

SFPOC-CENTRUM™

Composit Fiber Optic Overhead Ground Wire(OPGW)

Composit Fiber Optic Overhead Ground Wire(OPGW) is a composite overhead optical groundwire that provides high capacity communication channels to service present and future needs.

SFPOC-Centrum™ features a high optical fiber count OPGW providing excellent communication capabilities within a small overall diameter.

Installation of SFPOC-Centrum™ is straight forward utilizing standard OPGW hardware and equipment.

SFPOC-Centrum™ is custom designed to satisfy each customer's specified communication and groundwire requirements for short circuit current capacity, tensile strength, fiber count and fiber type while complying to ASTM, IEEE or IEC International Standards.

SFPOC provides with its products a comprehensive range of services, including OPGW hardware, installation supervision, type testing and training.

Optical Design Features

SFPOC-Centrum™ provides the type and number of optical fibers needed to meet customer's specific requirements while complying to ITU-T Standards.

SFPOC-Centrum™ features optical fibers placed loosely in a hermetically sealed stainless steel tube containing a gel filling compound to form an optical unit.

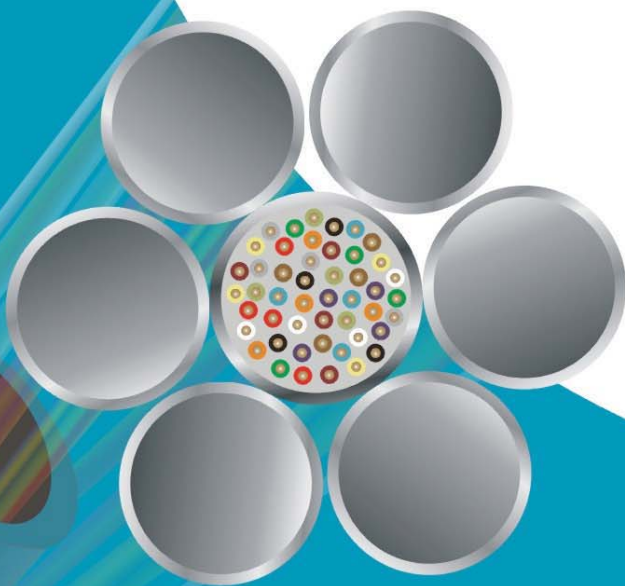
The optical fibers have low signal attenuation and wide band width allowing for long distance, high capacity communication.

Optical fibers are free from crosstalk and are not subjected to electromagnetic interference and polarization. They provide secure high quality signal transmission.

Groundwire Design Features

Aluminum-Clad Steel and Aluminum Alloy wires are stranded around a central optical unit.

The Aluminum-Clad Steel wires and Aluminum Alloy wires provide the mechanical strength to withstand installation and operating conditions, while achieving the conductivity needed to control temperature rise during short circuit fault conditions.



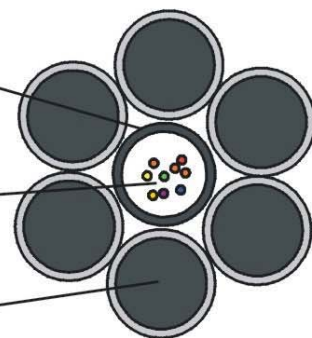
SFPOC

SFPOC-CENTRUM™ DESIGN FEATURES

Stainless Steel Tube Φ 3.6mm

Optical Fiber

27% ACS Φ 3.7mm



TYPICAL SFPOC-CENTRUM™ DESIGN	METRIC	IMPERIAL
Fiber count	48	48
Nominal Size	64mm ²	0.098in ²
Overall Diameter	11.1mm	0.437 "
Nominal Weight	415kg/km	0.279lb/ft
Minimum Tensile Strength	6500kgf	14,300lbs
Modulus of Elasticity	14300kgf/mm ²	20,340kpsi
Coefficient of Linear Expansion	13.4×10 ⁻⁶ /°C	7.4×10 ⁻⁶ /°F
DC Resistance at 20°C	0.99 Ω /km	1.60 Ω /mile
Fault Current Capacity (Ambient=40°C)	27kA ² sec	27kA ² sec

TYPICAL FIBER TYPES AND ATTENUATION

Attenuation	Units	G.652	G.655
1310nm	dB/km	0.36	--
1550nm	dB/km	0.22	0.22

Typical Fiber Types are available in accordance to ITU-T Standards: G652&655 or IEC 60793, 60794

*SFPOC OPGW custom designed to meet each customer's specific technical requirements.

Suzhou Furukawa Power Optic Cable Co., Ltd.(SFPOC)

Our product was successfully type tested at Kinectrics Inc. , Toronto, Canada as per internationally recognized specification. SFPOC is the first OPGW manufacturer in China to have successfully completed all type tests including lightning tests on OPGW.

SFPOC, a joint venture of The Furukawa Electric Co. , Ltd. of Japan and Etern (Yongding) Group of China, is a global leader in manufacture and supply of Optical Ground Wire (OPGW).

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SFPOC-DUAL™

Steel Tube encased in an Aluminum Tube

Composit Fiber Optic Overhead Ground Wire(OPGW) is a composite overhead optical groundwire that provides high capacity communication channels to service present and future needs.

