

Crimping of large wire gauges for turned contacts

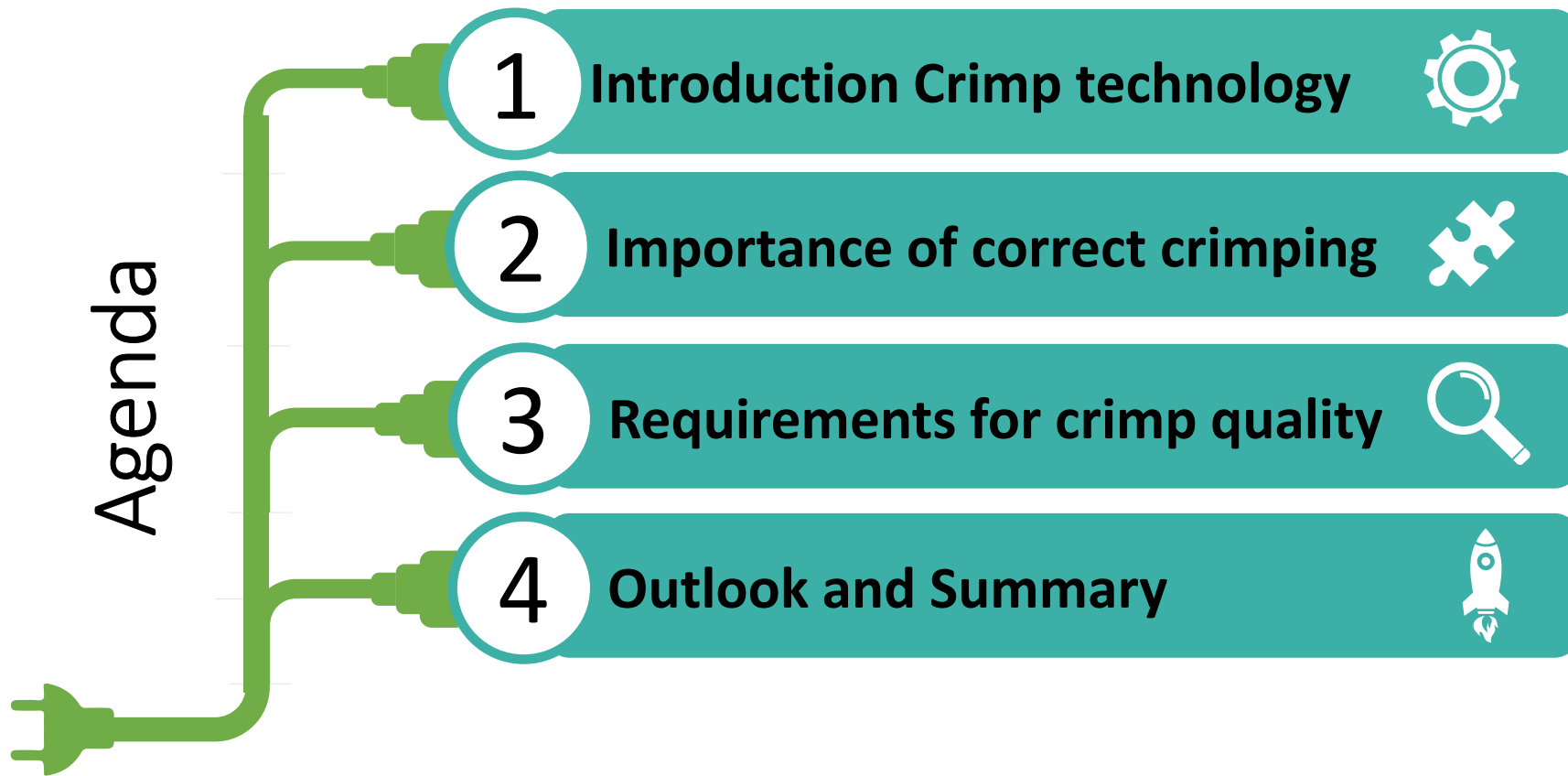


Power Electronics & Energy Storage event
27 juni 2023 | 1931 Congrescentrum 's-Hertogenbosch

ENERGY STORAGE



Agenda



1. Introduction Crimp technology

Was developed in the early 1940s

Advantages

- Efficient manufacturing
- Minimum technician skill
- No health risks by metal vapor
- High reproducibility of quality
- Great tensile strength
- Resistance to internal corrosion

