

ESAS and HTS device development in Europe
Mathias Noe, Karlsruhe Institute of Technology, Germany
IEA TCPs Joint Workshop, Milano, 31.01.2017

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ESAS Award for excellence.

Nominations are now open for the **ESAS award for excellence 2017**. These should be received by May 31st 2017.



ESAS brings together scientists and engineers working in applied superconductivity across both industry and academia in Europe. The society most notably organises the biennial **European Conference on Applied Superconductivity (EUCAS)** but is also involved in a growing range of other activities aimed at promoting the field of applied superconductivity.

The European Society of Applied Superconductivity (esas.org) supports young scientists

- International summer schools (materials, modelling, large scale applications, electronics)
- Travel support to summer schools and conferences
- Young researcher Awards

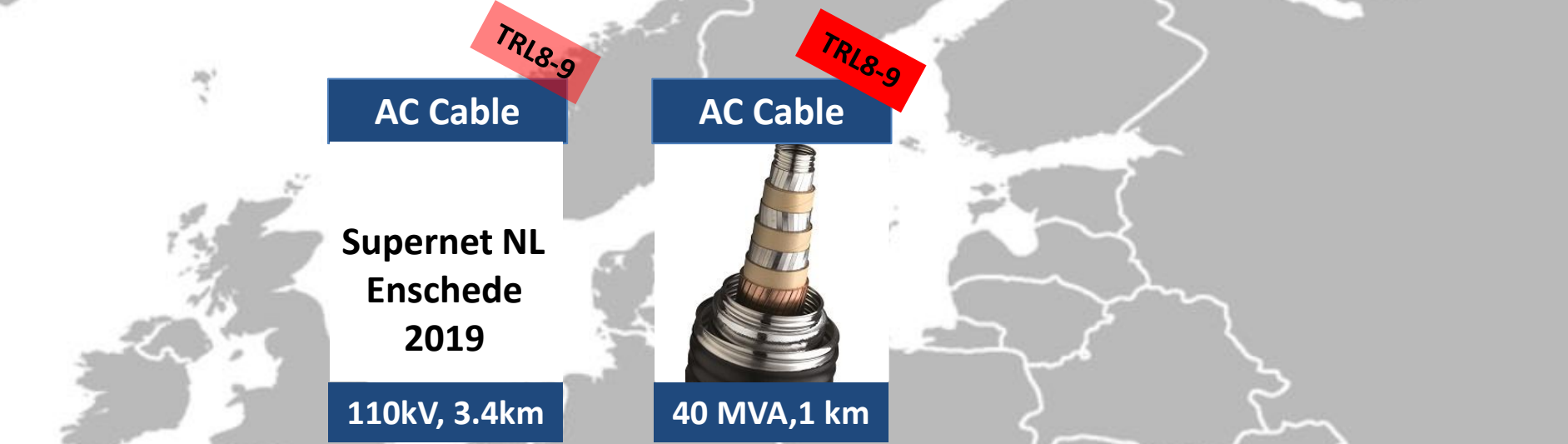




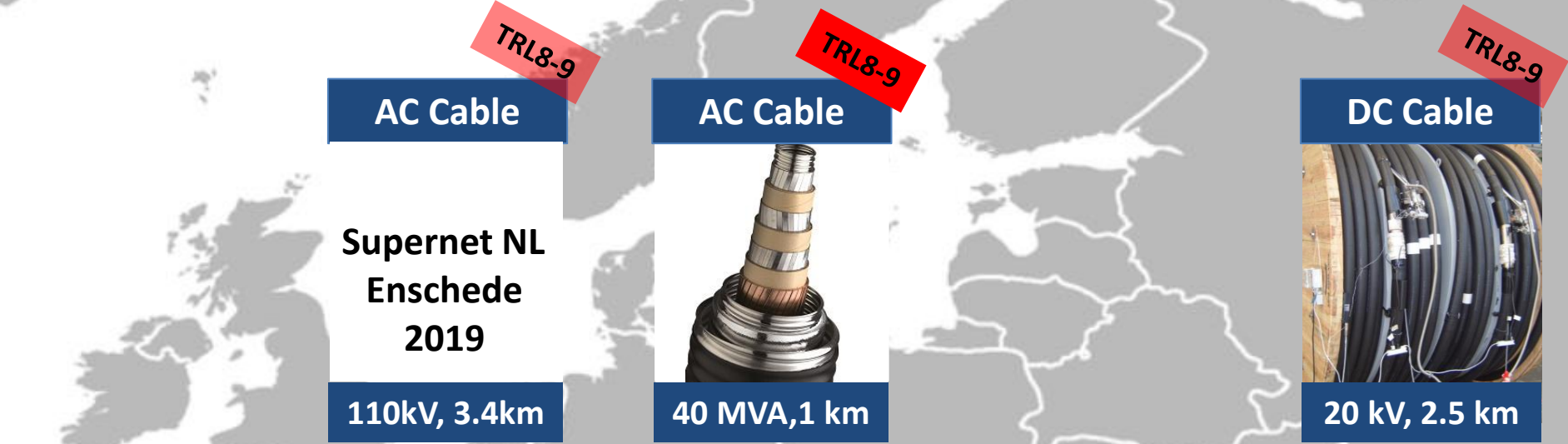
TRL 1 basic principles observed	TRL 2 technology concept formulated	TRL 3 experimental proof of concept	TRL 4 technology validated in lab	TRL 5 technology validated in relevant environment	TRL 6 technology demonstrated in relevant environment	TRL 7 system prototype demonstration in operational environment	TRL 8 system complete and qualified	TRL 9 actual system proven in operational environment
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TRL8-9

SCFCL



12 kV, 1600 A

TRL8-9


AC Cable

Supernet NL
Enschede
2019

110kV, 3.4km

TRL8-9


AC Cable



40 MVA, 1 km

TRL8-9

DC Cable



20 kV, 2.5 km

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Noe, Applications, Europe

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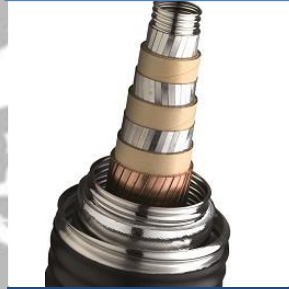
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TRL7


Generator



4 MVA, 3600rpm

TRL4


Wind Gen.


suprapower

Coil 20 K, 1.5 T

TRL8-9


SCFCL



12 kV, 815 A

TRL7

Wind Gen.



ecoswing

3.6 MW

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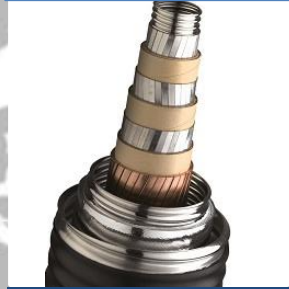
AC Cable

Supernet NL
Enschede
2019

110kV, 3.4km

TRL8-9


AC Cable



40 MVA, 1 km

TRL4


Transformer



1 MVA, 20 kV

TRL8-9

DC Cable




20 kV, 2.5 km

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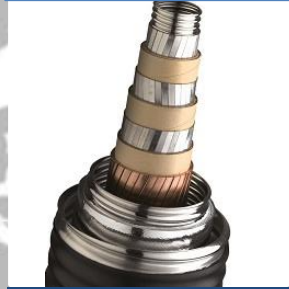
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SCFCL



12 kV, 815 A

TRL5-7


SMES

Columbus
ENEA
RSE
SPIN
U Bologna
by 2019

300kJ, 100kW

TRL7

Wind Gen.


ecoswing

3.6 MW