

E-bikes and e-scooters battery scare



- 1 Market consulting firm P&S Intelligence reports that the Australian micro mobility market – which encompasses both electric and traditional bikes and scooters, as well as electric mopeds and three-wheeled ‘pods’ – generated \$16.9m in revenue in 2020. The largest share of that figure was in e-scooter sales, due to their cost effectiveness.
- 2 But since then a number of these rideable devices, mostly powered by lithium-ion batteries, have burst into flames. Most incidents have occurred with low-quality light electric vehicles (LEVs) while they were charging. EV FireSafe, a body tracking electric vehicle battery fires, found 57 separate incidents worldwide since the start of the year. The project’s director Emma Sutcliffe said 13 of those serious incidents occurred in Australia.
- 3 Ms Sutcliffe said there were three issues with low-quality electric vehicles: they often have poor quality lithium-ion battery cells and battery management systems; they take a beating in normal operation; and they’re often stored or charged inside a home or workplace, so there is a higher risk of a fire spreading.
- 4 Battery packs are made up of a module of smaller battery cells, like a group of traditional AA batteries all working together. If damaged or overcharged, those cells can begin generating heat and internal gas build-up. The heat from the faulty cell spreads to other nearby cells, creating a chain reaction and eventual explosive exothermic reaction as those built up gases burst, catch fire, and vent from the battery module. This process is called a thermal runaway.

- 5 The Australian Fire Department advises: “Always stick to reputable and compatible lithium-ion battery brands, avoid over-charging and charging devices whilst you’re asleep or away from home.” Its spokesperson added: “Even high quality lithium-ion batteries are capable of creating a fire risk.” 7, the nation’s consumer watchdog is conducting its own investigation into lithium-ion battery fires, with part of the probe focusing on rideables. The Australian Competition and Consumer Commission (ACCC) released an issues paper on the batteries for consultation last December. A report on the matter is expected to be released by the end of the year.

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Tekst 3 E-bikes and e-scooters battery scare

- 1p 3 How is the topic of the article introduced in paragraph 1?
A by claiming that most people can afford to buy an e-scooter
B by making clear that e-scooters are popular products
C by outlining why bicycles are often replaced by e-scooters
D by stressing that e-scooters have become too cheap
- 1p 4 'Most incidents have occurred with low-quality light electric vehicles (LEVs) while they were charging.' (alinea 2)
→ In welke alinea wordt expliciet duidelijk dat ook de betere accu's gevaar kunnen opleveren?
Noteer het nummer van deze alinea in de uitwerkbijlage.
- 1p 5 What can be concluded about electric vehicles from paragraph 3?
A It is safer to park and recharge them outdoors.
B Their fragility causes unsafe traffic situations.
C They tend to fall apart under rough conditions.
- 1p 6 Which description fits paragraph 4?
A It gives a technical explanation of how a battery pack can malfunction.
B It lists a number of recent incidents related to battery packs.
C It makes clear that certification of battery packs is overdue.
D It stresses that battery packs need to be maintained by professionals.
- 1p 7 Kies bij 7 in alinea 5 het juiste antwoord uit de gegeven mogelijkheden.
A For example
B Meanwhile
C On the other hand
D Similarly

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift.