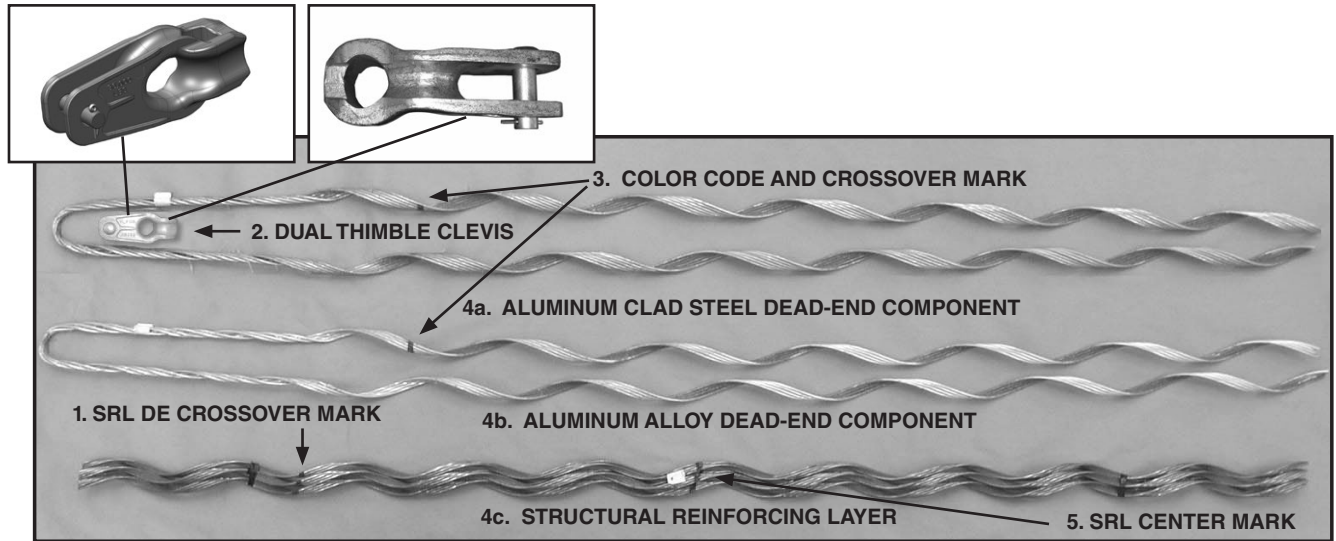




# THERMOLIGN® Dead-end

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before installation.



**THERMOLIGN DEAD-END AND ASSOCIATED HARDWARE**

## NOMENCLATURE

1. SRL Center Dead-end Crossover Mark
2. Dual Thimble Clevis
3. Color Code and Crossover Marks
- 4a. Aluminum Clad Steel Dead-end Component
- 4b. Aluminum Alloy Dead-end Component
- 4c. Structural Reinforcing Layer
5. SRL Center mark

## DESCRIPTION

THERMOLIGN Dead-ends are specially designed to provide a holding strength of at least 95% of the Rated Breaking Strength (RBS) of high temperature ACCR and ACSS/AW conductors (round wire designs only). These dead-ends are not to be used on conductors with trapezoidal outer strands (i.e., ACCR/TW or ACSS/TW).

## INSTALLATION ISSUES:

**Length:** THERMOLIGN Dead-ends are manufactured with a specific number of rods (wires) and length specified by PLP in order to provide necessary holding strength.

**CAUTION:** Alterations to the number or length of the rods may prevent the product from functioning properly. Do not alter the rods in any way.

**Structural Reinforcing Layer (SRL):** This layer of helically formed rods transfers the load between the conductors and the dead-end component. The SRL is specially designed to transfer these axial tensile forces without compressing the conductor.

**Associated Hardware:** Below are two additional components associated with the THERMOLIGN Dead-end application.

**A. Dual Thimble clevis:** A clevis of proper size and strength is provided in order to support the dead-end's loop and connect the dead-end to the structure or other fittings.

**B. Extension link:** The extension link (not shown) positions the dead-end at the structure to allow an acceptable conductor bending radius. A 14" (356 mm) link is provided.

## INSTALLATION ISSUES Continued:

**Re-application:** THERMOLIGN® Dead-ends may be used only **once** as a pulling-in grip (sagging), removed then reapplied **only once more** for permanent installation, for a total of two applications. DO NOT re-use after initial, permanent installation is completed.

## STRUCTURAL REINFORCING LAYER (SRL) APPLICATION

**STEP #1** Before applying the structural reinforcing layer, loop the aluminum alloy THERMOLIGN Dead-end component through the thimble clevis and position it parallel to the cable.



