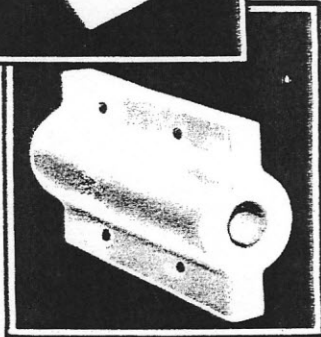
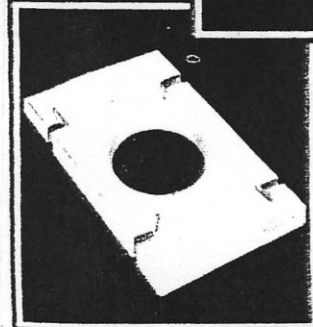
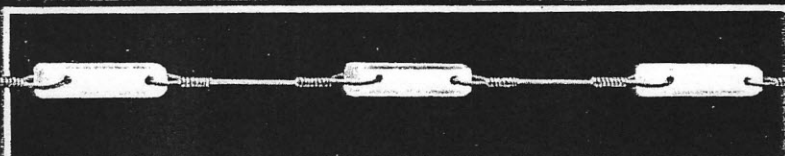
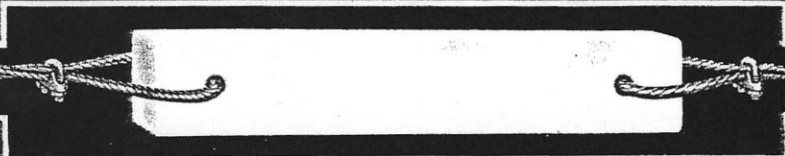
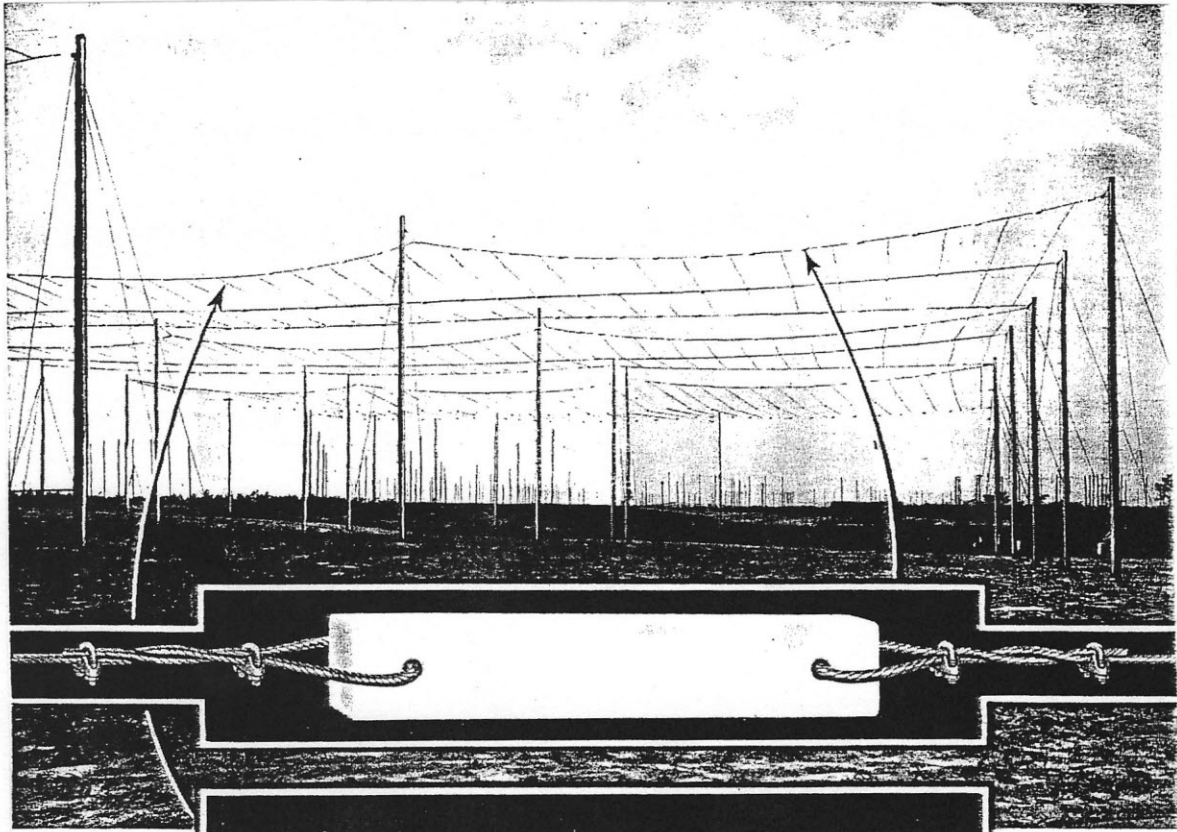


# 2016 PDF edition

## Old Familiar Strains

a newsletter for collectors of radio strain insulators and related items  
Volume 6 No. 1

February, 1999



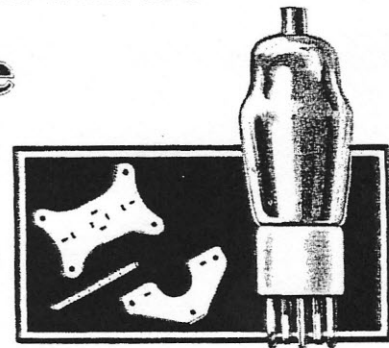
Central Receiving Station, R.C.A. Communications, Inc., Riverhead, Long Island, N. Y.