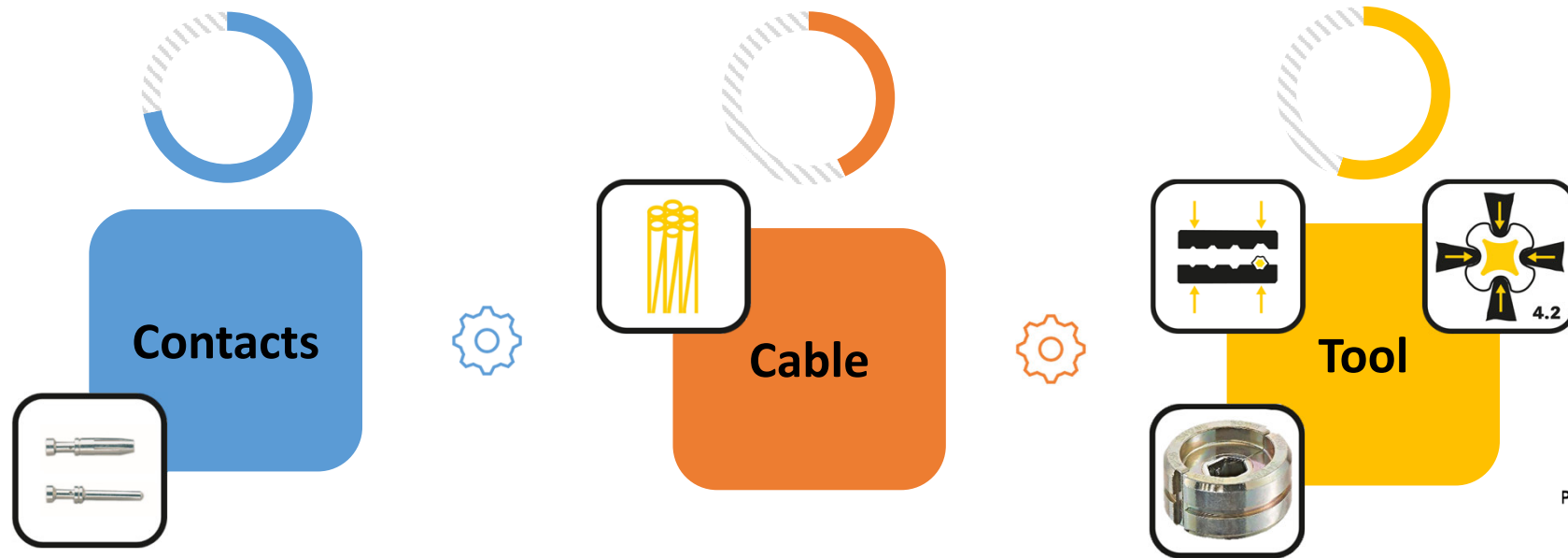
Invented for applications with high safety standards

Crimping is the controlled process of deforming a contact and a conductor to become a force-fit, electrically conducting, solderless connection

1. Introduction Crimp technology

Crimping is more than just deforming the contact with a wire

Quality factors during crimping



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1. Introduction Crimp technology

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Quality factors during crimping



Turned contacts:

- often used in harsh environments (aviation, aerospace, machinery)
- high-precision manufacturing process
- low contact resistance
- less generation of heat at equal conditions
- round shape favors contact density and precise fitting in isolation body
- vibration proof, gastight connection

1. Introduction Crimp technology

Crimping is more than just deforming the contact with a wire



Janek Kolhossner – Crimping of larger cross-sections for turned contacts

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2. Importance of correct crimping