**Positioning the THERMOLIGN DEAD-END**

Mark the conductor at the color-coded crossover mark on the dead-end. This will be the reference mark for positioning the structural reinforcing layer (SRL) subsets on the conductor.

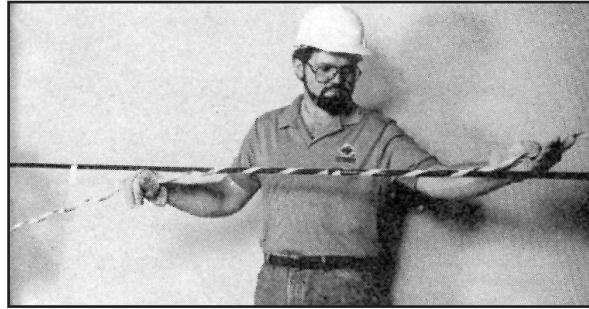
Align the color code or Dead-end crossover mark located near the structure of the SRL subset with the reference mark you just made on the conductor.

**PLP TIP:** THERMOLIGN Dead-end SRL rods are best installed starting at the center of the rods due to their long length. Begin at the center mark of the subset and apply them while pulling the rod legs up and away from the conductor as you wrap them on as shown in PHOTO A.

**CAUTION:** If you start to apply the SRL subsets of a THERMOLIGN Dead-end at the crossover mark near the structure, you may have difficulty phasing in the end of the final SRL subsets.

## STEP #2 WRAPPING FIRST SUBSET OF STRUCTURAL REINFORCING LAYER (SRL)

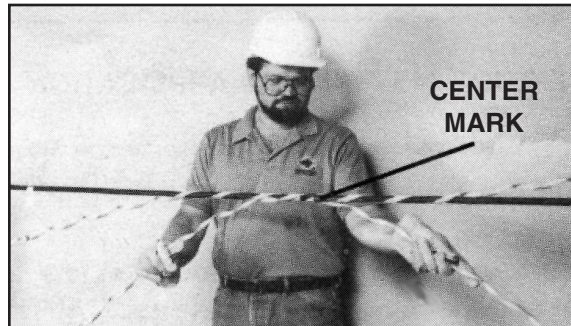
Wrap the rods of the first subset completely onto the conductor and snap the ends into place.



**PHOTO A**

## STEP #3 ALIGNING THE SECOND SUBSET

You may leave portions of this subset temporarily unwrapped if convenient, as shown below.



## STEP #4 WRAPPING THE SECOND SUBSET

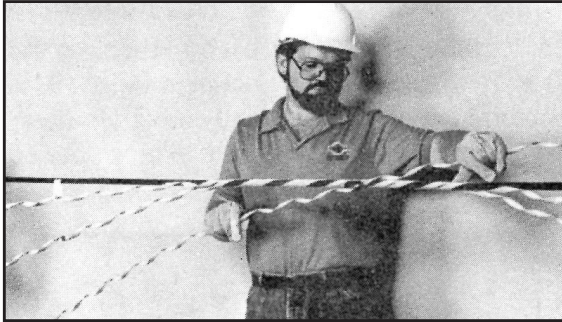
Wrap the second subset on the conductor for two or three pitch lengths, leaving the ends loose.



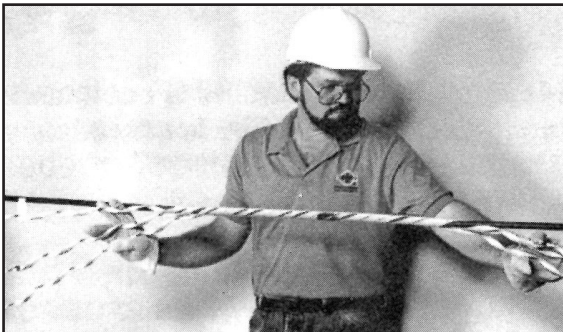
**PLP TIP:** It aids installation if you wrap a subset on the conductor **into** a previously applied subset. Wrapping **away** from a previously applied subset can increase the gap between subsets and cause application problems at the ends of the unapplied subsets. Wrapping all unapplied subsets at the same time can also help avoid this problem.

### STEP #5 ALIGN REMAINING SUBSET

Apply remaining subsets as outlined in Steps 3 and 4.



To complete application, wrap unapplied subsets **into** previously applied subsets **or** use both hands to wrap subsets simultaneously into position as shown below. First wrap one end, then wrap the other end. To assure a strong reinforcement, make sure that rods are not crossed and that all rods are evenly spaced. **MAKE SURE ALL ROD ENDS ARE IN PLACE.** Do not use tools that can damage the conductor surface.



