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## ELE-3COP-361

### Title – Application of Raybraid™ and Instalite™ Braid to Hand Laid cables.

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Before starting work please read this document carefully and note the guidance given.

#### 1 Purpose and Scope

This COP describes the procedure to be used when installing both single and double layers of Raybraid™ and Instalite™ Braid. The instructions in this document take preference over IPC/WHMA requirements, as do the drawing and any customer documentation.

#### 2 Performance Objective

This code of practice is produced to support operators already trained in the installation of heat shrinkable and harnessing products. It identifies the procedure to be used when installing both single and double layers of Raybraid™ and Instalite™ Braid to a cable form to give 360° screening. Raybraid™ is supplied in two product types,

RAY-90. Standard tin plated copper shield with 90% optical coverage.

RAY-10X. Available in tin plated copper (RAY-101) or nickel plated copper (RAY-103) for high temperature application with 93% optical coverage.

Instalite™ Braid is supplied as LWB-10X. Available in tin plated copper alloy (LWB-101) or nickel plated copper alloy (LWB-103) for high temperature application with the coverage specified on the SCD.

Raybraid™ and Instalite™ Braid are supplied on a tube former which facilitates assembly and is more robust than shield provided in flattened form.

#### 3 Materials and Equipment:

Cable to be shielded

Raybraid™ or Instalite™ Braid of the appropriate size. See Section 6 or SCD for Instalite™

Paper Adhesive Tape

Cord Gloves

Holding Fixture (Small Bench Vice)

#### 4 Health and Safety

Adhere to local Codes and Regulations relating to Safe Working practices. For the U.K. adhere to requirements of the Health and Safety at Work Act 1974 and subsequent amendments. Always wear gloves when pulling shield tight.

#### 5 Procedure

Using paper adhesive tape attach the end of the cable to be shielded, to the end of the Raybraid™ or Instalite™ Braid former tube.

Feed the Raybraid™ or Instalite™ Braid off of the former onto the cable. When all of the braid is fed onto the cable remove the former and paper tape from the cable.

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Pull the end of the braid over the end of the cable and twist to lock into place. Secure this end in the holding fixture.

Wearing cord gloves and starting from the clamped end, pull the Raybraid™ tight onto the cable and twist the free end of the shield (Instalite™ Braid twist and tape) to lock into place

Remove from the holding fixture.

For double shields using the paper adhesive tape attach the former of the second shield to the cable.

Feed the braid off of the former on to the cable. When all of the Raybraid™ or Instalite™ is fed onto the cable remove the former and paper tape.

Pull the end of the braid over the end of the cable and twist to lock into place. Secure this end in the holding fixture.

Wearing cord gloves and starting from the clamped end, pull the braid tight onto the cable and twist the free end of the shield (Instalite™ Braid twist and tape) to lock into place

Remove from the holding fixture

### 6. Table of Dimensions

#### RAY-90

Part Number	Usable Cable Diameter Range		Max Weight Kg/ Km	Max DC resistance at 20°C ohms/ Km	
	Min (mm)	Max (mm)			
RAY-90-3.0	2.0	3.5	13	28.0	
RAY-90-4.0	3.0	5.0	17	18.3	
RAY-90-5.0	4.0	6.0	21	13.8	
RAY-90-6.0	5.0	8.0	26	12.2	
RAY-90-10.0	7.0	12.0	53	6.0	
RAY-90-12.5	11.0	14.0	67	6.1	
RAY-90-15.0	13.0	18.0	101	3.0	
RAY-90-20.0	17.0	23.0	169	2.2	
RAY-90-25.0	22.0	28.0	207	1.6	
RAY-90-30.0	27.0	40.0	314	1.0	

#### RAY-101

Part Number	Usable Cable Diameter Range		Max Weight Kg/ Km	Max DC resistance at 20°C ohms/ Km	
	Min (mm)	Max (mm)			
				RAY-101	RAY-103
RAY-10X-3.0	2.5	5.0	14.5	17.0	17.3
RAY-10X-4.0	3.5	7.5	19.0	10.3	10.5
RAY-10X-6.0	4.5	9.5	31.0	8.0	8.1
RAY-10X-7.5	7.0	14.0	47.0	5.2	5.23
RAY-10X-10.0	8.0	22.0	59.0	3.96	4.02
RAY-10X-12.5	11.0	24.0	75.0	3.23	3.28
RAY-10X-20.0	16.0	38.0	109.0	2.32	2.35

### 7. Inspection Requirements

Ensure strands are not scraped, nicked, severed, flattened, untwisted, buckled, kinked or otherwise deformed. Ensure that the Raybraid™ or Instalite™ Braid is pulled tight onto the

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cableform and there is no bird caging. Weave of Raybraid™ should be consistent and of even coverage.

### 8. Visual Standards



ACCEPTABLE



NOTACCEPTABLE

Damaged and Nicked Conductors



NOTACCEPTABLE  
Uneven Coverage



NOTACCEPTABLE  
Window in Shield

Rev No	CRNo	Date	Raised	Approved
3	CR06-DM-071	25/04/06	John Cronin	Ken Wallington
4	CR09-DM-018	02/02/09	Paul Newman	Neil Dorricott
5	Visual Identity	06/06/11	Paul Newman	Neil Dorricott
6	Instalite™ Braid included	30/03/15	Nina Przybylska	Helen Smith

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