*Efficiency and Economy*  
THE GOAL OF ALL ENGINEERING EFFORT  
IS ACHIEVED WITH

### Isolantite

IT insulates the antennas of the world's greatest radio communication system. From antenna to vacuum tube component it guards against high frequency losses throughout the circuit of commercial short wave radio transmitters and receivers.

Just as ISOLANTITE has contributed to the success of commercial radio communication . . . so it will contribute to more efficient and dependable all-wave receivers for the home and hence their wider public acceptance.



## Isolantite Inc.

FACTORY at BELLEVILLE *New Jersey*

*New York Sales Office 233 Broadway*

## Editorial

This month I am privileged to present some information of Isolantite Manufacturing Company. Founded right after World War I, the company continues in business today offering a very broad line of top quality insulators. The discussion centers upon a 1966 history of the company that was prepared by a past president of the company. The monograph is supplemented with additional data on the company's history as well as lots of antenna insulator pictures.

Both **Gene Condon** and **Charlie Crews** report improved health.

Please check your mailing label to make sure that you've been credited for recent contributions. Thanks.



## Variations on the Theme

by Phillip Drexler

If you look closely at some of your lightning arresters, you may discover some neat variations. In addition to the versions previously reported in *OFS*, **Phillip Drexler** has uncovered the following variations:

- The plastic version of the Brach 1003 Duplex Vis-O-Glow exists in an amber color in addition to the more common clear plastic version. The amber version has the UL mark on the label - the clear version does not.
- The glass version of the Brach 1003 is also found with two different labels. One type has the words "Radio's finest arrester", "You can see it work." The other label just gives the name of the arrester, the company, and the location.
- I have two versions of the Fleron No. 17 Sentinel lightning arrester. One has "square" corners with a mounting hole in each corner. The other has only two screw holes, placed opposite each other diagonally. Also, the square-cornered version carries a Underwriter's approval notice "E-7191" that the other does not.

[See *OFS* 10/96 for more information on Fleron and the Sentinel lightning arrester.]

### Photo Credits

Isolantite 1931 catalog courtesy of **Elton Gish**

Current catalog courtesy of Isolantite Mfg. Co. (used by permission)

De Forest radio tube - De Forest ad *Radio Broadcast* 6/27 pg. 65.

Cover: *Radio Engineering* 5/34 pg. 1

A few months ago I made the acquaintance of George Lumpe, the current president of Isolantite Inc. It was he who shared this History of Isolantite which was prepared in 1966 by then president Frank J. Stevens.

## **History of Isolantite** by Frank J. Stevens, President

During World War I, France had been using German spark plugs in the automobiles and then were confronted with the necessity of making their own. A chemist, Mr. Delauay, was assigned the task of developing a material which turned out to be "Isolantite" which has since become almost a trade name.

Mr. Delaunay's brother-in-law, Mr. Richieu, a sergeant, went into no-man's-land and brought back Major De Caplane, who, as a reward, offered to supply Mr. Richieu with all the money he needed for a business after the war. The outcome was that the Isolantite Company of America started in 1920 for the purpose of making spark plugs, but these turned out to be not as good as the American "andalucite<sup>1</sup> plugs", developed in the Bureau of Standards; however, in the early 1920's, it was discovered that Isolantite was ideal material for radio frequency applications. Hence, "Isolantite" was used by General Electric, Radio Corporation of America and Westinghouse and others for their communication insulator problems. These same customers still use it.

During World War II<sup>2</sup>, the French-owned company was seized by the American

Government as soon as the Germans invaded France, and as a result of U.S. Government operations, the company was in bankruptcy in 1945-1946.

Here Isolantite Manufacturing Corporation, the present company, entered the picture, taking over the registered tradename, drawings, patents, engineering information and such of the old company's equipment as suited our purpose. Operations since that time have been very successful.

We have expanded the materials developed by the original company so that we can supply the original Grade L3 material plus other Government approved materials, Grades L4, L5 and L6. Research work is being carried on to develop these materials still further. These materials are now generally variations of magnesium aluminum silicate and are classified as "steatite".

The present company is recognized in Washington at the United States Information Agency for engineering and quality, for their requirements for American and overseas needs<sup>3</sup>. Radio Free Europe also purchases their needs from us. We also have always

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<sup>1</sup> Andalusite is a mineral,  $Al_2SiO_5$  consisting of a silicate of aluminum. Steatite is hydrated magnesium silicate. For more information on steatite see *OFS 12/97*.

<sup>2</sup> Isolantite's F. Potter participated on the committee to develop Military Standards

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for steatite during World War II. "War Standards for Military Radio" *Electronic Industries 12/42* pp. 33-35.

<sup>3</sup> Lee Stewart reports finding Isolantite strain insulators at the VOA's Bethany Relay Station (see *OFS 6/98* pg. 4).

supplied the needs of RCA Communications<sup>4</sup> and American Telephone and Telegraph for their overseas transmission, and still supply them. Collins Radio, Western Electric, Westinghouse, TRW, Inc., Bendix Corporation and many other are good customers.

The present company has also added a silicone alloy insulating material because of its very fine radio frequency characteristics, and Federal Aviation Agency uses these silicone alloy insulators for all of their air navigation beams and Instrument Landing Systems in the U.S.A. This excellent material has also been used for the same systems in Germany, Canada, India, etc.