SFPOC-DUAL™ is a compact OPGW design with excellent short circuit current capacity and mechanical strength.

The SFPOC-DUAL™ construction consists of a sealed inner stainless steel tube encased in an aluminum sealed tube. This design is well suited for highly corrosive environments without requiring the use of anti-corrosive grease.

The dual tube design offers greater crush and mechanical protection to the fibers from environmental effects. Single wire layer designs allow for larger outer metallic wires, offering excellent lightning performance.

SFPOC provides with its products a comprehensive range of services, including OPGW hardware, installation supervision, type testing and training.

Optical Design Features

SFPOC-DUAL™ provides the type and number of optical fibers needed to meet customer's specific requirements while complying to ITU-T Standards.

SFPOC-DUAL™ features optical fibers placed loosely in a hermetically sealed stainless steel tube covered with aluminum layer containing a gel filling compound to form an optical unit.

The optical tibers have low signal attenuation and wide band width allowing for long distance, high capacity communication.

Optical fibers are free from crosstalk and are not subjected to electromagnetic interference and polarization. They provide secure high quality signal transmission.

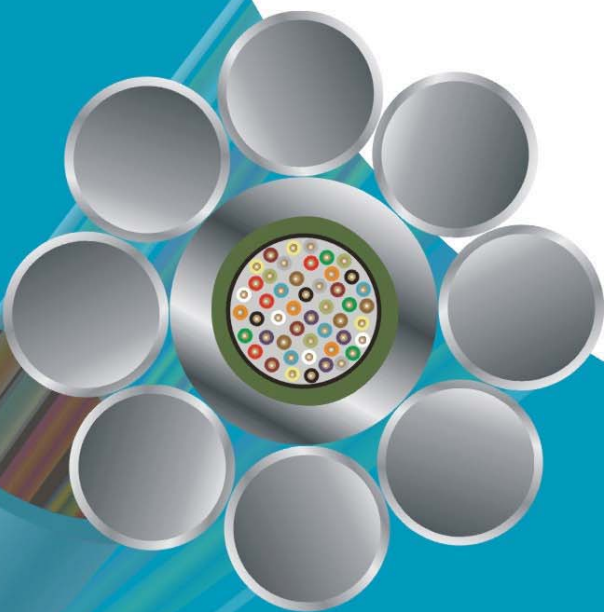
Groundwire Design Features

Aluminum-Clad Steel and Aluminum Alloy wires are stranded around a central optical unit.

The Aluminum-Clad Steel wires and Aluminum Alloy wires provide the mechanical strength to withstand installation and operating condition, while achieving the conductivity needed to control temperature rise during short circuit fault conditions.



SFPOC



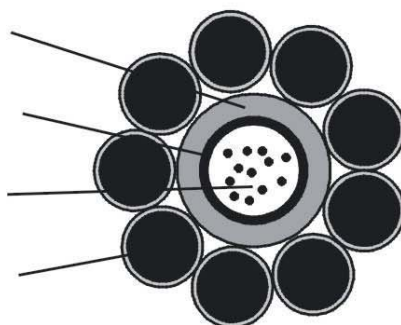
SFPOC-DUAL™ DESIGN FEATURES

Aluminum Tube $\Phi 5.0\text{mm}$

Stainless Steel Tube $\Phi 3.6\text{mm}$

Optical Fiber

27% ACS $\Phi 2.62\text{mm}$



TYPICAL SFPOC-DUAL™ DESIGN	METRIC	IMPERIAL
Fiber count	48	48
Nominal Size	49mm ²	0.076in ²
Overall Diameter	10.48mm	0.413"
Nominal Weight	333kg/km	0.224lb/ft
Minimum Tensile Strength	4900kgf	10,800lbs
Modulus of Elasticity	13000kgf/mm ²	18,490kpsi
Coefficient of Linear Expansion	$14 \times 10^{-6}/^{\circ}\text{C}$	$7.8 \times 10^{-6}/^{\circ}\text{F}$
DC Resistance at 20°C	0.96 Ω /km	1.54 Ω /mile
Fault Current Capacity (Ambient=40°C)	25kA ² sec	25kA ² sec

TYPICAL FIBER TYPES AND ATTENUATION			
Attenuation	Units	G.652	G.655
1310nm	dB/km	0.36	--
1550nm	dB/km	0.22	0.22

Typical Fiber Types are available in accordance to ITU Standards: G652&655 or IEC 60793, 60794

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SFPOC-LUX™

High Fiber Count Composite Fiber Optic Overhead Ground Wire (OPGW)

Composite Fiber Optic Overhead Ground Wire (OPGW) is a composite overhead optical ground wire that provides high capacity communication channels to service present and future needs.

SFPOC-LUX™ features high optical fiber count providing expanded communication capabilities.

SFPOC-LUX™ is custom designed to satisfy each customer's specified communication and groundwire requirements for short circuit current capacity, tensile strength, fiber count and fiber type while complying to ASTM, IEEE or IEC International Standards.

Installation of SFPOC-LUX™ is straightforward utilizing standard OPGW hardware and equipment.

SFPOC provides with its product a comprehensive range of services, including type testing, OPGW hardware, installation supervision and training.

Optical Design Features

SFPOC-LUX™ provides the type and number of optical fibers needed to meet customer's specific requirements while complying to ITU-T Standards.

