



GUAM POWER AUTHORITY
AGANA, GUAM

Specification No. 018

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Rev. 0

PREPARED BY INFORMATION SYSTEMS DEPARTMENT

GUAM POWER AUTHORITY
P.O. BOX 2977
AGANA, GUAM 96910

TRANSMISSION & DISTRIBUTION SPECIFICATION

SPECIFICATION No. 018

FOR

12 KV Distribution

Lightning Arrester

EFFECTIVE DATE: 2/12/85

ISSUED: [Signature]

APPROVED: [Signature]



12 KV DISTRIBUTION LIGHTNING ARRESTER

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1.0 SCOPE:

- 1.1 These specifications cover distribution lightning arresters, furnished complete in ratings herein specified for use on GPA's 13.8 KV distribution system.
- 1.2 The arrester is intended for use in tropical weather conditions with corrosive sea air atmosphere, wind strengths of 155 mph, and subject to moderate and severe earthquakes.

2.0 CONFORMANCE TO SPECIFICATION REQUIREMENTS:

Arresters shall meet the requirements of the following unless otherwise specified in this specification.

2.1 APPLICABLE STANDARDS:

ANSI C62.1-1975
IEEE 028-1974 SURGE ARRESTERS FOR AC POWER CIRCUITS

2.2 DEVIATION AND NONCONFORMANCE REQUIREMENTS:

- 2.2.1 Deviations from this specification or change in the material or design after the purchase order has been placed must be approved by the GPA Engineering Department issued by a Purchase Order Amendment.
- 2.2.2 Units received with deviations of non-conformance which are not acknowledged as specified in subparagraph 2.2.1 are subject to rejection. The Supplier of units rejected in this paragraph is responsible for any corrective action including but not limited to materials, labor and transportation necessary to dispose of, or make the units conform to the specification.
- 2.2.3 Notification of defective units discovered before or after installation that are believed to be inherent to manufacturing problems or workmanship shall be made and forwarded to the Supplier. The description of the item, documentation of the problem and the described information, disposition and/or follow up (as appropriate) that GPA expects from the Supplier will be specified. The Supplier's response shall be made within thirty (30) days unless an extension is acknowledged and approved in writing by the GPA Manager of Engineering.

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APPROVED: *ABelipshi*



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3.0 DESIGN:

3.1 Arrester furnished shall be crossarm mounted type, single piece, gray color porcelain enclosed, self-supporting, constructed to withstand 155 mph winds and severe earthquakes.

3.2 The arresters shall be a nominal 12 KV RMS rating and shall withstand a 60 KV maximum impulse sparkover ANSI front-of-wave. The arresters shall withstand 1.2 x 50 impulse sparkover of 49 KV, and have a minimum 60 HZ sparkover of 22 KV RMS. The maximum discharge voltage (crest KV) at indicated impulse current of 8 x 20 microseconds shall be

38 KV @ 1.5 KA, 46 KV @ 5.0 KA,
52 KV @ 10.0 KA, and 58 KV @ 20.0 KA

3.3 Arrester shall be furnished with pressure relief devices to prevent the explosion of the porcelain in the event of arrester failure.

4.0 CONNECTIONS:

The line terminal shall be an eye bolt type with conductor range to accommodate from #4 to #4/0 copper or aluminum conductor.

4.2 The ground terminal shall be furnished suitable for connection to a conductor range from #4 to #4/0 copper or aluminum conductors.

See details on Sheet 5 of 5

5.0 TESTS:

5.1 Arrester shall withstand tests specified by ANSI C62.1, or latest revision thereof.

5.2 Copies of certified test results shall be provided to GPA Engineering within 30 days of award.

6.0 DATA TO BE FURNISHED BY MANUFACTURER:

6.1 Manufacturer shall submit with his proposal the following:

1. Arrester type
2. Arrester ratings
3. Typical drawing showing dimensions and mounting details
4. Description data

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6.2 After receipt of order, manufacturer shall submit within thirty (30) days, the following data:

1. Three (3) sets of certified drawings showing necessary dimensions for mounting and connecting arresters.

7.0 QUALITY CONTROL:

7.1 Suppliers Quality Control Program:

The Supplier shall have a quality program to assure compliance with the requirements of this specification. The program shall be documented and available for GPA's review.

7.2 Documentation of Manufacturer's Quality Control Program shall include:

- a. Show where in the manufacture, assembly and production checks are taken.
- b. Indicate the nature of the check, ie. what is being checked and the check method eg. visual, electrical tests, etc.

