Rome Cable
CORPORATION

SPEC 7670

January 1, 1997

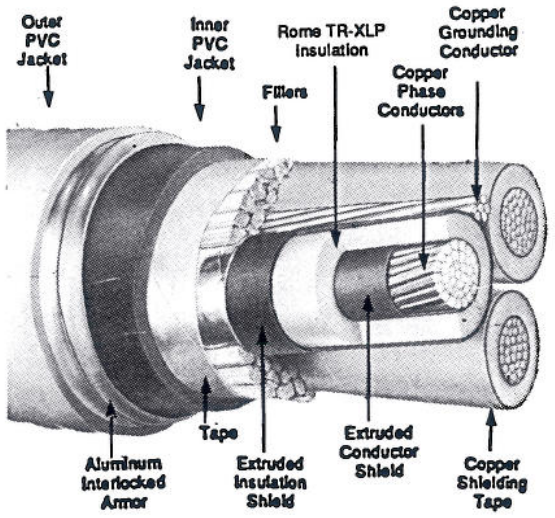
ROME TECK-HV MINUS 40C, HL, FT4, 15KV 100% & 133% IL

3 Conductor, Rome TR-XLP Insulation
Inner PVC Jacket, Aluminum Armor, Outer PVC Jacket

APPLICATION: As flame retardant three conductor power cable rated 15kV, 90C in wet or dry locations. Widely used in the pulp and paper, petroleum, petrochemical, mining industries where cables with outstanding resistance to mechanical abuse, chemical attack and high reliability are required. Suitable for use in direct burial, open wiring, ventilated flexible cableways, and in non-ventilated, ventilated or ladder type cable trays. Inner and outer PVC jacket have low acid gas evolution and low flame spread properties along with excellent low temperature properties.

STANDARDS:
1. Listed as Power Cable per CSA Std. C68.3.
2. Minus 40C rated per CSA Std. C22.2 No.131.
3. Passes FT-4 70000 BTU/Hr cable tray flame test of CSA Std. C22.2 No. 0.3.
4. Complies with Acid Gas Evolution Test of Ontario Hydro Provisional Spec L-891 SM-77. Less than 14% acid gas evolution.
5. HL approved for use in hazardous locations per CSA Std. C22.2 No. 174.

CONSTRUCTION: Three conductors of Class B stranded uncoated compact copper, extruded conductor shield, RomeTR-XLP (tree retardant crosslinked polyethylene) insulation, extruded insulation shield, uncoated copper shielding tape. Three conductors twisted together with one uncoated copper grounding conductor and suitable fillers, tape, PVC inner jacket, aluminum interlocked armor, PVC outer jacket, surface printed.



Size AWG or kcmil		Thickness		Diameters						Weight		AMP*	Connectors	
Phase	Ground	Insul.	Inner Jkt.	Inner Jkt.		Armor		Outer Jkt.		lb/k ft.	kg/km		T & B	Crouse-Hinds
		Mils	Mils	In.	mm	In.	mm	In.	mm					
15KV 100% INSULATION LEVEL														
2	6	175	110	1.88	47.6	2.11	53.5	2.24	56.7	2628	3910	164	10474	0100229
1	6	175	110	1.95	49.3	2.18	55.2	2.30	58.4	2878	4283	187	10474	0100229
1/0	6	175	110	2.03	51.4	2.26	57.2	2.39	60.5	3196	4756	215	10552	0100230
2/0	6	175	110	2.12	53.6	2.35	59.9	2.50	63.5	3648	5428	246	10553	0100565
3/0	4	175	110	2.22	56.3	2.45	62.1	2.61	66.1	4166	6199	283	10553	0100565
4/0	4	175	110	2.33	59.2	2.56	65.0	2.72	69.0	4740	7054	325	10553	0100565
250	4	175	110	2.45	62.2	2.68	68.0	2.84	72.1	5264	7834	359	10554	0100566
300	4	175	110	2.57	65.1	2.80	71.0	2.96	75.0	5904	8786	399	10554	0100566
350	3	175	110	2.71	68.8	2.94	74.6	3.10	78.7	6665	9919	438	10554	0100567
400	3	175	110	2.88	72.9	3.11	78.8	3.29	83.4	7559	11248	471	10479	0100234
500	3	175	140	3.04	77.0	3.27	82.9	3.45	87.5	8765	13040	536	10481	0100235
600	2	175	140	3.23	82.0	3.46	87.8	3.64	92.5	10079	14999	589	10482	0100237
750	2	175	140	3.43	87.1	3.66	92.9	3.84	97.6	11830	17603	669	10484	0100238
15KV 133% INSULATION LEVEL														
1	6	220	110	2.15	54.5	2.38	60.3	2.54	64.3	3280	4880	187	10553	0100565
1/0	6	220	110	2.23	56.6	2.46	62.3	2.62	66.4	3603	5362	215	10553	0100565
2/0	6	220	110	2.32	58.7	2.55	64.6	2.70	68.6	3994	5944	246	10553	0100565
3/0	4	220	110	2.42	61.4	2.65	67.2	2.81	71.2	4523	6731	283	10477	0100232
4/0	4	220	110	2.53	64.3	2.76	70.1	2.92	74.1	5109	7603	325	10554	0100566
250	4	220	110	2.70	68.4	2.93	74.2	3.09	78.4	5755	8564	359	10554	0100567
300	4	220	110	2.81	71.4	3.04	77.2	3.21	81.5	6691	9957	399	10479	0100234
350	3	220	140	2.98	75.6	3.21	81.5	3.39	86.1	7363	10956	438	10480	0100235
400	3	220	140	3.08	78.0	3.31	83.9	3.49	88.5	7994	11895	471	10481	0100236
500	3	220	140	3.24	82.1	3.47	88.0	3.65	92.6	9215	13710	536	10482	0100237
600	2	220	140	3.43	87.1	3.66	92.9	3.84	97.6	10550	15700	589	10484	0100238