SFPOC-LUX™ features optical fibers placed loosely in a hermetically sealed stainless steel tube containing a gel filling compound to form an optical unit. This tube provides protection to the optical fibers during installation and operation under severe environmental conditions.

The optical fibers have low signal attenuation and wide bandwidth allowing for long distance, high capacity communication.

Optical fibers are free from crosstalk and are not subjected to electromagnetic interference and polarization. They provide secure high quality signal transmission.

Groundwire Design Features

Aluminum-Clad Steel and Aluminum Alloy wires are stranded together with one or more optical units.

The Aluminum-Clad Steel and Aluminum Alloy wires provide the mechanical strength to withstand installation and operating conditions, while achieving the conductivity needed to control temperature rise during short circuit fault conditions.



SFPOC

SFPOC-LUX™ DESIGN FEATURES

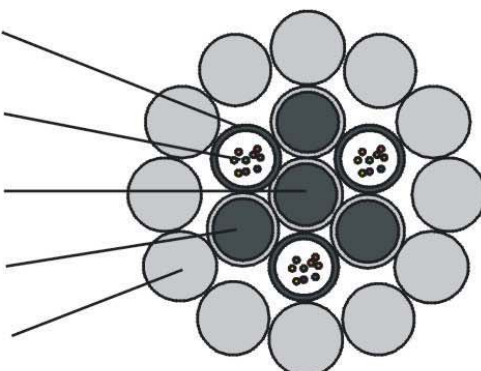
Stainless Steel Tube $\Phi 3.5\text{mm}$

Optical Fiber

30%ACS $\Phi 3.7\text{mm}$

30%ACS $\Phi 3.6\text{mm}$

AAL $\Phi 3.65\text{mm}$



TYPICAL SFPOC-LUX™ DESIGN	METRIC	IMPERIAL
Fiber count	144	144
Nominal Size	167mm ²	0.258in ²
Overall Diameter	18.2mm	0.717 "
Nominal Weight	654kg/km	0.439lb/ft
Minimum Tensile Strength	7330kgf	16,160lbs
Modulus of Elasticity	8090kgf/mm ²	11,500kpsi
Coefficient of Linear Expansion	$19.2 \times 10^{-6}/^{\circ}\text{C}$	$10.7 \times 10^{-6}/^{\circ}\text{F}$
DC Resistance at 20°C	0.22 Ω /km	0.35 Ω /mile
Fault Current Capacity(Ambient=40°C)	250kA ² sec	250kA ² sec

TYPICAL FIBER TYPES AND ATTENUATION

Attenuation	Units	G.652	G.655
1310nm	dB/km	0.36	--
1550nm	dB/km	0.22	0.22

Typical Fiber Types are available in accordance to ITU Standards: G652&655 or IEC 60793, 60794

*SFPOC OPGW custom designed to meet each customer's specific technical requirements.

Suzhou Furukawa Power Optic Cable Co., Ltd.(SFPOC)

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SFPOC-PLAST™

Plastic tube encased in a metallic Tube

Composite Fiber Optic Overhead Ground Wire(OPGW) is a composite overhead optical groundwire that provides high capacity communication channels to service present and future needs.

SFPOC-PLAST™ is a new OPGW that can be applied to a very high voltage power transmission system where induced current will not flow through ground wires. Non-metallic tubes placed in the Aluminum tube insulates the metallic wires from the structures at the entry of splice box. SFPOC-PLAST™ helps in substantially reducing the loss due to circulation of induced current through the ground wire.

The cable ends of SFPOC-PLAST™ are easy to handle especially at the time of accessing the optical fibers for splicing. The non-metallic tube eliminates the risk of damage caused to the fibers by the edge of the metallic tube while removing it for splicing of fibers.

The SFPOC-PLAST™ OPGW cable is designed to meet the specific requirement of the user in respect to short circuit capacity, tensile strength, fiber count and fiber type complying to ASTM, IEC and IEEE standards.

SFPOC provides with its products a comprehensive range of services, including OPGW hardware, installation supervision, type testing and training.

Optical Design Features

SFPOC-PLAST™ features optical fibers placed loosely in plastic tubes embedded in a hermetically sealed Aluminum tube.

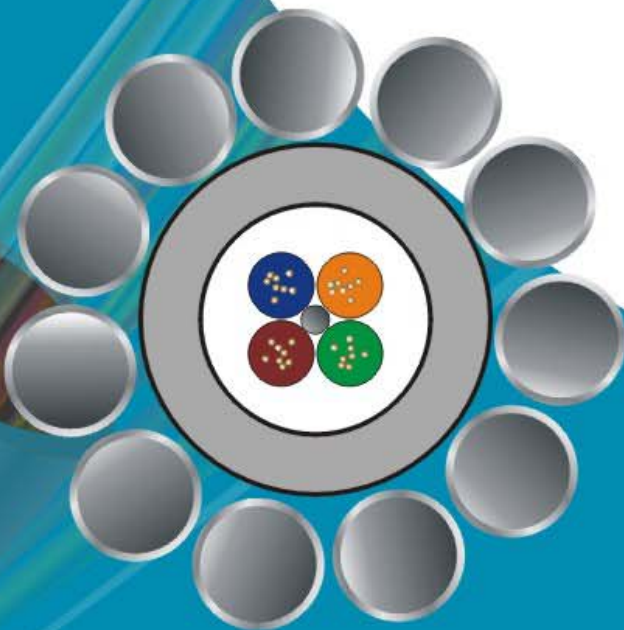
The optical fibers have low signal attenuation and wide band width allowing for long distance, high capacity communication.