**COMPLETING SRL APPLICATION**

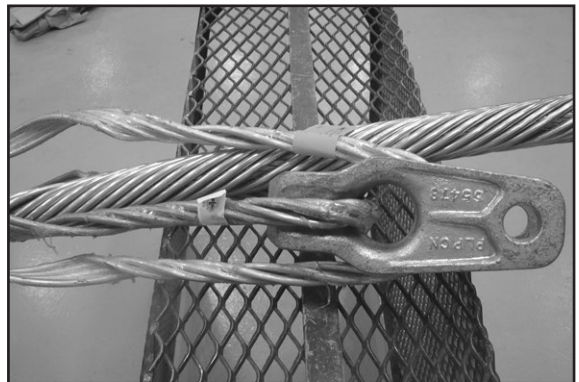
## DEAD-END APPLICATION

**STEP #1** Insert THERMOLIGN Dead-end components in the Thimble Clevis provided. Thread the aluminum alloy dead-end component through the working hole of the Thimble Clevis.

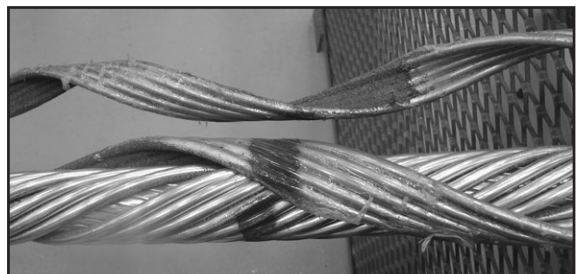


**STEP #2** Place the loop of the aluminum clad dead-end into the seat of the thimble clevis.

**CAUTION:** Care should be taken to assure that the loops are properly seated in the thimble clevis.

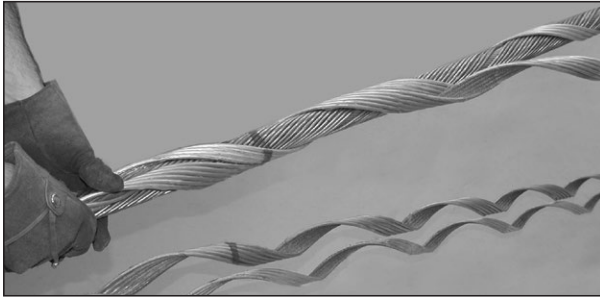


**STEP #3** Align the crossover mark of the aluminum alloy dead-end with the color code mark of the SRL closest to the structure. Begin application by wrapping the dead-end leg over the SRL starting at the color coded crossover marks. Completely install this leg.



#### STEP #4 APPLY THE SECOND DEAD-END LEG

Align the crossover mark of the aluminum clad dead-end component with the SRL color mark closest to the structure. There will be approximately 1-1/2" between the color code marks with the legs properly phased. Apply this leg in the same fashion as the previous dead-end leg, as shown below. Make sure that the legs phase in properly without overlapping rods. Keep the Thimble Clevis lined up in the loops of the dead-end components during this procedure.



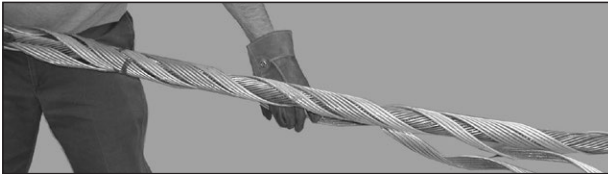
#### STEP #6 SPLITTING DEAD-END LEGS

To ease dead-end installation, do not apply the last two leg pitches. Split the legs as shown below, then apply them completely as smaller subsets or as individual rods. Make sure that all rod ends are snapped into place.

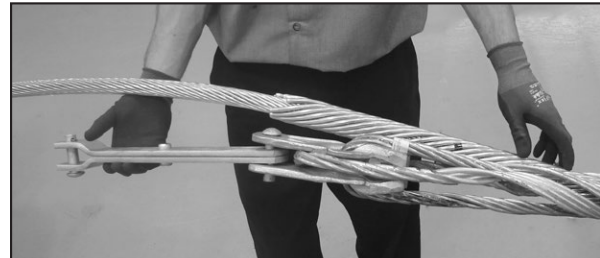


#### STEP #5 SPLITTING THE LEGS

Complete the dead-end installation by installing the second leg of the aluminum alloy dead-end then the aluminum clad dead-end.



#### COMPLETED DEAD-END APPLICATION



#### SAFETY CONSIDERATIONS

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual.

**FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

This product is intended for a single (one time) use and for the specified application.

**Do not reuse or modify this product under any circumstances.**

This product is intended for use by trained technicians only. This product should not be used by anyone who is not familiar with, and not trained to use it.

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



# PREFORMED LINE PRODUCTS

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