The present company has also been requested by the Voice of America to redesign some of the insulators which have failed in service, so that failures no longer continue with the new designs. In fact, we have been called for consultation with Litton Industries, Kershner & Wright, and Hammond & Whitney for insulators used on their various projects.

At present, we believe we have the largest assortment of high voltage, high frequency, high strength insulators of any company in the industry. These insulators range in size from 1/2" diameter up to 2-1/2" in diameter and in lengths up to 24". The ultimate strength of these insulators goes as high as 21,360 pounds. All strain insulators of these types are given routine strength of or other tests to limit the bare possibility of failure in service, and to the best of our knowledge, no insulator has ever so failed.

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<sup>4</sup> RCA's Radio Central station was featured in the Isolantite ad which appears on this month's cover. For more information about Radio Central see *OFS* 4/97 pg. 8.

The first of these designs was made in 1929 by the writer, and we still have one insulator made up at that time. These insulators have been used extensively by RCA Communications, Inc., American Telephone & Telegraph Co., and the Navy<sup>5</sup>. We have seen some of these insulators removed from service and from appearances, they have been in use for 20 years or more.

The writer originated the use for pharmaceutical presses of automatic pressing of steatite and other materials in 1930. This processing method has been extremely successful so that many other companies use it in this country as well as in Britain. During World War II, the writer was invited by the British Air Ministry to introduce this method of production there. While they were using almost 100 million pieces of one part per year, their production time was 126 minutes per 100 parts. In checking the automatic pressing on a recent trip they reported a reduction to 20.2 minutes per 1000, and their production has increased several times since 1943.

The possibilities for the future of steatite seem to be very promising. While plastics have made slight inroads and alumina was at one time thought to be a strong competitor, experience indicates that neither of these materials now show any substantial erosion of the steatite business. The trend in the use of steatite has been upward since the depression in 1958. During this time, there has been a miniaturization in the parts of electronics, but the rapid growth in electronics has more than offset the size of

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<sup>5</sup> Isolantite's Manufacturers Designating Symbol for government contracts was CBU and its FSCM is 81143. For more information on military strains see *OFS* 10/98.

the parts. So we see no reason for believing that the industry will suffer from competition. In fact, we are looking forward to a steady increase in its use because of its great adaptability, and Isolantite can share the business with confidence.

Steatite has better characteristics for high dielectric strength, low dielectric losses than porcelain, alumina, and many other ceramic materials. The thermal and mechanical properties are by no means of secondary importance. Frequently, dielectric insulators must withstand high temperatures, great compressive strength, and even great temperature shock and in such applications, steatite is unique. It will withstand most chemical attacks.

One such application is for "chemical tower packing". It is used in quantity by Hercules, Inc. and others. Eastman Kodak uses it in their silver acid processing.

Another important application is for vacuum tube bases<sup>6</sup>, airport lighting bases, etc.

Incidentally, it has been our policy in past years to stand on a very even keel even in times of an influx of orders so that we can assure our customers of service. We have had no desires to extend ourselves to a point where our customers might become

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<sup>6</sup>De Forest began using the distinctive unglazed white Isolantite tube bases in 1925. At least 20 types were made including both long and short pin styles. They were a feature of De Forest tubes until 1927. Isolantite tube bases carry an ink-stamped notice "Isolantite Bases Mfg. For Excl." Information from pg. 165 of *70 Years of Radio Tubes and Valves* by John W. Stokes published by The Vestal Press Ltd. Vestal, NY 1982. Picture on page 3.

dissatisfied with delivers or our quality control.

Recently we have a acquired a complete tool room and are, therefore, now in a better position to apply the close tolerance of tool making to those steatite orders which may need close tolerance.

A recent addition increasing our floor space 30% enables us to increase our firing capacity, and at the same time remove from our manufacturing space equipment presently used for firing, so that we can increase production in all operations.

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President Frank J. Stevens, was an electrical engineer and joined the Institute of Radio Engineers in 1947. Mr. Stevens acquired the assets of Isolantite after World War II. Around 1950, he moved the company's plant from Belleville, NJ, to its current location in Stirling, NJ, Mr. Stevens passed away in 1970. And in 1971, the current president, George Lumpe, bought the company from Mr. Stevens' estate.

Isolantite continues to maintain a vast product line of porcelain and steatite products. Mr. Lumpe believes that they probably make more types of insulators than anyone in the industry..

The company continues to contract with the United States Information Service to provide insulators for Voice of America Broadcast stations. And they recently sent insulators to Sri Lanka for a sizable installation.

In the near term, Isolantite plans to add a large gas-fired kiln to further expand their capacity (which currently runs in the millions of parts each year).

## Directive Antenna Suspension Insulators

THESE insulators are available for many applications in radio antennae where the loads are not high such as those encountered in directive antenna arrays. They are exceptionally strong, considering their small cross-section, and their proportions are such as to introduce a minimum of loss in the antenna system. Saddle ways are provided in all the insulators of this type, specified below, and should, therefore, not be used with a pin shackle.



SPECIFICATIONS

Insulator No.	Overall Length	Distance between hole centers "L"	Diam. of bar	Diam. of holes
626-L2	3 1/4"	2"	3/4"	1/4"
626-L4	5 1/4"	4"	3/4"	1/4"
626-L6	7 1/4"	6"	3/4"	1/4"
627-L2	3 1/4"	2"	1/2"	1/8"
627-L4	5 1/4"	4"	1/2"	1/8"
627-L6	7 1/4"	6"	1/2"	1/8"

## Transmitting Antenna Suspension Insulators

THOUSANDS of these rectangular bar type insulators have been installed in directive transmitting antennae which are now in service in many parts of the world. They were introduced several years ago and are still giving service in short wave antennae used in transatlantic circuits.