Optical fibers are free from crosstalk and are not subjected to electromagnetic interference and polarization. They provide secure high quality signal transmission.

Groundwire Design Features

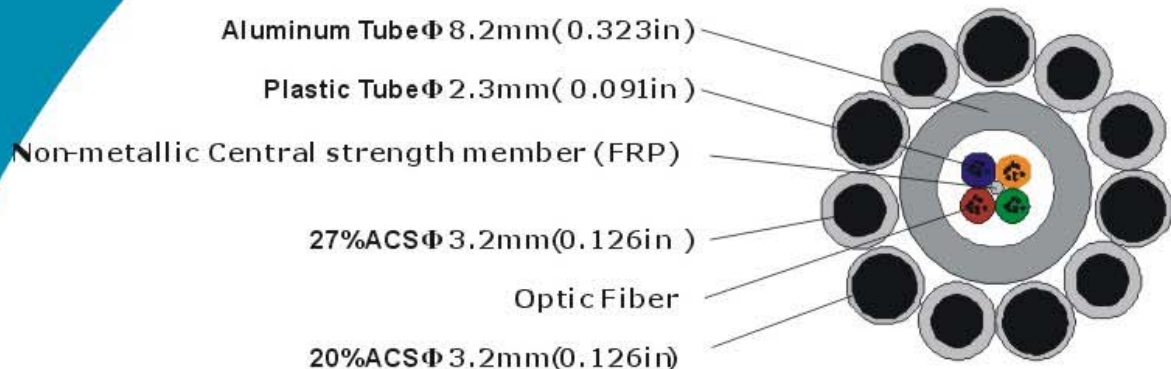
Aluminum-Clad Steel and Aluminum Alloy wires are stranded around a central optical unit.

The Aluminum-Clad Steel wires and Aluminum Alloy wires provide the mechanical strength to withstand installation and operating condition, while achieving the conductivity needed to control temperature rise during short circuit fault conditions.



SFPOC

SFPOC-PLAST™ DESIGN FEATURES



TYPICAL SFPOC-PLAST™ DESIGN	METRIC	IMPERIAL
Fiber count	48	48
Nominal Size	88mm ²	0.136in ²
Overall Diameter	14.6mm	0.575in
Nominal Weight	636kg/km	0.427lb/ft
Minimum Tensile Strength	10,285kg	22,679lbs
Modulus of Elasticity	15290kgf/mm ²	21,747kpsi
Coefficient of Linear Expansion	$13.2 \times 10^{-6}/^{\circ}\text{C}$	$2.3 \times 10^{-6}/^{\circ}\text{F}$
DC Resistance at 20°C	0.493 Ω /km	0.793 Ω /mile
Fault Current Capacity(Ambient=40°C)	90kA ² sec	90kA ² sec

TYPICAL FIBER TYPES AND ATTENUATION

Attenuation	Units	G.652	G.655
1310nm	dB/km	0.36	--
1550nm	dB/km	0.22	0.22

Typical Fiber Types are available in accordance to ITU Standards:G.652&655 or IEC 60793,60794

*SFPOC OPGW custom designed to meet each customer's specific technical requirements.

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SFPOC-TRAZ™

Composite Fiber Optic Overhead Ground Wire(OPGW)

Composite Fiber Optic Overhead Ground Wire(OPGW) is a composite overhead optical groundwire that provides high capacity communication channels to service present and future needs.

SFPOC-TRAZ™ is a compact design featuring high mechanical strength and fault current rating within a smaller diameter. This feature is achieved by using trapezoidal shaped aluminum clad steel wires which reduce the overall diameter of the cable without any reduction in electrical conducting area.

The smaller diameter of SFPOC-TRAZ™ also results in excellent sag-tension performance of the OPGW. Installation of SFPOC-TRAZ™ is straight forward utilizing standard OPGW hardware & equipment.

SFPOC-TRAZ™ is custom designed to satisfy each customer's specified communication and groundwire requirements for short circuit current capacity, tensile strength, fiber count and fiber type while complying to ASTM, IEEE or IEC International Standards.

SFPOC provides with its products a comprehensive range of services, including OPGW hardware, installation supervision, type testing and training.

Optical Design Features

SFPOC-TRAZ™ provides the type and number of optical fibers needed to meet customer's specific requirements while complying to ITU-T Standards.

SFPOC-TRAZ™ features optical fibers placed loosely in a hermetically sealed stainless steel tube containing a gel filling compound to form an optical unit. This tube provides protection to the optical fibers during installation and operation under severe environmental condition. Aluminum layer over the stainless steel tube is optional.

The optical fibers have low signal attenuation and wide band width allowing for long distance, high capacity communication.

Optical fibers are free from crosstalk and are not subjected to electromagnetic interference and polarization. They provide secure high quality signal transmission.

Groundwire Design Features

Aluminum-Clad Steel and Aluminum Alloy wires are stranded around a central optical unit.

