

NEED MORE TRANSMISSION CAPACITY? GET IT WITH OKONITE

BY RECONDUCTORING YOUR EXISTING PIPE TYPE SYSTEM WITH CABLES USING LPP INSULATION



BEFORE



AFTER

Invented by Okonite in 1932, Pipe Type Cable systems have provided the ultimate reliability for underground bulk transmission of electric power for over 80 years. Federal and regional contingency mandates, as well as reliability targets and customer load growth have caused electric utilities to consider maximizing their largest infrastructure asset: existing pipe.

Manufactured to tight Okonite and industry standards, the evolution of LPP insulation has created the opportunity to upgrade circuit capacities with minimal capital expense by using the same existing pipe infrastructure and without disturbing surface conditions. While the permitting and approval process for new underground transmission lines can be time consuming and result in unexpected cost adders, reconductoring in existing pipe is often the best asset management practice.

Excavation, restoration and manhole/duct systems account for over 70% of the total cost of a new underground transmission system. Eliminate those costs, minimize siting challenges and keep EMF to almost zero while increasing the MVA capacity of your existing system. Options include increasing the operating voltage and conductor size all while decreasing the amount of dielectric fluid required. Okonite engineers are ready to assist you.

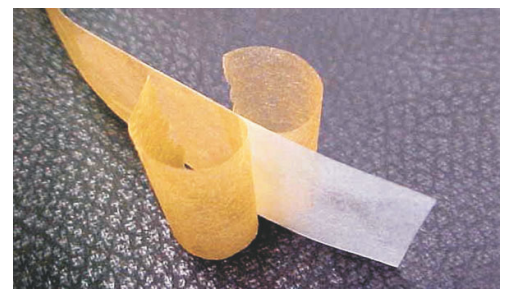
SUGGESTED RECONDUCTORING CONDUCTOR SIZES			
HPFF (High Pressure Fluid Filled)			
Voltage Rating	Existing Pipe Size		
	5-9/16" OD x 0.258" Wall (ID = 5.046")	6-5/8" OD x 0.250" Wall (ID = 6.125")	8-5/8" OD x 0.250" Wall (ID = 8.125")
69 kV	1750 kcmil Compact Segmental 0.190" LPP Clearance = 0.64" 138 MVA (1155 amps)*	3000 kcmil Compact Segmental 0.200" LPP Clearance = 0.78" 167 MVA (1393 amps)*	3500 kcmil Compact Segmental 0.250" LPP Clearance = 2.48" 182 MVA (1518 amps)*
115 kV	1250 kcmil Compact Segmental 0.275" LPP Clearance = 0.79" 199 MVA (998 amps)*	2750 kcmil Compact Segmental 0.285" LPP Clearance = 0.60" 267 MVA (1339 amps)*	3500 kcmil Compact Segmental 0.300" LPP Clearance = 2.25" 298 MVA (1496 amps)*
138 kV	1250 kcmil Compact Segmental 0.325" LPP Clearance = 0.53" 235 MVA (983 amps)*	2500 kcmil Compact Segmental 0.325" LPP Clearance = 0.60" 309 MVA (1292 amps)*	3500 kcmil Compact Segmental 0.350" LPP Clearance = 2.02" 354 MVA (1480 amps)*
230 kV	—	1500 kcmil Compact Segmental 0.475" LPP Clearance = 0.76" 411 MVA (1030 amps)*	3500 kcmil Compact Segmental 0.500" LPP Clearance = 1.29" 567 MVA (1423 amps)*
345 kV	—	—	3000 kcmil Compact Segmental 0.600" LPP Clearance = 1.14" 782 MVA (1308 amps)*
<p>* MVA values based on ampacity for standard installation conditions; 1 pipe 36" deep to CL of pipe, 85°C Conductor, 20°C Soil, 90 RHO Soil, 75% Load Factor, Triangular Configuration. If conditions are different, then the ampacity and MVA ratings can be adjusted, accordingly. Contact Okonite for custom ratings calculations. (1) Reconductoring designs are also available for 69 kV, 115 kV and 138 kV HPGF (High Pressure Gas Filled) systems. Contact Okonite with specific design goals. (2) Larger conductor sizes are possible for 5", 6" and 8" pipes with smaller clearances. Contact Okonite for more details.</p>			



Recently completed reductoring projects at Eversource, Public Service Electric & Gas, and Potomac Electric Power Company have resulted in significant project cost savings when compared to installing new systems. The additional capacity provided has deferred new generation and infrastructure enhancements.

LPP INSULATION

By using our newest Laminated Paper Polypropylene (LPP) in existing pipe systems, cables can be produced with significantly thinner insulation walls than that of traditional kraft paper. This allows for use of larger conductors or operation at higher voltages to increase system capacity.



Please contact us to discuss how Okonite technology can minimize costs for your customers while providing the traditional excellent reliability they expect and deserve.



THE OKONITE COMPANY
Okonite Cables...A higher Standard!



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