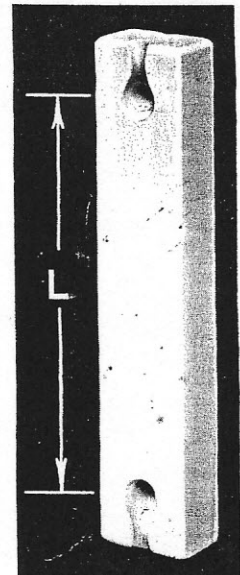
Fabricated in the new Isolantite they are even stronger than before and their prices have been materially reduced. The table of specifications below and the illus-

trations indicate the different sizes available and the different methods of attachment that are provided. At the left, insulator 727-L 5 1/4" is illustrated equipped with bronze shackles. These shackles are available for all insulators in this series and are recommended for use except where saddleways are provided for direct cable connection. The fastening holes of all insulators in this group are of a diameter to take 5/16" pins.



SPECIFICATIONS

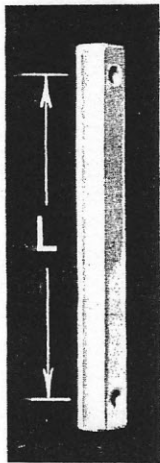
Insulator No.	Distance between hole centers "L"	Size of bar	Type of Hole
726-L4	4"	3/4 x 1 1/8	Small Countersink
726-L5 1/4	5 1/4"	3/4 x 1 1/8	Small Countersink
726-L6	6"	3/4 x 1 1/8	Small Countersink
726-L8	8"	3/4 x 1 1/8	Small Countersink
727-L4	4"	1 x 1 1/2	Small Countersink
727-L5 1/4	5 1/4"	1 x 1 1/2	Small Countersink
727-L6	6"	1 x 1 1/2	Small Countersink
727-L8	8"	1 x 1 1/2	Small Countersink
728-L2 5/8	2 5/8"	7/8 x 1 1/4	Saddle Way
729	5 1/4"	1 x 1 1/2	Saddle Way
730	5 1/4"	1 x 1 1/2	Large Countersink



**Isolantite**

## Small Receiving Antenna Insulator

**I**NSULATOR 776 is designed for insulating receiving antennae. It is very strong mechanically, having an average ultimate strength of over 2,000 pounds. The two holes provided are  $\frac{3}{16}$ " in diameter with a  $1\frac{3}{8}$ " center to center spacing. The overall diameter is  $\frac{7}{8}$ " and the length 2". The insulator is glazed all over except one end.



## Insulator 777

**T**HESE insulators are provided with two flattened sides, the purpose of which is to afford simple and effective mounting of stamped fittings at the ends.

### SPECIFICATIONS

Insulator No.	Overall Length	Distance between hole centers "L"	Size of bar	Diameter of holes	Method of attaching
777-L1 $\frac{3}{8}$	2 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	$\frac{1}{2}$ x $\frac{5}{8}$	$\frac{3}{16}$ "	Pin shackle
777-L2	2 $\frac{3}{4}$ "	2"	$\frac{1}{2}$ x $\frac{5}{8}$	$\frac{3}{16}$ "	Pin shackle
777-L4	4 $\frac{3}{4}$ "	4"	$\frac{1}{2}$ x $\frac{5}{8}$	$\frac{3}{16}$ "	Pin shackle
777-L6	6 $\frac{3}{4}$ "	6"	$\frac{1}{2}$ x $\frac{5}{8}$	$\frac{3}{16}$ "	Pin shackle

## Transmission Line Spreaders

**T**RANSMISSION line spreaders in the two styles shown are used extensively in the construction of directive antennae. Type 1080 is supplied with two slots in which the feeder cables rest. The latter are afterward wrapped with wire first passed through the holes in the bar. By soldering the service wires to the cables, the insulator is fixed in place in the feeder system.

This insulator is glazed all over except one end. Type 1088 differs from the former in that a groove turned in both ends provides means for fastening the cables. The wires for holding the cables in place may be wrapped around the insulator in these grooves and afterward soldered to the cables. This insulator is furnished unglazed unless otherwise specified.



1080

### SPECIFICATIONS

Insulator No.	Overall Length	Distance between hole centers or grooves	Diameter	Size of hole	Size of grooves
1080	4"	3"	$\frac{3}{4}$	$\frac{1}{8}$ "	$\frac{1}{8}$ " radius
1080	6"	5"	$\frac{3}{4}$	$\frac{1}{8}$ "	$\frac{1}{8}$ " radius
1080	10"	9"	$\frac{3}{4}$	$\frac{1}{8}$ "	$\frac{1}{8}$ " radius
1088	4"	3"	$\frac{3}{4}$	none	$\frac{1}{8}$ " radius
1088	6"	5"	$\frac{3}{4}$	none	$\frac{1}{8}$ " radius
1088	10"	9"	$\frac{3}{4}$	none	$\frac{1}{8}$ " radius



1088

**Isolantite**

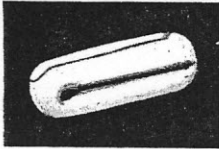
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## Aircraft Antenna Strain Insulators



801



804

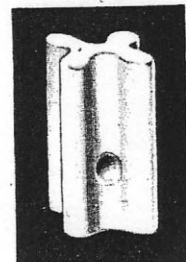
THESE insulators, being very small in size and circular in shape, offer only slight head resistance when used in aircraft antenna. Moreover, owing to their light weight they will not cause sagging.