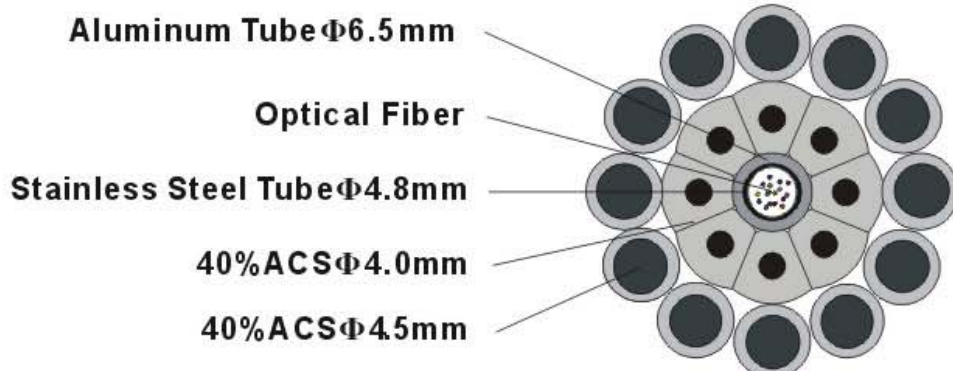
The aluminum clad steel wires are shaped trapezoidally around the optical unit to provide a compact construction.

The Aluminum-Clad Steel wires and Aluminum Alloy wires provide the mechanical strength to withstand installation and operating conditions, while achieving the conductivity needed to control temperature rise during short circuit fault conditions.



SFPOC

SFPOC-TRAZ™ DESIGN FEATURES



TYPICAL SFPOC-TRAZ™ DESIGN	METRIC	IMPERIAL
Fiber count (Max)	48	48
Nominal Size	291mm ²	0.451in ²
Overall Diameter	22.5mm	0.886 "
Nominal Weight	1474kg/km	0.99lb/ft
Minimum Tensile Strength	18328kgf	40413lbs
Modulus of Elasticity	11100kgf/mm ²	15787kpsi
Coefficient of Linear Expansion	15.5×10 ⁻⁶ /°C	8.6×10 ⁻⁶ /°F
DC Resistance at 20°C	0.134 Ω/km	0.216 Ω/mile
Fault Current Capacity(Ambient=40°C)	751.0kA ² sec	751.0kA ² sec

TYPICAL FIBER TYPES AND ATTENUATION

Attenuation	Units	G.652	G.655
1310nm	dB/km	0.36	--
1550nm	dB/km	0.22	0.22

Typical Fiber Types are available in accordance to ITU-T Standards:G.652&655 or IEC 60793,60794

*SFPOC OPGW custom designed to meet each customer's specific technical requirements.

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QUALIFICATION

— Another outstanding achievement of SFPOC OPGW —

★ SFPOC OPGW successfully passed the extremely vigorous type test as per the specification of **American Electric Power (AEP)**, USA. The tests were carried out at **Kinectrics International, Inc.**, Toronto, Canada. This qualification proves the high quality of our products.



CERTIFICATION OF PERFORMANCE OF TYPE TESTS ON SUZHOU FURUKAWA POWER OPTIC CABLE CO., (SFPOC), OPGW CABLE

Sequential Thermal and Tension Test and Combined Tension — Angle Loads Test as per specifications TLES 24 Rev3 and TLES 26 of American Electric Power Service Corporation were performed on an Optical Ground Wire (OPGW) of Suzhou Furukawa Power Optic Cable Co., Ltd. (SFPOC), Luxu Industry Zone, Linhu Economic District, Wujiang City, Jiangsu Province, China, 215211.

The cable manufactured by SFPOC for the tests was as described below:

Fiber Count: 96; Fiber Type: G652D, Allwave of OFS; Diameter: 0.646 inches; Rated breaking Strength: 24,784 lbs; Short Circuit Current Capacity: 140kAsec. The design data sheet SFPOC/SFSJ-J-2471 is attached.

The suspension and deadend accessories were supplied by Preformed Line Product USA.

All tests were performed by Kinectrics International staff at their laboratories at 800 Kipling Avenue, Toronto, Ontario, M8Z 6C4, Canada.

The following tests were performed:

1) Sequential Thermal and Tension as per AEP Spec TLES 24-Rev3

A) Thermal - I²T: Using appropriate equipment, subject a sample of OPGW to an electrical current producing the quoted thermal capability ([kiloamp]2 -sec) a total of ten (10) times, subject to the following conditions:

- Time duration of the current shall not exceed 15 cycles (0.25 seconds)
- Fault Current is the RMS (root-mean-square) value.
- Of the ten (10) times that the fault current is applied, the measured I²T must be at least 95% of the specified thermal capability on any single application, and the average of the quoted thermal capability.
- The initial temperature of the OPGW at the start of these Thermal tests shall be 40°C (104°F). After each fault current application, the OPGW temperature shall be brought to between 35°C and 45°C (95°F and 113°F) prior to the next application of fault current. The temperature of the aluminum tube or central housing may be monitored during testing at the vendors option. Compare observations with Failure Criteria, General Note IV, above.

