Clamps, Ductile Iron, Angle

1. Scope

This standard covers the requirements for forged steel and ductile iron angle clamps.

Angle clamps consist of a body, a keeper (a metal piece that sandwiches the conductor to the body of the clamp), a button-head pin, a cotter pin, and fastening hardware.

This standard applies to Seattle City Light (SCL) Stock No. 695016.

2. Application

Ductile iron angle clamps are used for distribution angle construction, up to 120 degrees. These clamps may be used with galvanized steel overhead ground wire or copper and Copperweld phase wire; however, magnetic induction heating will occur.

3. Industry Standards

Ductile iron angle clamps shall meet the applicable requirements of the following industry standards:

ANSI/NEMA C29.2B; American National Standard for Insulators–Wet Process Porcelain and Toughened Glass—Transmission Suspension Type; 2013 Edition

ASTM A47; Standard Specification for Ferritic Malleable Iron Castings; 2014 Edition

ASTM A153; Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware; 2005 Edition

ASTM A536; Standard Specification for Ductile Iron Castings; 2014 Edition

ASTM A711 / A711M; Standard Specification for Steel Forging Stock; 2012 Edition

4. Requirements

Angle clamps and their keepers shall meet the following requirements:

- Be made of ductile iron or forged steel; Ductile iron shall conform to ASTM A536; forged steel shall conform to ASTM A711
- Be galvanized in accordance with ASTM A153.
- Be designed to meet the ultimate strengths shown in Table 4 and Figure 4.
- Have smooth surfaces and all edges rounded to prevent formation of corona or damage to the conductor.

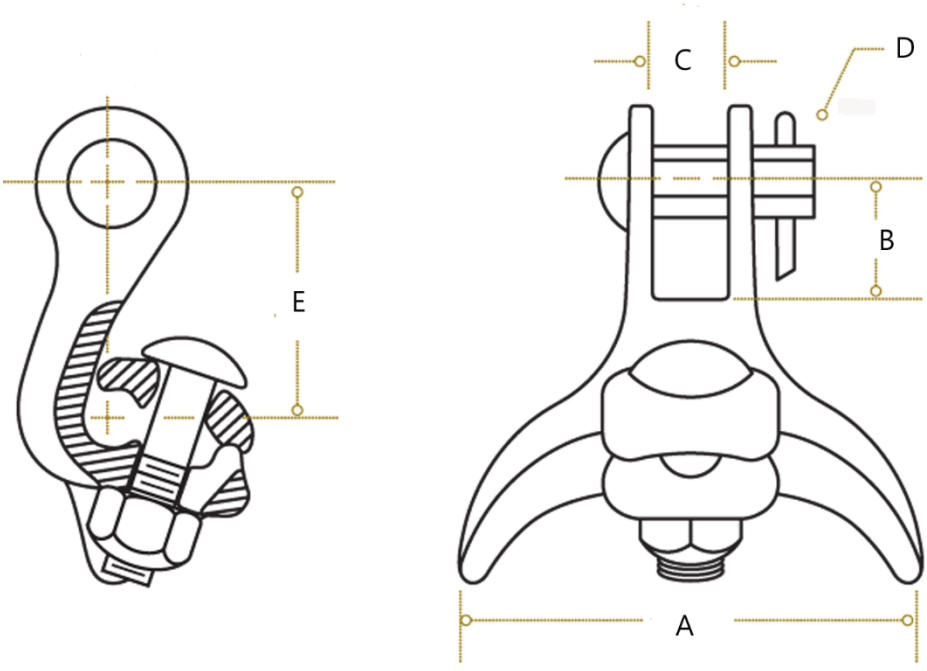
Fastening hardware and button-head pin shall be galvanized in accordance with ASTM A153.

Button-head pin shall be provided with cotter pins meeting the applicable requirements of SCL 5825.90.

Table 4. Angle Clamp Attributes

Stock No.	Conductor Size Range (AWG/kcmil)	Conductor Diameter (in)		Ultimate Strength (lb)	Max Take-Off Angle (degrees)	Dimensions, Nominal (in)				
		(min)	(max)	(min)		A	B	C	D	E
695016	2/0 – 500	0.162	0.6	7000	60	4-1/4	1-1/8	11/16	5/8	2-7/8

Figure 4. Angle Clamp



5. Marking

Each fitting shall be permanently and legibly marked in raised or stamped letters. Marking shall include but not be limited to the following information:

- Manufacturer name or symbol
- Manufacturer part number
- Fitting ultimate strength

6. Packaging

Product shall be packaged to prevent damage during shipping, handling, and storage.

Standard package quantity shall not exceed 50 per box.

Standard package weight shall not exceed 50 pounds.

Individual packages shall be legibly marked with:

- Manufacturer name
- Manufacturer catalog number
- Product description
- SCL stock number

Shipping containers shall be legibly marked with:

- SCL purchase order number
- SCL stock number

7. Issuance

Stock Unit: EA

8. Approved Manufacturers

Stock No.	Line Hardware, Inc.	MacLean Power Systems	Hubbell Power Systems
695016	AC60	FAC-75	82860-2000

9. References

SCL Material Standard 5825.90; "Cotter Pin, Humpback, Stainless Steel"

10. Sources

SCL Material Standard 6950.1 (canceled); "Clamps, Angle"

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www.hubbellpowersystems.com

www.macleanpower.com