Using a number 14 B & S gauge wire, insulator 801 provides a creepage path approximately  $5/16$ " in length while insulator 804 has a leakage path of  $1/2$ ". The total actual length of the insulating path may be increased by adding additional insulators in series. Insulator 801 is  $1\frac{1}{4}$ " over all with two  $3/16$ " holes, while 804 is  $1\frac{1}{2}$ " long,  $17/32$ " diameter with two  $.120$ " holes.

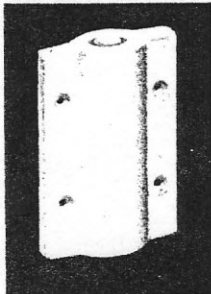
Since both insulators are of the compression type accidental breakage of the insulator will not allow the antenna to be carried away and become entangled in plane gear. The insulators are fully glazed with a white low loss ceramic glaze which easily washes free of foreign conducting material which may become deposited upon its surface.

## Compression Type Strain Insulators

USED singly for low voltage antenna system or in various numbers for use at higher voltages these insulators give a leakage path of  $1/2$ " per unit when used with  $3/16$ " cables. They will develop the full strength of a  $3/16$ " steel cable without injury. A deeply cut saddleway is provided around each hole in order to avoid sharp bends in hard drawn wires with which they may be used. For guying light masts, insulating or sectioning conductors in the vicinity of the antenna they have proved highly satisfactory. The length of insulator 803 is  $2\frac{1}{4}$ "; maximum diameter  $1\frac{1}{2}$ "; standard hole size  $1/4$ ".



803



1015

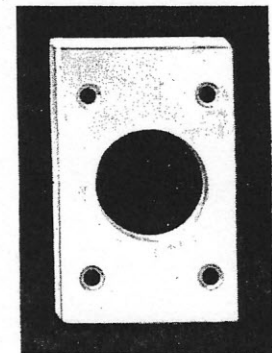
## Transmission Line Stand-off Insulator

MOUNTED to a vertical support with bolt or lag screw, this single post insulator will support four wires whereas four insulators might otherwise be necessary. It is glazed all over except one end. The center hole in insulator 1015 is  $.400$ " in diameter while the four small holes in the projectors are  $.075$ " diameter. The latter are spaced on  $1.3$ " centres and are counterbored on both sides.

## Directive Antenna Transposition Insulators

INSULATORS type 1016 are designed for use in the transmission line of directive antennae providing convenient means for transposing the wires at suitable intervals.

The slight bend which the leads take in entering the holes in the insulator is sufficient to prevent the insulator from sliding down vertical leads even with severe vibration. These insulators are glazed all over except one end. The 1016 transposition insulator is  $3\frac{3}{4}$ " long by  $2\frac{1}{4}$ " wide by  $1/4$ " thick, with a center opening  $1\frac{3}{8}$ " diameter. Four holes  $5/16$ " diameter are spaced on a rectangle  $1\frac{1}{2}$ " by  $2\frac{9}{16}$ ".



1016

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**Isolantite**

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## Heavy Duty Suspension Insulators for Loads up to Twelve Tons

THE strain insulators described on these pages are designed not only to support great mechanical loads but to provide a long insulating path between fittings, thereby giving greater protection against electrical leakage and flash-over in the high voltage antenna.

As numerous tests have proved the tensile strength of Isolantite to be substantially greater than that of other ceramic materials suitable for high voltage and high frequency insulation, communication engineers have expressed marked preference for insulators 752 to 759 since the day of their introduction. The prices of these Isolantite insulators are especially low and this feature, when considered along with strength, and the well known electrical characteristics of the material from which they are made, has established a new standard in value which has not yet been approached.

Insulators 752 to 759 may be used in an assembly in order to attain greater range in total mechanical strength. At the left assembly 765 is shown which consists of two 755 insulators in combination with fittings providing a total average ultimate strength of 12,000 pounds. Insulators 752 to 759 can be used in an assembly of two insulators. Only insulators 756 to 759 however are supplied with fittings for a combination using three units which give an average ultimate strength of 25,000 pounds.