Bit Error Rate (BER) is to be measured and determined using equipment with a minimum transmission rate of 45 Megabit/sec. Lightwave equipment shall be connected with an optical attenuator in series between the source and the detector such that no greater than a 5dB margin exists above operation at a BER of one in one-billion bits. BER measurement equipment shall be capable of measuring rates of one in one-billion bits.

B) Tension: Mount the above sample after Thermal - I²T test in a tension machine, increase tension gradually to 95% of RBS. Hold for 10 hours measuring attenuation loss at least every 30 minutes.

Failure Criteria: If any of the following occur:

- Permanent or temporary attenuation loss exceeding the quoted value.
- Permanent or temporary attenuation loss exceeding the pre-test attenuation loss by more than 10%.
- The permanent or temporary Bit Error Rate (BER) exceeds one in ten thousand bits when the Fault Current is applied and one in one-billion bits at other times.
- Breakage, melting or significant damage to any metal component (check cross-sections after completion of test).
- Breakage, melting or significant damage to any non-metallic component (check cross-sections after completion of test).

1

2) Combined Tension - Angle Loads (Suspension Hardware) as per AEP Spec TLES 26

a) Mount sample of OPGW and suspension assembly in a tension machine with the suspension assembly supporting the maximum design deflection angle (i.e. combined line angle and down drop angle). Measure attenuation under nominal (500 lbs. or less) tension.

b) Increase tension to 30% of the OPGW's Rated Breaking Strength (RBS). Hold 5 minutes; measure attenuation.

c) Increase tension to 60% of RBS. Hold 5 minutes; measure attenuation.

d) Increase tension to 80% of RBS. Hold 5 minutes; measure attenuation.

e) Increase tension to 90% of RBS. Hold 5 minutes; measure attenuation.

f) Increase tension to 95% of RBS. Hold 30 minutes; measure attenuation.

Failure Criteria: If any of the following occur:

- Permanent or temporary attenuation loss exceeding the quoted value.
- Permanent or temporary attenuation loss exceeding the pre-test attenuation loss by more than 10%.
- Breakage, melting or significant damage to any metal component (check cross-sections after completion of test).
- Breakage, melting or significant damage to any non-metallic component (check cross-sections after completion of tests.)

This is to certify that the above tests were completed successfully and the OPGW cable met all the acceptance criteria of the relevant test specification to the full satisfaction of Kinectrics International Inc.

For Kinectrics International Inc.

Craig Pon
Principal Engineer - Transmission and Distribution Technologies

Date: June 22, 2007

2

Non-Specular Finish

Non specular finish is available on request. (Applicable to any design of SFPOC's OPGW)



Before treatment



Treatment-1



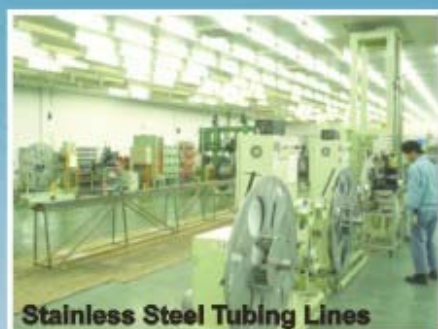
Treatment-2

As of July, 2007

Update of SFPOC

The Production Capacity of SFPOC has been increased up to 8,500km/year after installation of new manufacturing facilities.

Pictures of some main machinery in workshop



Stainless Steel Tubing Lines



30B Wire Stranders from Canada



Aluminum Tubing Line

Global Activities

SFPOC is a major global player in the field of OPGW. SFPOC manufactures OPGW based on the proven technology of The Furukawa Electric Co., Ltd.(FEC), Japan, a pioneer in design, manufacture & live-line-installation of OPGW. Furukawa brand OPGW has been installed in different countries all over the world.

