

Paris Session 2022



HVDC Mass-Impregnated Cables for the future

SC B1 Insulated Cables – PS1 – Q3

Lars Lervik, Norway



HVDC Mass-Impregnated Cables for the future

HVDC MI cable systems have:

- **Excellent service reliability**
 - Several thousand kilometres installed, and failures are very rare
- **Life-time exceeding 40 years**
 - Examples of cables being in service for more than 45 years
- **Vast experience at the highest voltage levels (500–525 kV)**
 - More than 4400 km MI cable operating at this voltage level today
- **More than 10 years operational experience at deep waters (>1500 m)**
 - Several submarine cable systems installed deeper than 1000 m

HVDC Mass-Impregnated Cables for the future

Development of HVDC MI cables

- **Continuous research and development results in increased:**
 - Voltage level
 - Power transmission capacity
 - Installation depth



600 kV

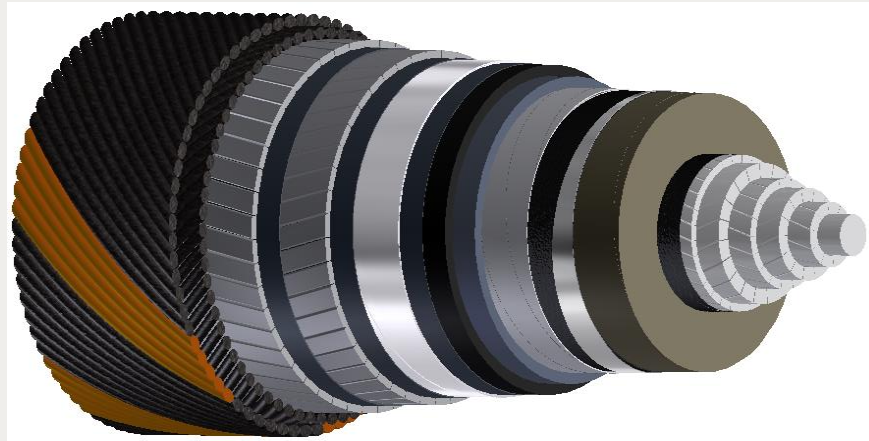
1100 MW

3000 m

HVDC Mass-Impregnated Cables for the future

Deep water HVDC MI cables

- 525 kV MI cables have been qualified for 3000 m water depth
- This breakthrough is paving the way for realizing highly reliable and powerful HVDC interconnections in deeper waters than ever before



*Deep water HVDC MI cable
for 3000 m water depth*