



# Fittings for **LSCC**

Low-Sag Composite Core Conductor



SEMYUNG ELECTRIC MACHINERY CO., LTD.

Large capacity, High efficiency

# Low Sag Composite - core Conductor



## Construction

- Stranded conductor based on ASTM B 857 and EN 50182
- Aluminum-covered carbon fiber composite-core based on ASTM B 987
- Aluminum wire with trapezoidal shape based on ASTM B 609

## Aluminum-covered Carbon Fiber Composite-core

- Extra high tensile strength, low thermal expansion and light weight
- Galvanic protection
- Stable protection of composite-core from various environment conditions
- More current carrying capacity
- Less electrical resistance (low line losses)

## Aluminum wire with trapezoidal shape

- High conductivity (63% IACS)

## Characteristics of LSCC

2X

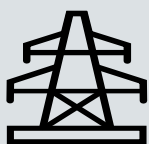
### Double Current Capacity

Upgrades current capacity by almost double compared to conventional which has a higher allowable temperature.

20%

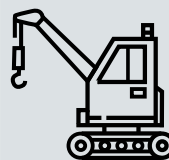
### Reduce Power Loss

Resistance is reduced by more than 20%, meaning less power loss and more current capacity.



### Realization of Low Sag

Tensile strength and sag is reduced, and drop-down accidents prevented. All of this results in overall lower installation cost.



### Installation Convenience

The construction period will not increase either, since LSCC uses the same accessories and installation method as conventional ACSR.

# SEMYUNG.

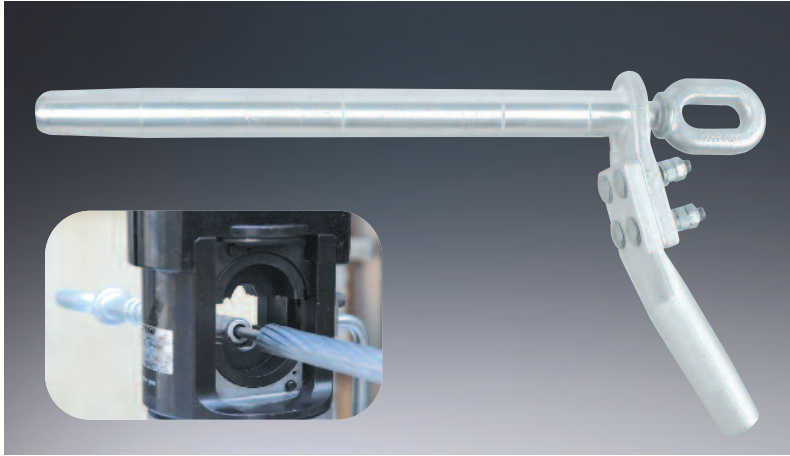
World Leader In The Technology of Transmission Line Fittings



LSCC fittings maximized the advantages of ACSR and STACIR fittings through casting, forging, machining and design technology accumulated over a long period of time.

We produce and supply fittings designed and manufactured to maintain safety to the characteristics of Al-covered carbon fiber composite core and fully annealed aluminum wire, which are important parts of LSCC

## Compression Type Deadend Clamp for LSCC



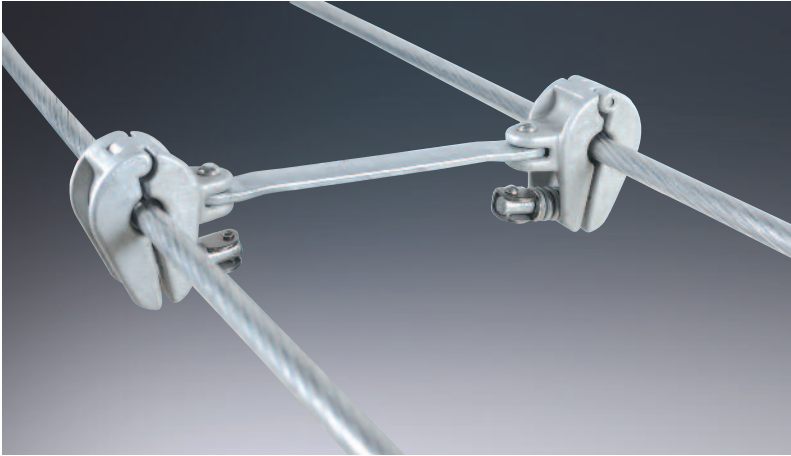
- Clamp body : Pure Al, friction welding
- Steel clamp : Forged steel, high precision processed products
- Jumper clamp : Pure Al, gravity casting
- Compression type Deadend clamps for LSCC are compressed more easily in the same way as current conductors (ACSR, STACIR etc), which is designed to promote convenience of work without additional learning of skills and functions.