8.0 PACKING AND SHIPPING:

- 8.1 Each arrester shall be placed and crated in a manner to prevent damage and injury during shipment.
- 8.2 The arrester shall be properly secured with suitable material to provide physical protection and prevent shifting during transit.

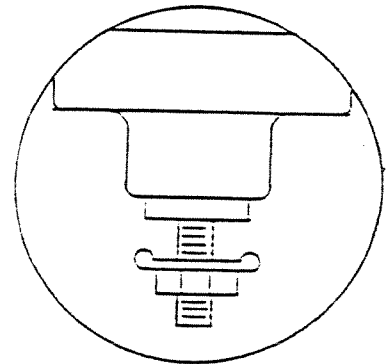
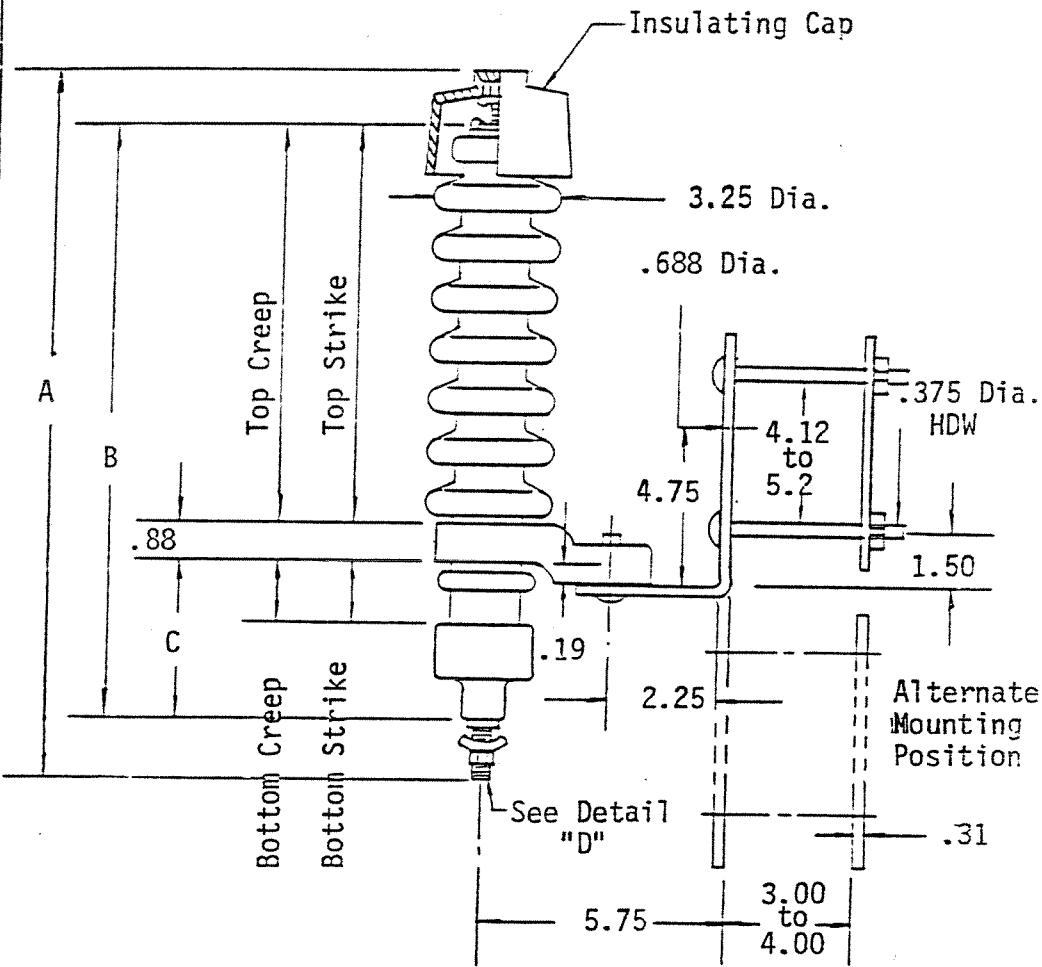
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DETAIL - "D"

FRONT VIEW

KV RATING	DIMENSIONS			TOP CREEP	TOP STRIKE	BOTTOM CREEP	BOTTOM STRIKE
	A	B	C				
12	17.92	12.11	4.33	16.46	10.10	2.75	2.17

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APPROVED: *Abalyska*