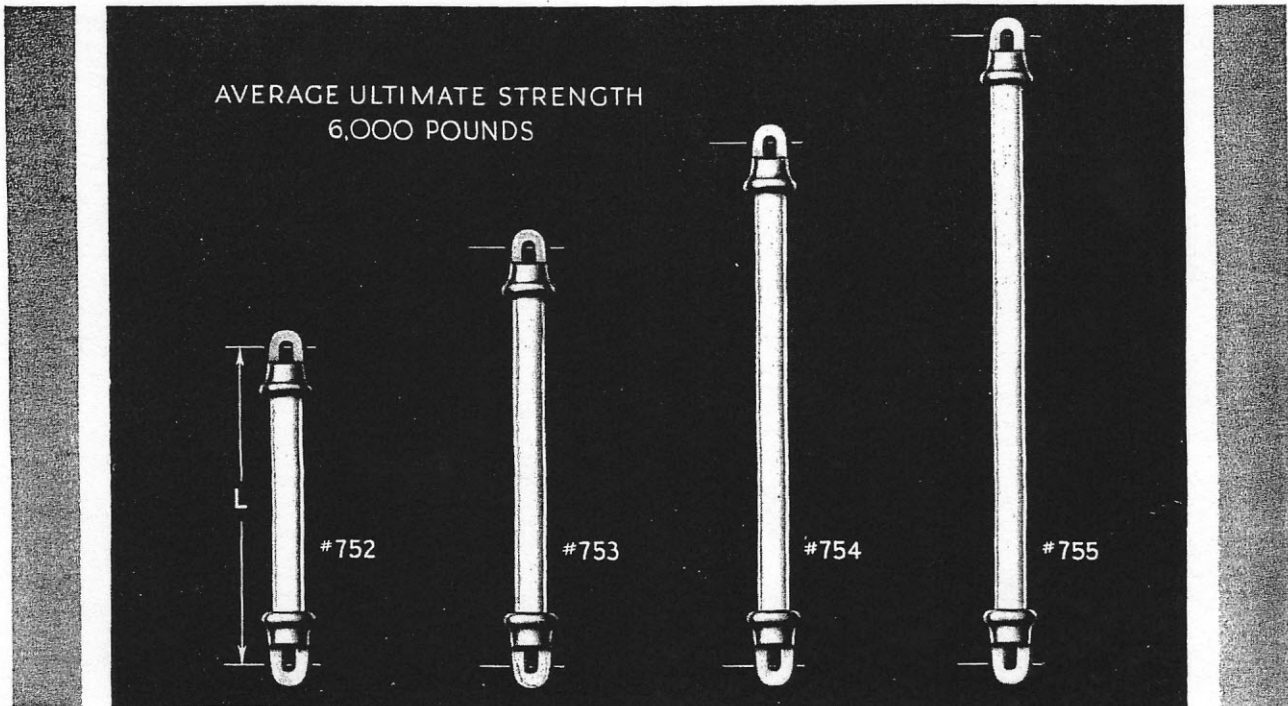
The fittings used in the construction of these assemblies are hot galvanized steel. Pins, cotterpins and shackles are supplied and the assembly is shipped complete ready for use. All the insulators listed on these two pages are glazed all over.



765



769

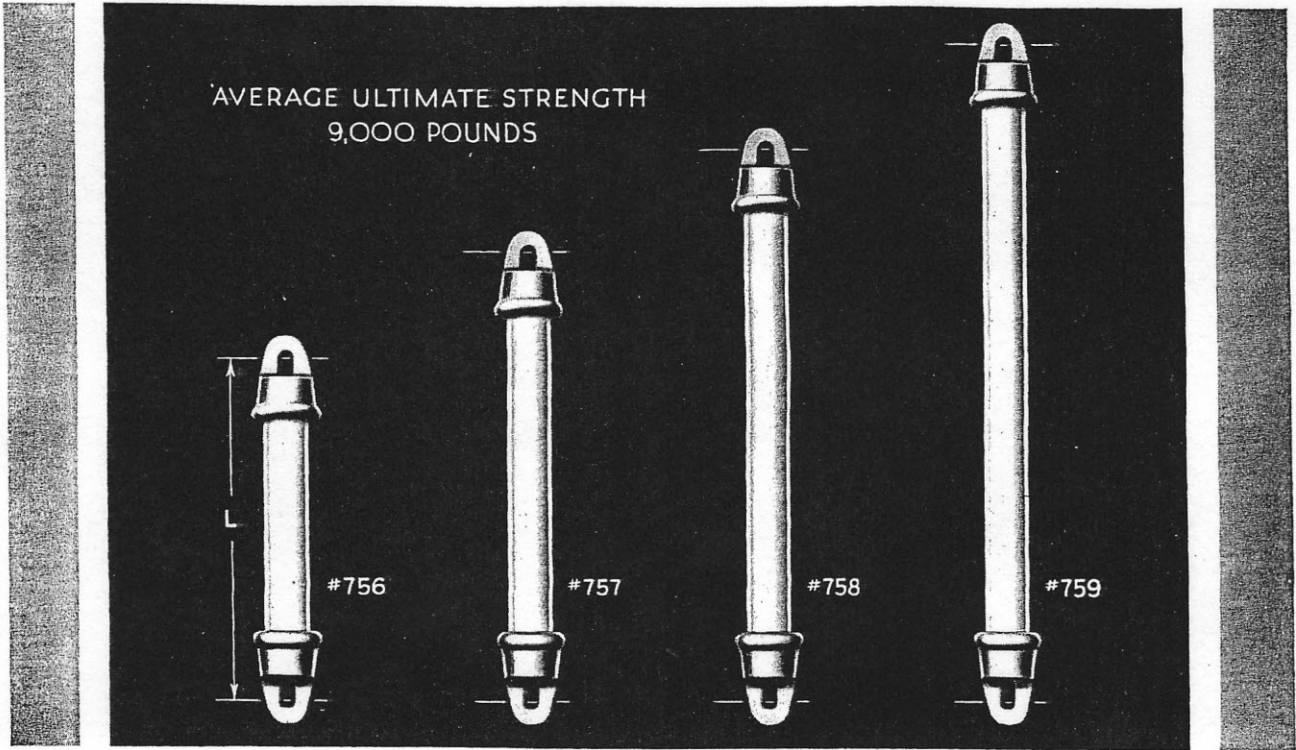


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**Isolantite**

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AVERAGE ULTIMATE STRENGTH  
9,000 POUNDS



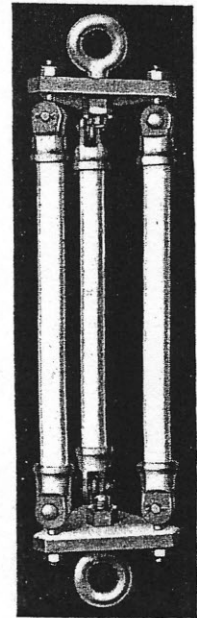
The insulators illustrated above as well as those on the opposite page, are given individual load tests before shipment, a feature of added interest to those demanding the utmost in mechanical reliability.