## Hinge Type Suspension Clamp for LSCC

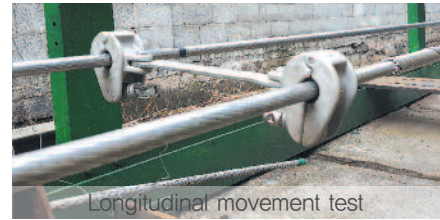


- Housing : Al-alloy, gravity casting, hinge type
- Insert rubber : Heat and ozone resistance rubber
- Armour rods : Al-alloy (A6061)
- Recommended angle : 30 ° (for single) ~ 60 ° (for double)
- Strong gripping force with low clamping force
- Designed for 200°C continuous conductor temperature
- Manufactured in a hinged type, so it can be safely installed without any problems or accidents caused by falling.

## Boltless Type Spacer for LSCC



Compression and tension test



Longitudinal movement test

- Clamp : Al-alloy, gravity casting, hinge type
- Insert rubber : Heat and ozone resistance rubber
- Strap : Steel (Forging press)
- Gripping by high tension and heat resistance springs
- Rotation angle : Min.  $\pm 30^\circ$
- Heat and ozone resistant rubber is placed inside the clamp to protect the aluminum wire without damage and abrasion.
- Boltless type clamp is not only easier to fasten, but also maintains the same condition during the long-term period of operation. Furthermore, it preserves a stable grip even under the creep phenomenon.

## Vibration Damper for LSCC



Damper fatigue test



Attachment of weights to messenger cable test

- Clamp : Al-alloy, gravity casting, hinge type
- Weight : Ductile cast iron
- Armour rods : Al-alloy (A6061)
- Excellent corona characteristics, vibration damping and installation workability
- Very convenient to install on the conductor as non-separating structure.
- To protect against various vibrations, a preformed armour rod is assembled on the wire and clamps are placed additionally on it. As a result it fully protect the annealed aluminium wire of the LSCC.



Exclusive drilling machine for Steel clamp

## Production Facilities

Semyung Electric Machinery has a long tradition of excellence in the manufacture of fittings for Transmission line designated by the KEPCO (Korea Electric Power Corporation). In particular, so as to produce various fittings from EHV to UHV level, we are equipped with state of the art processing & automation facilities, manufacture products under the strict control system for processing & quality maintenance, and export fittings for transmission lines to a number of countries around the world.

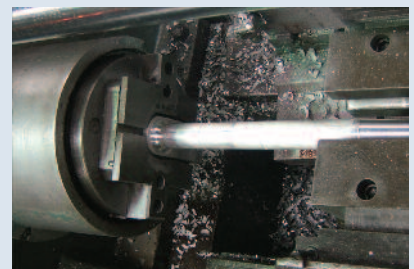
오랜 역사와 함께 발전하여온 세명전기는 한국전력공사(KEPCO)의 송전금구류 우수 제작업체로서인정을 받고 있으며, 특히 특고압에서 초고압 금구류에 이르기까지 다양한 제품생산을 위하여 최신 가공설비와 자동화 설비를 구축하고 엄격한 공정관리와 품질관리로 제품을 생산하며, 세계 각국으로 송전 금구류를 공급하고 있습니다.



Exclusive drilling



Mold manufacturing



Friction welding



Turning angle test of Suspension clamp

## Quality Assurance System

Semyung guarantees the best quality by designing and manufacturing the most suitable for LSCC and our test equipments satisfy the IEEE and IEC standard.

Therefore, the excellence of our products has been recognized by accredited international laboratory testing organizations such as ILAC-MRA, KOLAS, and KERI

LSCC에 가장 적합한 금구의 설계와 제작으로 품질을 보증하고, IEEE, IEC 규격을 만족하는 시험설비를 구축하여 신뢰성을 확보하였으며, 공인시험기관(ILAC-MRA/KOLAS/KERI) 으로부터 제품의 우수성을 인정 받았습니다.



Vibraion fatigue test equipment



Heat cycle test equipment



3D Modeling design



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