ARMORED CABLE TRANSITION

Revision	Date	Paragraph	Description	Changed By
1	3/26/08		Original Issue	Don Snyder
2	7/31/08	5.2, 5.3	Increased length of both tubes by 5 mm	Don Snyder
3	12/19/08	2,3,5	Updated p/n, deleted cutting SS tubing, increased length of buffered fiber	Don Snyder

1. PURPOSE

This procedure describes the method for transitioning from braided fiberglass sleeving to armored cable.

2. SPECIAL EQUIPMENT

	Equipment Name	Description	
2.1	Air Motor with cutoff wheel		
2.2	Abrasive Cutoff Wheel		
2.3	Vise		
2.4	Fusion Splicer		
2.5	Fiber Cleaver		
2.6	Crimp Tool	Orange Handled	
2.7	Heat Gun		
2.8	Buffered Fiber Strip Tool		
2.9	Permanent Marker		
2.10	150 mm Rule		
2.11	Scissors – Yellow	Kevlar Cutter	FIS #F1KS1
2.12	Shears	Heavy Duty cable shears	McMaster #2498A27
2.13	Jacket Slitter	Ideal #45-163	FIS #F1-0021

3. MATERIALS AND SUPPLIES

	Item Name	Item Description	Part ID #
3.1	MOI Armored Cable	3mm OD, steel core	
3.2	Fiber Sensor		
3.3	Fusion Splice Sleeve	60mm long	
3.4	SS Tubing	.135” ID by .165” OD	222563
3.5	Heat Shrink Tubing	3/16 OD Adhesive Lined	222564

