Paris Session 2022

DISCONNECTOR STANDARDIZATION

SC A3

PS1 Question 02

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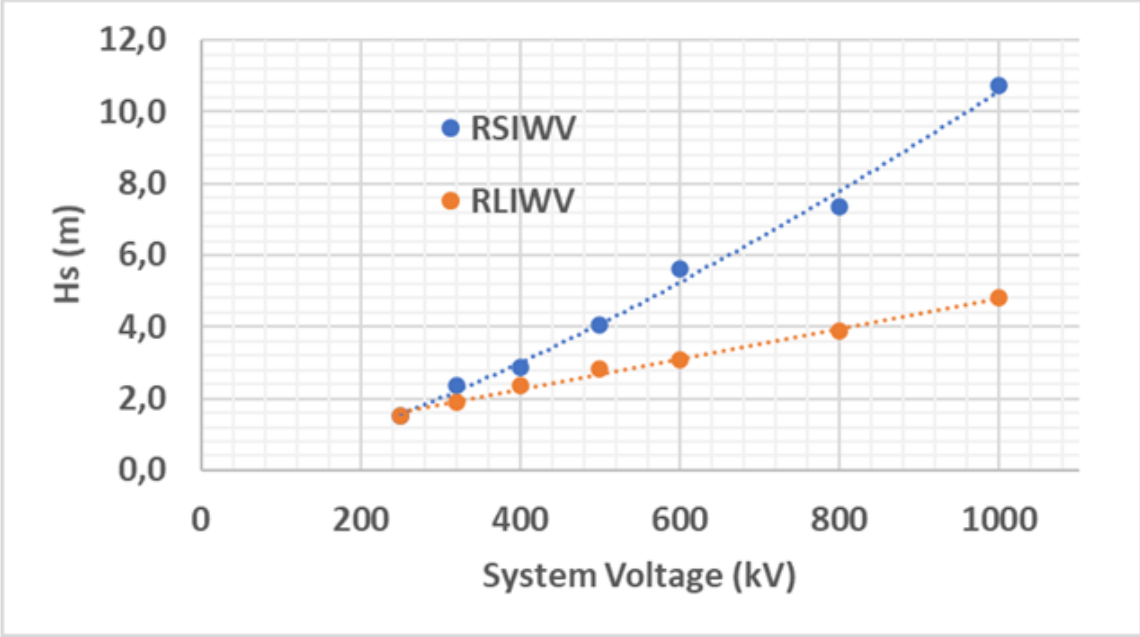
Disconnectors for indoor use

- The major challenge for HVDC disconnectors is the design of the phase to ground insulation, due the very long insulator sets necessary especially in the UHV range
- For **indoor use** SI dominates the design (evaluation considering the maximum overvoltage values foreseen in IEC_TS_62271-5 draft).



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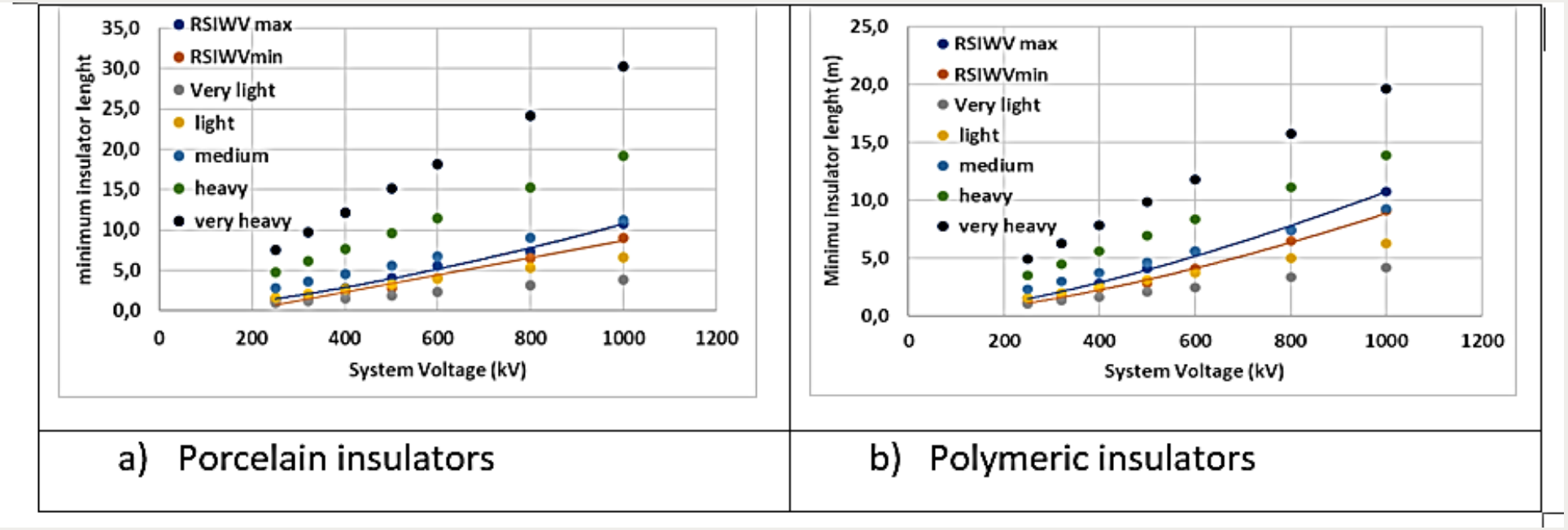
Disconnectors for outdoor use

- Data for porcelain insulators indicate that for pollution classes equal to medium or above pollution dominates the design leading to very high insulator length, limiting the apparatus feasibility at least in the upper voltage range.
- For polymeric solutions pollution dominates the design only for heavy and very heavy conditions



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DC Disconnector standardization

- Standardization of Disconnectors for **indoor** use may benefit from the rationalization of the SI requirements (now ranging from 1.6 to 2.3 p.u).
- Standardization of Disconnectors for **outdoor use** may benefit from well defined and agreed pollution severity levels for each pollution class and corresponding USCD
- More information on CIGRE paper **10773 " Sizing and testing of HVDC disconnectors from the dielectric point of view "** by Eros STELLA*, Marco NOSILATI Francisco, CHACON, Alberto PIGINI

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