SPECIFICATIONS (Single)

Insulator Number	Spacing "L"	Leakage Length	Weight	Insulator Number	Spacing "L"	Leakage Length	Weight
752	12"	8"	2½ lbs.	756	13"	8"	5⅝ lbs.
753	16"	12"	3 lbs.	757	17"	12"	6½ lbs.
754	20"	16"	3¾ lbs.	758	21"	16"	7⅛ lbs.
755	24"	20"	3¾ lbs.	759	25"	20"	8⅛ lbs.

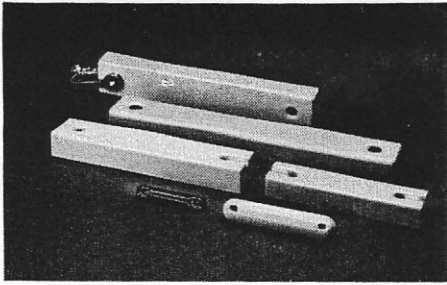
SPECIFICATIONS (double and triple)

Insulator Number	Assembly	Insulator Number	Assembly	Insulator Number	Assembly
762	Two No. 752 bars	766	Two No. 756 bars	786	Three No. 756 bars
763	Two No. 753 bars	767	Two No. 757 bars	787	Three No. 757 bars
764	Two No. 754 bars	768	Two No. 758 bars	788	Three No. 758 bars
765	Two No. 755 bars	769	Two No. 759 bars	789	Three No. 759 bars



789

**Isolantite**



## Transmitting Antenna Strain Insulators

Isolantite strain insulators, available in standard rectangular shapes can be provided in many sizes and lengths for light and moderate duty applications. Their simplicity makes them an economical choice over metal end-capped assemblies. End configurations can be

supplied for direct cable attachment with a variety of hole shapes. Metal shackles may also be specified on one or both ends.

Round light duty strain and spreader insulators are also available in many diameters and lengths.

### DIMENSIONS IN INCHES

INSULATOR NO.	FIGURE NO.	*STANDARD LENGTH "L"	HOLE DIA.	SIZE OF BAR	**SHACKLE
726	1	4, 6, 8, 11-9/16	11/32	3/4 x 1-1/8	2 pc. 2"
727	1	5-1/4, 6, 8, 10, 12, 15	11/32	1 x 1-1/2	2 pc, 2" or 3"
728	3	2-5/8, 4, 6	11/32	7/8 x 1-1/4	
729	3	5-1/4, 6, 8, 10, 12, 15	11/32	1 x 1-1/2	
730	4	5-1/4, 6, 8	11/32	1 x 1-1/2	
20920	2	5-1/4, 6, 8, 10, 12, 15	11/32	1 x 1-1/2	1 pc. 2" or 3"
2786	5	8, 10, 12, 15	3/8	1 x 1-1/2	

\* WHEN ORDERING: Specify Length "L". Distance from Hole center to end is 9/10".

\*\* Specify shackle desired.

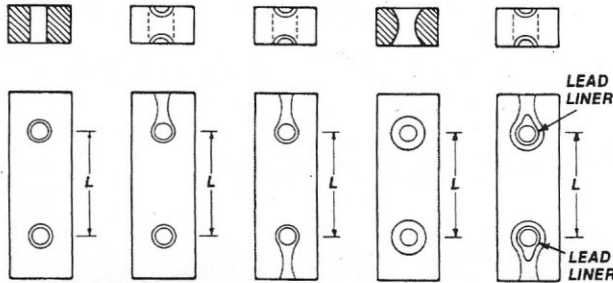
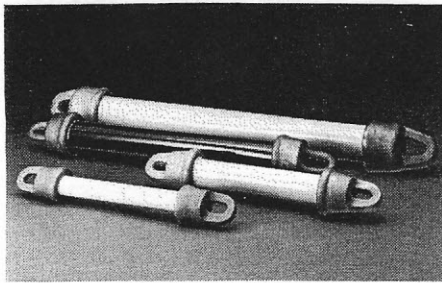


FIGURE 1 FIGURE 2 FIGURE 3 FIGURE 4 FIGURE 5



## Heavy Duty Suspension Insulators

Isolantite Heavy Duty Suspension Insulators are used for applications in which large mechanical loads are encountered on high voltage antenna assemblies. They provide a long insulating path between the metal fittings to protect against electrical leakage and flashover. A wide range of sizes and strengths are available in this type of

insulator with greater strengths and leakage lengths attainable by combining insulators into assemblies. The ceramic is available in white or brown glaze.

Metal end caps can be supplied as either single or double loop in manganese, silicon, aluminum bronze, anodized aluminum, or galvanized malleable iron.

### DIMENSIONS IN INCHES

INSULATOR NO.	FIGURE NO.	SPACING "L"	LEAKAGE LENGTH	WEIGHT (LBS.)	AVERAGE ULTIMATE STRENGTH (LBS.)
752	1	12	8	2-1/2	4500
753	1	16	12	3	4500
754	1	20	16	3-3/8	4500
755	1	24	20	3-3/4	4500
2746	1	28	24	4-1/8	4500
3107	2	18-5/16	12	7-1/2	7000
756	3	13	8	5-5/8	9000
757	3	17	12	6-1/2	9000
758	3	21	16	7-1/8	9000
759	3	25	20	8-1/8	9000
21330	4	19-9/16	15	7	9000
3541	4	27-3/16	20	18	>9000

NOTE: "L" is measured between centers of end cap hole radii at outer edge.