4. SETUP

4.1 Verify that all testing is complete and that it has passed the customers’ requirements.

4.2 Check for final packaging requirements.

4.3 Check for length of armored cable required and distance from sensor to armored cable.

4.4 Check for type of armored cable, regular - blue or black – high temperature.

5. OPERATION

5.1 Cut desired length of armored cable.

5.2 Cut Heat Shrink tubing to 85mm length.

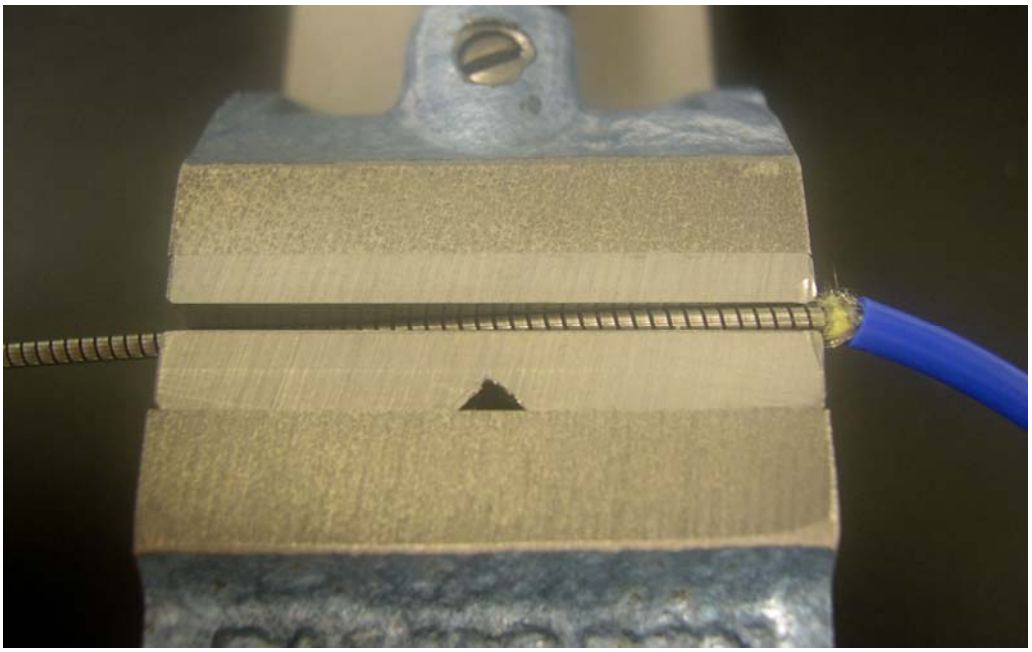
5.3 Prepare Armored Cable End

5.3.1 Mark armored cable end 70 mm from end.

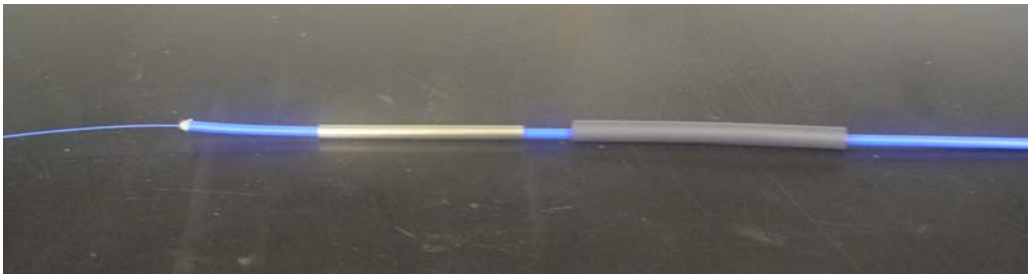
5.3.2 Use Ideal jacket slitter to cut around jacket.

5.3.3 Cut wires and Kevlar as close to jacket as possible using yellow handled scissors.

5.3.4 Clamp core tube in vise and cut as close as possible to cable jacket using abrasive cutoff wheel in Dremel motor. Do not let the core tube get hot as it will damage the PVC buffer on the fiber.



5.3.5 Slide heat shrink tubing over cable then slide SS tube over cable.

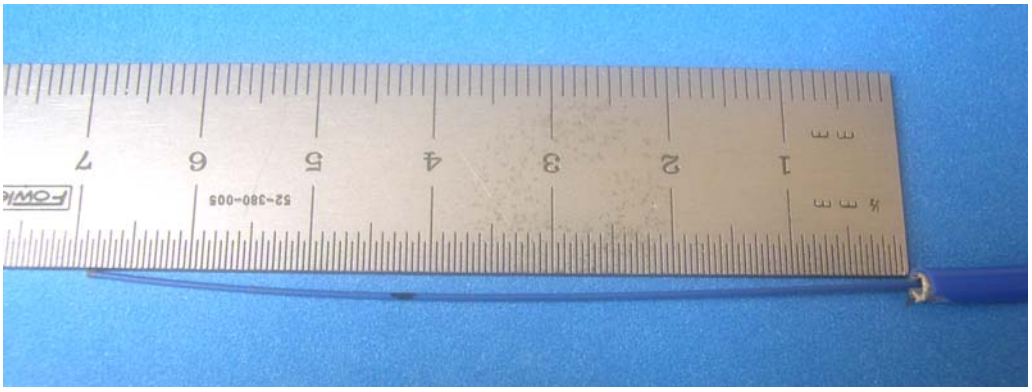


5.3.6 If using polyimide fiber in armored cable, insert 1.5” long piece of aqua colored buffer tube (p/n 220299) into end of armored cable and epoxy in place.

5.4 Fusion Splice Fibers

5.4.1 Lightly push buffered fiber into cable and release.

5.4.2 Mark buffer 42 mm from end of cable.



5.4.3 Strip buffer to mark and wipe fiber with alcohol.

5.4.4 Place fiber in cleaver with buffer at the 18 mm location and load in fusion splicer.

5.4.5 Cut sensor fiber to proper length.

5.4.6 Slide splice sleeve over sensor fiber and strip sensor fiber.

5.4.7 Splice fibers.

5.4.8 Remove fiber and center splice sleeve over fusion splice, place in heater and heat.

5.5 Attach SS Tubing

5.5.1 Mark the cable 10 mm and 20 mm from armored jacket.

5.5.2 Slide SS tubing over cable and splice sleeve and align end with the 10 mm mark.

5.5.3 Crimp tubing onto jacket using Crimp tool with .128” hex crimp.

5.5.4 Slide the heat shrink tubing over the SS tubing and align with the 20 mm mark.

5.5.5 Shrink with the heat gun starting with the center first.

NOTE: ***Sections 6 thru 12 are not applicable to this procedure and are intentionally left out.***