Sincerely,

Frederick F. Franklin, P.E.
Forensic Engineer