Table 3. Summary of Bend and High-Potential-Withstand Tests

SPECIMEN NUMBER	VISUAL APPEARANCE BEFORE AND DURING BEND TEST[a]	MANDREL DIAMETER (in)/(mm)	MANDREL/ CABLE DIAMETER RATIO	NUMBER OF CABLE TURNS	APPLIED ALTERNATING POTENTIAL[b] (V)	LEAKAGE/ CHARGING CURRENT (mA)	REMARKS
1-1	Many rust-colored markings with white chemical deposit overall. No apparent cracks or tears.	4/102	40	8	1600	<10.0	Withstood potential. (Specimens connected together for test.)
1-2	Same as for specimen 1-1.	4/102	40	7			
1-3	Same as for specimen 1-1.	4/102	40	7			
1-4	Same as for specimen 1-1.	4/102	40	9			
2-1	Same as for specimen 1-1.	6/152	40	6	2400	<10.0	Withstood potential. (Specimens connected together for test.)
2-2	White chemical deposits overall. No apparent cracks or tears.	6/152	40	7			
2-3	Same as for specimen 1-1.	6/152	40	5			
2-4	Same as for specimen 1-1.	6/152	40	8			
3-1	White chemical deposits overall. No apparent cracks or tears.	16/406	40	2	3600	<10.0	Withstood potential. (Specimens connected together for test.)
3-2	Same as for specimen 3-1.	16/406	40	2			
3-3	Same as for specimen 3-1.	16/406	40	2			
4-1	Rust-colored markings approximately 2 in (50 mm) in length. White chemical deposits overall. No apparent tears or cracks.	5/127	38.5	6	2400	<10.0	Withstood potential. (Specimens connected together for test.)
4-2	White chemical deposits overall. No apparent cracks or tears.	5/127	38.5	7			
5-1	Outer jacket missing for approximately 14 in (0.35 m) of length at one end of cable. No apparent cracking of conductor insulation. White chemical deposits overall.	10/254	40	4	1200	<10.0	Withstood potential. (Note c)
5-2	Outer jacket missing from one-half of the specimen length. Other appearances the same as specimen 5-1.	10/254	40	4	1200	See Remarks	Leakage/charging current was 650 mA for first minute and then decreased to an average of 300 mA for remaining 4 min. The potential was maintained. (Note c)
6-1	Longitudinal cracks in outer jacket along entire length. No apparent cracking of conductor insulation. White chemical deposits overall.	24/610	40	2	2400	<10.0	Withstood potential. (Note d)
6-2	Same as specimen 6-1 except for the addition of circumferential cracks in the outer jacket.	24/610	40	2	2400	<10.0	Withstood potential. (Note d)
7	Outer jacket missing from most specimens. Conductor insulation appears intact. The ends of the heat-shrinkable splice were cracked (on the surface) for a distance of 2 in (50 mm). (Note e)	24/610	36.4	2	2400	<10.0	Withstood potential. (Note d)

NOTES:

a. Specimens were removed from the test vessel by cutting the specimens off just below (inside) the vessel penetrations. Visual inspection and high-potential withstand test results do not include portions of specimens contained within the penetrations.

b. Potentials applied for 5 min after specimens had been immersed in room-temperature tap water for 1.0-h minimum. The ground terminal of the test instrument was connected to a bare copper conductor in the water.

c. Potential applied to conductors 1 and 2 connected together with the drain wire and water at ground potential.

d. Potential was applied for 5 min to alternate outer conductors (i.e., 3, 5, and 7 connected together) with other conductors (i.e., 1, 2, 4, and 6) at ground potential. Then the potential was applied to the remaining outer conductors (i.e., 2, 4, and 6 connected together) with all other conductors at ground potential. Conductor 1 was always at ground potential.

e. Technician's inspection report indicated splice was "cracked." Later examination of photographs suggested cracks were limited to the surface of the splice and did not extend through the splice material. Specimen not available for reinspection.

INSTRUMENT NUMBER	18253
INSTR AND MFR	MULTIAMP INSTR. CORP. MILLIAMMETER
TYPE/MODEL NUMBER	165
SERIAL NUMBER	2104
RANGE/FEATURES	0-10,000 MA
ACCURACY	0.5 PERCENT OF F.S.
DATE CALIBRATED	12-10-79
CALIBRATION DUE	6-10-80

INSTRUMENT NUMBER	18281
INSTR AND MFR	AMETEK PRESSURE TRANSDUCER
TYPE/MODEL NUMBER	50G0200BC2
SERIAL NUMBER	41296-1
RANGE/FEATURES	0-200 PSIG 0-1 VDC
ACCURACY	0.25 PERCENT OF F.S.
DATE CALIBRATED	12-18-79 WITH 18037
CALIBRATION DUE	12-18-80

INSTRUMENT NUMBER	18290
INSTR AND MFR	TAKEDA RIKEN MULTIMETER
TYPE/MODEL NUMBER	TRI 6355 DIGITAL
SERIAL NUMBER	54721122
RANGE/FEATURES	0-1000 DCV ACV OHM DCI ACI
ACCURACY	0.5 PERCENT OF F.S.
DATE CALIBRATED	5-16-79
CALIBRATION DUE	5-16-80

INSTRUMENT NUMBER	18192
INSTR AND MFR	DANIEL INDUSTRIES FLOW SECTION
TYPE/MODEL NUMBER	STAINLESS STEEL 3/4 IN
SERIAL NUMBER	NONE
RANGE/FEATURES	1440 PSI 0.742 IN I.D.
ACCURACY	0.75 PERCENT OF INDICATION
DATE CALIBRATED	9-25-79 WITH 0.375 ORIFICE PLATE
CALIBRATION DUE	9-25-80

INSTRUMENT NUMBER	4217507
INSTR AND MFR	BECKMAN INS. AND BREAKDOWN TEST SET
TYPE/MODEL NUMBER	1600
SERIAL NUMBER	77145
RANGE/FEATURES	10 KV AC/DC 10 MA AC/DC
ACCURACY	3.0 PERCENT OF F.S.
DATE CALIBRATED	10-15-79
CALIBRATION DUE	4-15-80

INSTRUMENT NUMBER	18299
INSTR AND MFR	HIPOTRONICS AC DIELECTRIC TEST SET
TYPE/MODEL NUMBER	715-10
SERIAL NUMBER	76-26386
RANGE/FEATURES	0-15 KVAC 750 MA
ACCURACY	2.0 PERCENT AT 2/3 OF SPAN
DATE CALIBRATED	1-21-80
CALIBRATION DUE	1-21-81