Some Major Projects

Middle East-UAE



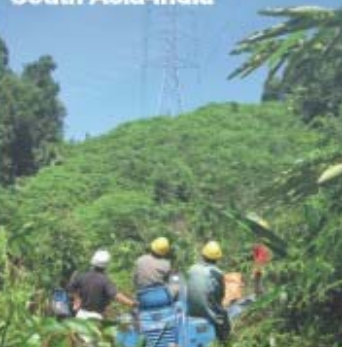
Africa-Morocco



Southeast Asia-Philippines



South Asia-India



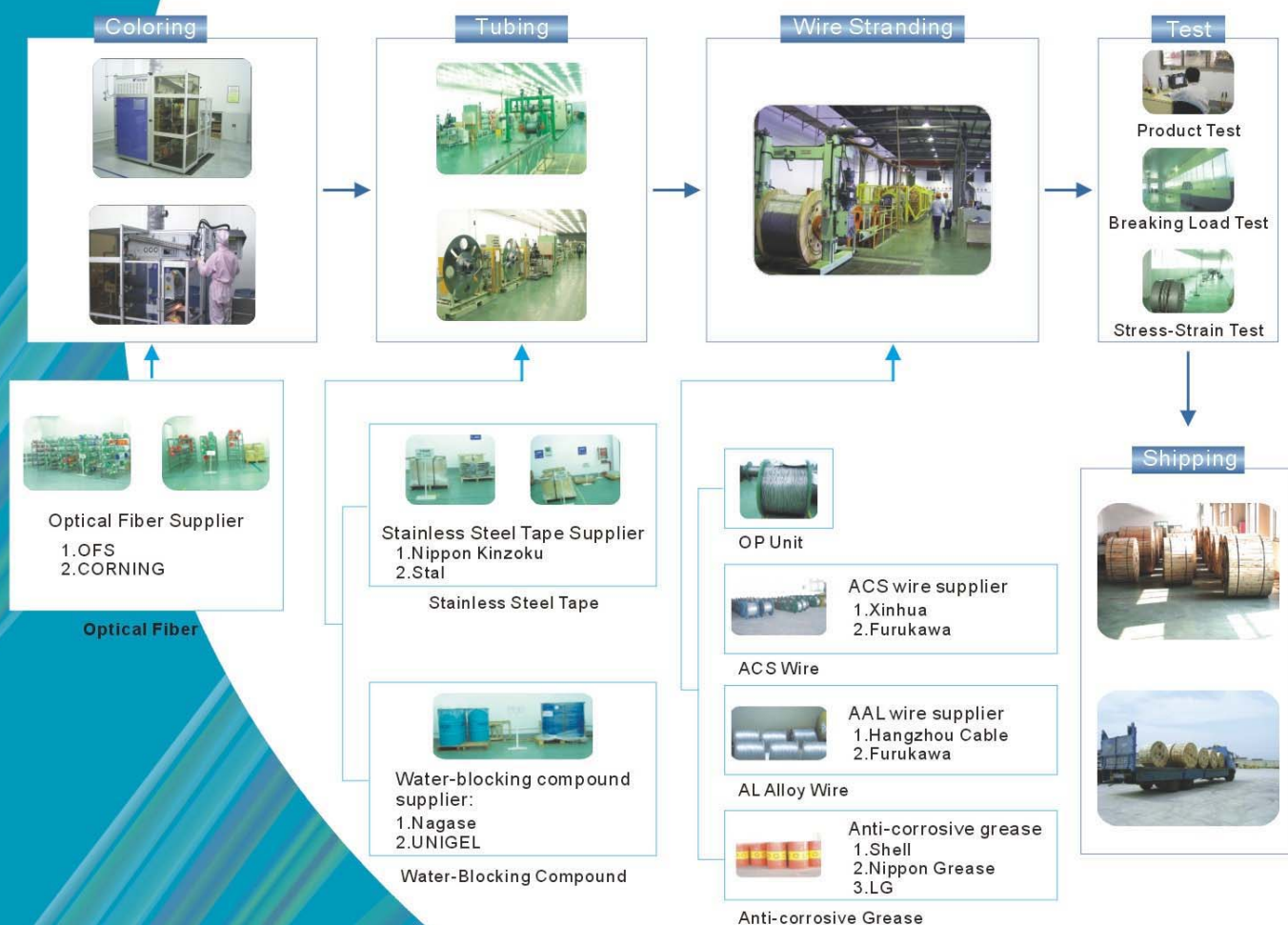
USA-Northeast Missouri Electric Power



Australia



Flow Chart of OPGW Manufacturing Process



Qualification Document



CERTIFICATION OF PERFORMANCE OF TYPE TESTS ON SUZHOU FURUKAWA POWER OPTIC CABLE CO., LTD. (SFPOC) OPGW CABLE

A series of fifteen (15) tests were performed on an Optical Ground Wire (OPGW) for Suzhou Furukawa Power Optic Cable Co., Ltd. (SFPOC), Luxu Industry Zone, Linhu Economic District, Wujiang City, Jiangsu Province, China, 215211. The 14.0 mm diameter, 48 fibre OPGW cable (specifications attached) was manufactured by SFPOC. All tests were performed by Kinectrics International staff at their laboratories at 800 Kipling Avenue, Toronto, Ontario, M8Z 6C4, CANADA. This is to certify that the following tests were completed successfully and met all the acceptance criteria of the relevant test specification to the full satisfaction of Kinectrics International Inc.

TEST	TEST DATE	TEST STANDARD (IEEE SM 1138-1994)
1. Water Ingress Test	December 12-13, 2005	Paragraph 4.1.1.1
2. Seepage of Flooding Compound	December 12-13, 2005	Paragraph 4.1.1.2
3. Short Circuit Test	December 9, 2005	Paragraph 4.1.1.3
4. Aeolian Vibration Test	Dec. 12, 2005 - Jan. 6, 2006	Paragraph 4.1.1.4
5. Galloping Test	December 13-16, 2005	Paragraph 4.1.1.5
6. Sheave Test	December 14, 2005	Paragraph 4.1.1.6
7. Crush Test	December 14, 2005	Paragraph 4.1.1.7
8. Impact Test	December 16, 2005	Paragraph 4.1.1.7
9. Creep Test	Dec. 13-Jan. 24, 2006	Paragraph 4.1.1.8
10/11. Stress-Strain/Fibre-Strain Test	December 8, 2005	Paragraphs 4.1.1.9 and 4.1.1.11
12. Strain Margin Test	December 8, 2005	Paragraph 4.1.1.10
13. Cable Cut-off Wavelength	December 14, 2005	Paragraph 4.1.1.12
14. Temperature Cycle Test	January 16-18, 2006	Paragraph 4.1.1.13
15. Lightning Arc Test	December 16, 2005	IEC 60794-1-2

For Kinectrics International, Inc.:

Mr. Craig Pon
Principal Engineer - Transmission and Distribution Technologies

Date: February 10, 2006

Certificate of Registration



This is to certify that the
Quality Management System of :

Suzhou Furukawa Power Optic Cable Co., Ltd.