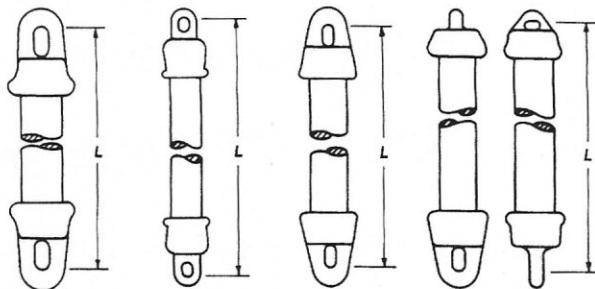


FIGURE 1 FIGURE 2 FIGURE 3 FIGURE 4

Insulators No. 752 through No. 2746 are 1 1/4" dia.  
 Insulator No. 3107 is 1 1/2" dia.  
 Insulators No. 756 through No. 21330 are 1 3/4" dia.  
 Insulator No. 3541 is 2 3/8" dia.

## Seeing Insulators in a New Light

by Charlie Crews

My niece took me to a local antique mall recently, and I found a beautiful light green, or aqua, antenna insulator, just full of bubbles. I did not have one like it. I don't have many with bubbles in the glass like that. So there are pretty ones out there to be found!

I checked it with my black light, and it's fluorescent yellow!

Check out your old insulators with a black light. I'll bet some of them will be fluorescent. A lot of older glass is.

### Airplane Insulator Update

In the last issue, we identified the MX 270 and 273 airplane antenna insulators/springs. Although I don't have pictures to share, there are a few more items in this family that I overlooked.

- MX-189 and MX-190 are also military aircraft antenna insulators.
- MX-271 and MX -272 are as well.
- And MX-274 and MX-275 are "tensioning units for aircraft fixed antennas."

Thanks to F W Chesson

## Readers Write

Your account of the estate sale ("choices" in the December issue) sounds like a collector's dream. **Lee Stewart**

I can't believe that it's been 5 years. Congratulations. **Rick Soller.**

The donuts (OFS 12/98 pg. 16) also came in a "lemonade" amber and a deep golden amber and (my rarest) a soft light blue. Glenn Drummond of Alabama has a chain of donuts in all sorts of colors. It was made as whimsy at the Hemingray factory. Any of them could have been freed from the chain by breaking its neighbors and used as a radio antenna insulator. **Gene Condon.**

### Recent Acquisitions

My recent finds: M.M. Fleron lightning arrester in cobalt, Belden lightning arrester in brown bakelite and an Everett lightning arrester in white. Also found a glass "diamond" radio strain. **Jeff Hogan**

Santa was good to me this year. My wife brought me some unusual styles that she picked up in London (England). And my folks outdid themselves. First it was a cigar box full of porcelains. Then they followed up with a Silvertone De Luxe antenna kit that came complete with perriwinkle blue glazed insulators. **Dan Howard**

## A Testimonial to Isolantite

*This testimonial by James Millen, the president of National Radio was printed in the August, 1937 issue of QST magazine (pg. 65)*

When we first offered a complete line of low-loss dielectrics some years ago, we introduced the use of the word "steatite" to describe a certain group of high quality ceramic materials. At that time the word was used, particularly in Europe, to refer to the best of ceramic dielectrics. In its own field the word had come to have almost the same meaning as "Sterling." Since we first used it, we regret to say that the word has been so abused that it has lost most of its original meaning.

Many people incorrectly suppose that "steatite" is a brand. Actually it is the common name for a certain variety of natural talc used in making the best of electrical ceramics. It is a very expensive material to use because of the difficulties in manufacture. For one thing it is difficult to mold or compact into shape preparatory to firing. Further, it is very fragile at this stage so that breakage is high even when the pieces are handled with the greatest of care. In addition it requires such a high firing temperature that a special kiln is necessary. Only a few such kilns exist in this country.

Because of the difficulties in handling steatite, it is often mixed with other materials to make the product cheaper to manufacture, though inferior electrically. Up to a certain point such adulteration is not objectionable, because for many purposes the loss of electrical characteristics is not serious. However, the practice has been carried to such extremes by some American companies that materials are advertised as made of steatite that actually contain only a trace of that material, the bulk being cheap

porcelain. Apparently there is no way to stop this, for as long as there is any steatite in the product at all it is legal to refer to it as "made of steatite."

This applies mostly to this country. In Europe, where most of the pioneer work was done, "steatite" still means quality. In fact they think so highly of the word that in France the principle manufacturer of high-grade ceramics L'Isolantite S.A.<sup>7</sup>, uses *Isolant-Steatite* as the trade name of their product, while in Germany the premier company is known as *Steatit-Magnesia Aktiengesellschaft*. If these companies should test some of the material sold in this country as steatite, they would be quite embarrassed.

... The best suggestion we can make is to purchase only from a reliable source, and to be willing to pay a fair price. There is enough competition to ensure that you will get exactly what you pay for.

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The National company backed up its endorsement of *genuine* Isolantite and steatite insulators by featuring the insulators in its product line through the 1930's and 1940's. National sold "Q-Bar" feed-line spacers, bushings, stand-offs, tube sockets and other Isolantite products. Isolantite products were frequently identified *by name* in National's advertisements.

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<sup>7</sup>(The parent company of the Isolantite Company of America).