ARTICLE
326 Integrated Gas Spacer Cable: Type IGS

Part I. General

326.1 Scope. This article covers the use, installation, and construction specifications for integrated gas spacer cable, Type IGS.

As illustrated in Exhibit 326.1, IGS cable consists of solid aluminum rod conductors, 250 kcmil minimum size. These conductors are insulated with dry kraft paper and are installed in a medium-density polyethylene gas pipe, minimum trade size 2, which is then filled with sulfur hexafluoride (SF_6) gas at a pressure of approximately 20 pounds per square inch.

Part II. Installation

326.10 Uses Permitted. Type IGS cable shall be permitted for use underground, including direct burial in the earth, as the following:

(1) Service-entrance conductors
(2) Feeder or branch-circuit conductors
(3) Service conductors, underground

326.12 Uses Not Permitted. Type IGS cable shall not be used as interior wiring or be exposed in contact with buildings.

326.24 Bending Radius. Where the coilable nonmetallic conduit and cable are bent for installation purposes or are flexed or bent during shipment or installation, the radius of the curve of the inner edge measured to the inside of the bend shall not be less than specified in Table 326.24.

326.26 Bends. A run of Type IGS cable between pull boxes or terminations shall not contain more than the equivalent of four quarter bends (360 degrees total), including those bends located immediately at the pull box or terminations.

326.40 Fittings. Terminations and splices for Type IGS cable shall be identified as a type that is suitable for maintaining the gas pressure within the conduit. A valve and cap shall be provided for each length of the cable and conduit to check the gas pressure or to inject gas into the conduit.

326.80 Ampacity. The ampacity of Type IGS cable shall not exceed the values shown in Table 326.80.

TABLE 326.24 *Minimum Radii of Bends*

Conduit Size		Minimum Radii	
Metric Designator	**Trade Size**	**mm**	**in.**
53	2	600	24
78	3	900	35
103	4	1150	45

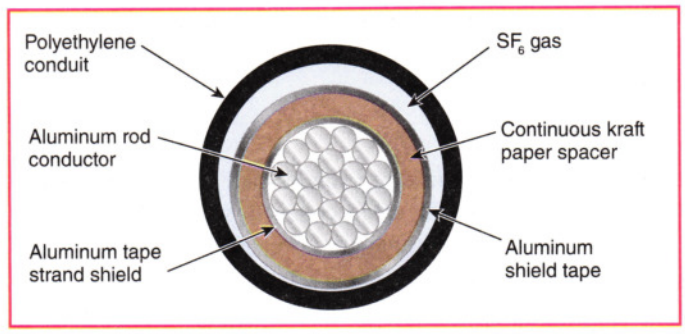

EXHIBIT 326.1 Cross section of single-conductor, 4750-kcmil Type IGS cable.

TABLE 326.80 *Ampacity of Type IGS Cable*

Size (kcmil)	Amperes	Size (kcmil)	Amperes
250	119	2500	376
500	168	3000	412
750	206	3250	429
1000	238	3500	445
1250	266	3750	461
1500	292	4000	476
1750	315	4250	491
2000	336	4500	505
2250	357	4750	519

Part III. Construction Specifications

326.104 Conductors. The conductors shall be solid aluminum rods, laid parallel, consisting of one to nineteen 12.7 mm (½ in.) diameter rods. The minimum conductor size shall be 250 kcmil, and the maximum size shall be 4750 kcmil.

326.112 Insulation. The insulation shall be dry kraft paper tapes and a pressurized sulfur hexafluoride gas (SF_6), both approved for electrical use. The nominal gas pressure shall be 138 kPa gauge (20 lb/in.^{2} gauge). The thickness of the paper spacer shall be as specified in Table 326.112.

TABLE 326.112 *Paper Spacer Thickness*

	Thickness	
Size (kcmil)	**mm**	**in.**
250–1000	1.02	0.040
1250–4750	1.52	0.060

326.116 Conduit. The conduit shall be a medium density polyethylene identified as suitable for use with natural gas rated pipe in metric designator 53, 78, or 103 (trade size 2, 3, or 4). The percent fill dimensions for the conduit are shown in Table 326.116.