

Formed-Wire Aluminum-Clad Guy Grip



1. Scope

This standard covers the material requirements for formed-wire guy grips. This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Description
014440	1/4-in Alumoweld
565122	5/16-in Alumoweld
565124	7/16-in Alumoweld
565126	9/16-in Alumoweld

2. Application

Guy grips are used to connect guy wires conforming to ASTM B416 to pole anchoring systems. Guy wire systems are used to support utility poles and related structures.

1/4-in guy grips are used to pull in 1/4-in support strand, overhead, fiber optic duct.

Each guy grip is rated to hold more than the rated breaking strength (RBS) of the guy strand it fits.

Guy grips are not rated for use on primary or secondary wire, nor should these be used on Aluminum Conductor Steel Reinforced (ACSR) conductors.

3. Industry Standards

Guy grips shall meet the applicable requirements of the following industry standards:

ASTM B415-98(2013); Standard Specification for Hard-Drawn Aluminum-Clad Steel Wire

ASTM B416-98(2013); Standard Specification for Concentric-Lay-Stranded Aluminum-Clad Steel Conductors

Standards Coordinator
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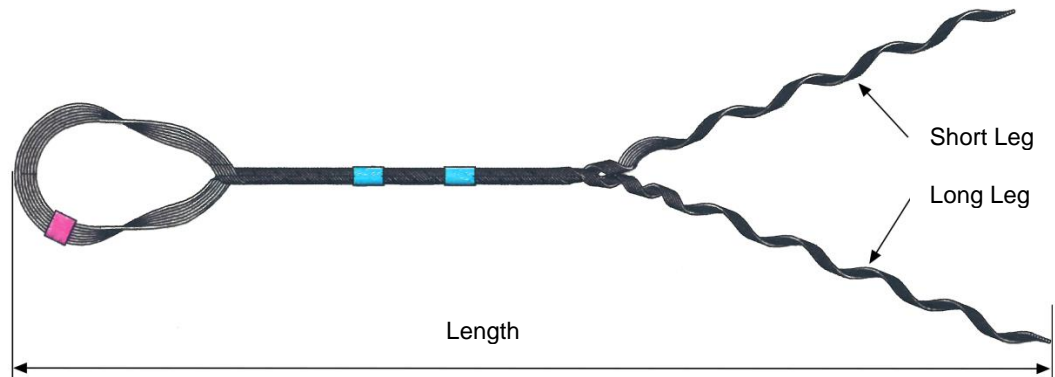
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4. General Requirements

Guy grips shall be of the configuration detailed in Figure 4.

Figure 4. Guy Grip Configuration



The loop end shall be a twisted loop and not flared.

Guy grips shall be made of high-strength spring steel wire, conforming to ASTM B416.

Guy grips shall be designed to hold the full-rated strength of aluminum-covered guy strands per Table 4 (on the next page of this document).

Each grip shall have identifying marks to indicate the proper crossover points for both large and small strain insulators.

One leg of the grip shall be longer than the other to facilitate easy removal from the strand.

The contact area of each grip shall be coated with a high-friction abrasive grit.

4.1 Wire

Before stranding, the aluminum-clad steel wire shall meet the requirements of ASTM B415.

4.2 Lay

The preferred lay for guy grip wire is 13.5 times the outside diameter of that layer.

The lay shall be between 10 and 16 times the outside diameter.

Guy grips shall be left-hand lay unless otherwise specified.

Table 4. General Requirements

Stock No.	Size (in)	Guy Wire Diameter (in)	Guy grip length (in)	Rate Strength (lb)
014440	1/4	0.231–0.258	24, -1/+0	6000
565122	5/16	0.308–0.311	26, -1/+0	10,000
565124	7/16	0.395–0.444	37, -1/+0	20,000
565126	9/16	0.571–0.591	50	34,290

5. Packaging

Guy grips shall be packaged to prevent damage from shipping, inside or outside storage and casual handling.

Guy grips shall be packaged as detailed in Table 5.

Table 5. Packaging

Stock No.	Size (in)	Units/package
014440	1/4	50
565122	5/16	50
565124	7/16	10-25
565126	9/16	10-20

A tag shall be attached to the outside of each package detailing:

- Manufacturer name or symbol
- Size of guy grip
- Manufacturer catalog number
- Date of manufacture
- SCL stock number

6. Issuance

Unit: EA

7. Approved Manufacturers

Stock No.	Size (in)	Manufacturer	Catalog	Color Code
014440	1/4	Helical	HG-517-6M	Yellow
		Preformed	AWDE-4110	Yellow
		MacLean	DE-AC4110	Yellow
565122	5/16	Helical	HG 521-10M	Black
		Preformed	AWDE-4116	Black
		MacLean	DE-AC4116	Black
565124	7/16	Helical	HG 528-20M	Green
		Preformed	AWDE4126	Yellow
565126	9/16	Preformed	BG-4173	Orange
		MacLean	DE-AC4133	Orange

8. Sources

Tilley, Kathy; SCL Electrical Engineering Support Specialist, subject matter expert and originator of 5651.40 (kathy.tilley@seattle.gov)