Could be as minor as causing
a headlight to flicker



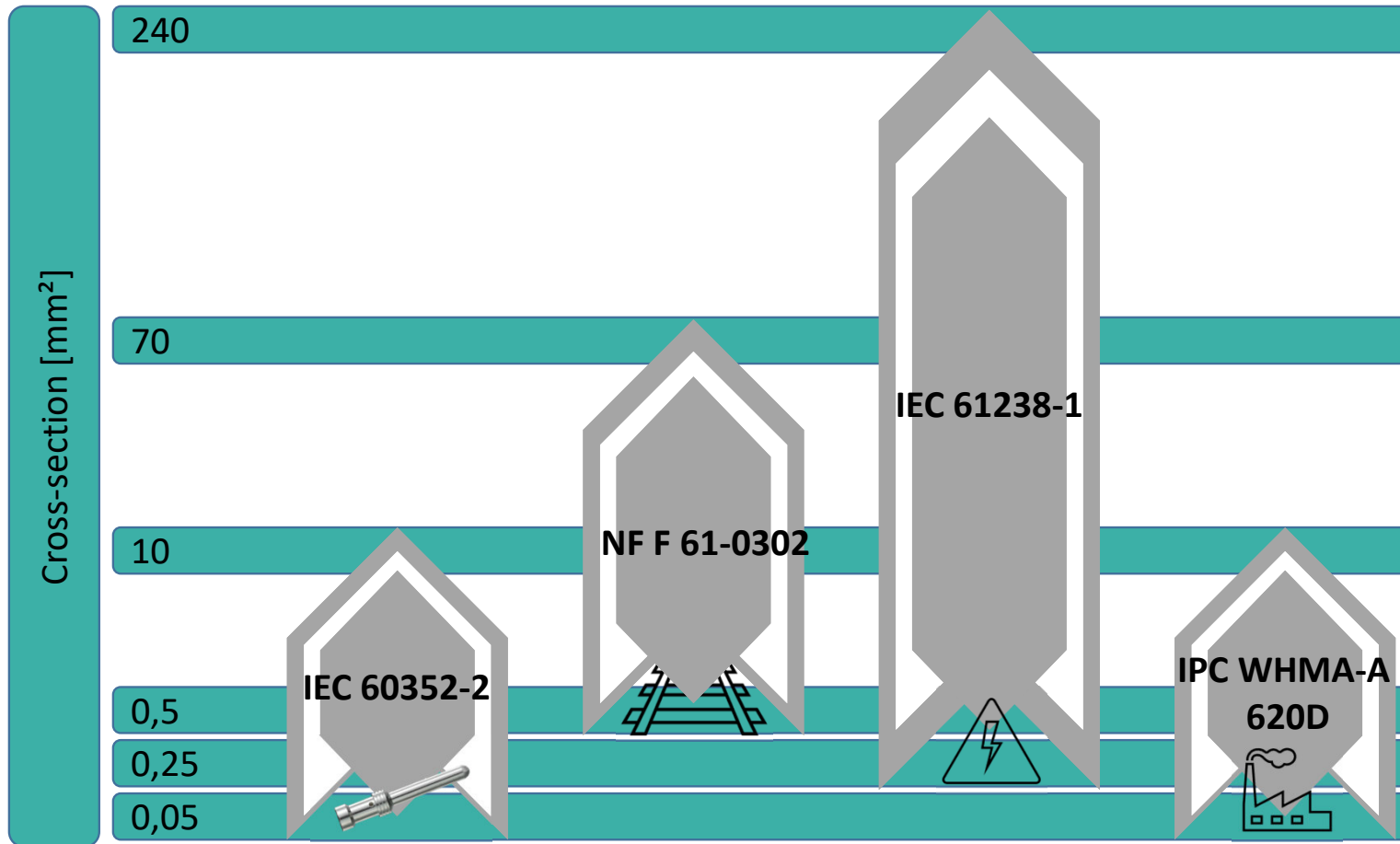
Or it could trigger a safety system
or data center to fail



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3. Requirements for crimp quality



Janek Kolhossner – Crimping of larger cross-sections for turned contacts

3. Requirements for crimp quality

How can we secure a good connection while production?



Prior to production:

Choose the right contact type and cable

Using manufacturer recommended tools

Using test certificates for documentation

Creating an overview to the production team

Detailed staff training



While production

Short test regarding chosen standard

- Visual inspection
 - Contact / Cable / Tool
- Contact resistance
- Pull out forces
- Cross-section
- ...



After production

Calibration / repair of the crimp tools on a regular basis

Storage of certificates for documentations

4. Outlook and Summary

Crimping is more than just deforming the contact with a wire

3 quality factors must be coordinated (contact, cable, tool)

Crimping will remain an important termination technology

Crimping is ideal for Power Electronics and Energy Storage

HARTING Technology Group

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Visit us at our booth 10 !!

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Thank you
for your attention



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A decorative graphic on the right side of the footer. It consists of a horizontal green line that tapers into a fan shape, with several small white plus signs scattered along the lines.