Luxu Industry Zone, Linhu Economic District, Wujiang,
Jiangsu Province, P. R. China

has been assessed and found complying with

ISO 9001: 2000

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times. This certification has been accredited by a member of International Accreditation Forum MLA for Quality Management System. The certificate is not valid until the annual hologram is presented.

CERTIFICATION SCOPE:

Manufacture, Technical Consultation and After-sales Service of Optical Fiber Composite Overhead Groundwire and Appendixes.

REGISTRATION NO.: **0303062**

Authorised Signatory

Moody International Certification Ltd.

www.moodyint.com



DATE OF ISSUE: May 21, 2006
VALID UNTIL: May 20, 2009



014

The use of the Accreditation Mark indicates accreditation in respect of those activities covered by the Accreditation Certificate 014. The certificate remains the property of Moody International Certification Limited to whom it must be returned on request.

Suzhou Furukawa Power Optic Cable Co., Ltd. (SFPOC)

Our product was successfully type tested at Kinectrics Inc., Toronto, Canada as per internationally recognized specification. SFPOC is the first OPGW manufacturer in China to have successfully completed all type tests including lightning tests on OPGW.

SFPOC, a joint venture of The Furukawa Electric Co., Ltd. of Japan and Etern (Yongding) Group of China, is a global leader in manufacture and supply of Optical Ground Wire (OPGW).

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As of August 2008

Update new activities of SFPOC

SFPOC OPGW IN WIND FARM PROJECTS

As the world increasingly turns toward clean renewable sources of energy to avert global warming, rising cost of fossil source fuel and pollution of environment, wind is becoming an increasingly valuable source of energy. Wind is the fastest growing source of electricity in the world and is one of the least expensive forms of renewable power available. SFPOC has been effectively and consistently contributing to the wind power transmission in the form of cost efficient and high quality optical fiber ground wire (OPGW) which provides protection to the transmission system from short circuit current & lightning and also provides an effective communication system through optical fibers of excellent quality.



Some of the major wind farm projects using SFPOC OPGW are listed below:

Project	Country	Quantity(ft)	Year
Ripley Wind Power	Canada	92,000	2007
Cohocton Wind Farm	USA	56,000	2007
Twin Buttes Wind Farm	USA	71,250	2006
Meridian Way Wind Farm	USA	176,200	2008
Whitestone Wind Farm	USA	75,000	2008
Ashtabula Wind Farm	USA	53,000	2008
Buffalo Ridge Wind Farm	USA	30,885	2008
Pebble Springs Wind Farm	USA	40,790	2008
Elm Creek Wind Farm	USA	46,000	2008



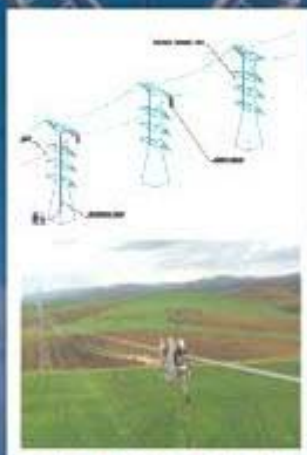
As of August 2008

Update new activities of SFPOC

SFPOC OPGW IN LIVE-LINE INSTALLATION PROJECTS

SFPOC OPGW is a single solution as the best in LIVE-LINE OPGW projects !

There is no other solution than Live-line installation system when the power outage is not allowed in the existing power lines. The live-line installation system is a kind of blockbuster elixir or panacea, developed by our mother company, Furukawa Electric (FEC) of Japan through their pioneering engagement in the engineering and installation of their cables and hardware they produced and supplied for more than a century, and inherited by their affiliate unit of energy sector called VISCAS founded in 2002 in



Japan for its massive application all around the globe. Backed by proven expertise of live-line jobs executed by FEC and then VISCAS around the world, we, SFPOC, are eager to extend our state-of-art technologies of designing and manufacturing OPGW and high-quality services for the users of the world as a Chinese manufacturing unit of OPGW held by FEC of Japan. Our OPGW is a synonym of highest quality, and best solution for the live-line projects secured by our VISCAS in four corners around the world.

Country	Customer	Project	Quantity	Year	Supplied by
India	PGCIL	Northern Region	1,700km	2000	PFI
India	PGCIL	North-Eastern Region	963km	2002	PFI
India	PGCIL	Delhi-Mumbai	1,400km	2002	PFI
Malaysia	TNB	Mainhead-B	375km	2004	PFI
Morocco	ONE	OPGW, ADSS Project	1,210km	2004	PFI
India	PGCIL	Package 1-A, 2-B	2,812km	2005	PFI
Morocco	ONE	OPGW, OPCC Project	1,030km	2005	PFI/SFPOC
Senegal	Senelec	National Dispatching Project	345km	2007	SFPOC
Fiji	FEA	OPGW for section 1&2	144km	2008	SFPOC
Philippines	TeaM Energy (IPP)	Sual Kadampat 230kV	31km	2008	SFPOC
Azerbaijan	Azerenergi	SCADA/EMS project	1,100km	under construction	SFPOC
	Total	11,110km			