*AMPACITY in accordance with ICEA P-46-426/IEEE S135-1, 90°C conductor temperature, 40°C ambient, in free air or cable tray with a minimum of one cable diameter spacing. Agreement from the electrical inspection department is required for use of these ampacities. See CEC Part 1, Appendix B, Note to Rule 4-004(1).

NOTES: 1.Cable weight based upon aluminum armor. Galvanized steel armor available on request.

Information on this sheet subject to change without notice.

Rome Cable
CORPORATION

SPEC 7670

1-1-97

Specification
ROME TECK-HV MINUS 40C, HL, FT4, 15KV 100% & 133% IL
3 Conductor, Rome TR-XLP Insulation
Inner PVC Jacket, Aluminum Armor, Outer PVC Jacket

1. SCOPE
1.1 This specification describes three conductor Rome TR-XLP (TR-XLPE) insulated, PVC inner jacketed, aluminum interlocked armored, PVC outer jacketed TECK-HV cable for use in circuits not exceeding 15kV 100% or 133% insulation level, at conductor temperatures of 90°C for normal operation, 130°C for emergency overload conditions, and 250°C for short circuit conditions. Cables are suitable for use indoors or outdoors in wet or dry conditions in open wiring, ventilated flexible cableways, cable trays and direct burial installations, in commercial or industrial applications.

2. STANDARDS
2.1 The following standards shall form a part of this specification to the extent specified herein:
- 2.1.1 CSA Std. C68.3 Power Cable.
- 2.1.2 CSA Std. C22.2 No. 131 TECK 90 MINUS 40C cable.
- 2.1.3 CSA Std. C22.2 No. 0.3 Clause 4.11.4 FT4 flame test.
- 2.1.4 Ontario Hydro Provisional Spec L891 SM-77.
- 2.1.5 CSA Std. C22.2 No. 174 Cables and Cable Glands for Use in Hazardous Locations.

3. CONDUCTORS
3.1 Shall be Class B stranded uncoated compact copper conforming to CSA C68.3.

4. CONDUCTOR SHIELD
4.1 Shall be an extruded conducting crosslinked polyethylene compound with a minimum thickness in accordance with CSA C68.3, Table 2.

5. INSULATION
5.1 Shall be Rome TR-XLP tree-retardant crosslinked polyethylene meeting the requirements of CSA C68.3. Average thickness shall be 175 mils for 100% IL cables and 220 mils for 133% IL cables. Minimum thickness at any point shall be not less than 90% of the specified thickness.

6. SHIELDING
6.1 Over the insulation shall be applied an extruded conducting thermosetting insulation shield. It shall be in intimate contact with the insulation and shall be free stripping leaving no conducting particles or other residue on the insulation surface. The minimum point thickness of this layer shall comply with CSA C68.3, Table 5.

6.2 An uncoated 5 mil copper tape shall be helically applied over the extruded insulation shield with a minimum lap of 20%. The tape shall meet the requirements of CSA C68.3. A colored tape shall be applied longitudinally under the copper shielding tape to provide phase identification.

7. ASSEMBLY
7.1 Three phase conductors shall be cabled together with a Class B stranded uncoated copper grounding conductor and suitable nonhygroscopic fillers to make round. Length of lay shall not exceed 35 times the phase conductor diameter. The grounding conductor shall comply with the requirements of CSA C68.3 and CSA C22.2 No. 131. A nonhygroscopic cable tape shall be applied over the assembly.

8. INNER PVC JACKET
8.1 Shall be PVC meeting the requirements of C22.2 No. 131 including requirements for low temperature classification of -40°C. Thickness of jacket shall be as specified in C22.2 No. 131.

9. INTERLOCKED ARMOR
9.1 An aluminum alloy interlocked armor shall be applied over the inner PVC jacket meeting the requirements of C22.2 No. 131, Clause 4.11.

10. OUTER PVC JACKET
10.1 Cables shall have an overall red PVC jacket meeting the requirements of C22.2 No. 131 including requirements for low temperature classification of -40C. Thickness of jacket shall comply with CSA C68.3, Table 21.

11. IDENTIFICATION
11.1 Cables shall be provided with a legend identifying the manufacturer, number of conductors, size, voltage rating and insulation level, TECK-HV, MINUS 40C, TR-XLPE, FT4, HL, power cable symbol, year of manufacture and length markings in meters.

12. TESTS
12.1 Completed cable shall meet requirements for 15 kV cable in CSA C68.3, applicable requirements for TECK-HV cables in CSA C22.2 No. 131 including MINUS 40C low temperature classification, FT4 flame test requirement of C22.2 No. 0.3, HL requirements of C22.2 No. 174 and the acid gas evolution test of OH L891 SM-77.