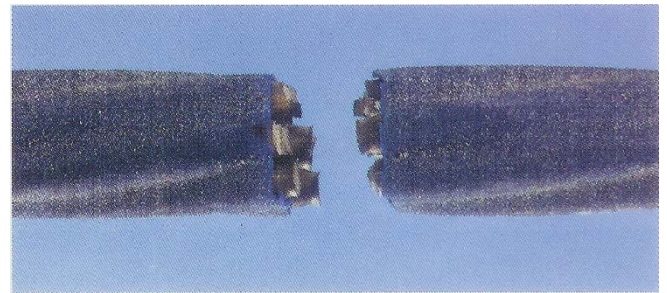
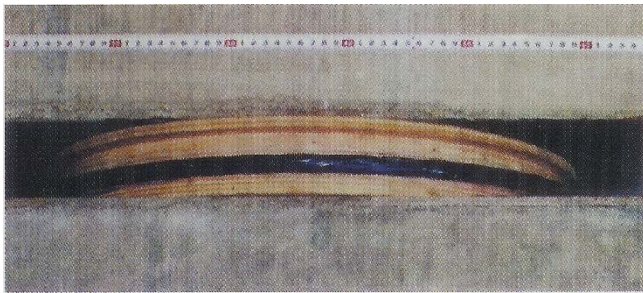


EPOXY COATED STRAND

Dimensions and Mechanical Characteristics of Flo-Gard and Flo-Bond

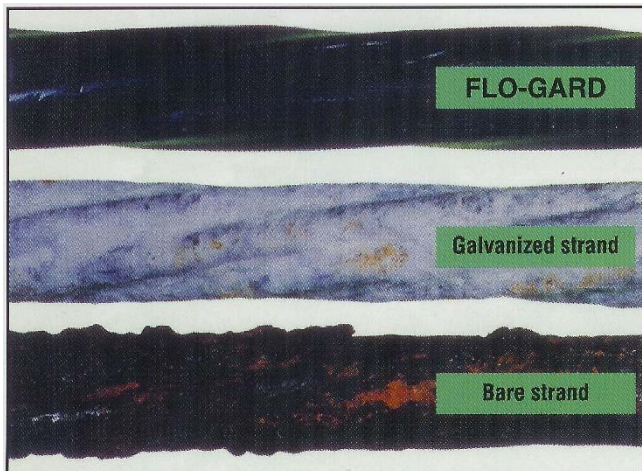
Strand Nominal Diameter	EPOXY COATED STRAND			STEEL STRAND (A 416/A 416M)		
	Nominal Diameter	Coating Thickness	Nominal Weight	Minimum Breaking Strength	Minimum Yield Strength	Minimum Elongation at 1% Extension
in. [mm]	in. [mm]	mil [mm]	lbf/kft [kg/km]	lbf [kN]	lbf [kN]	%
3/8 [9.53]	0.415 [10.54]	20 [500]	310 [461]	23,000 [102.3]	20,700 [92.1]	3.5
7/16 [11.11]	0.478 [12.14]	20 [500]	420 [625]	31,000 [137.9]	27,900 [124.1]	3.5
1/2 [12.70]	0.540 [13.72]	20 [500]	550 [819]	41,300 [183.7]	37,170 [165.3]	3.5
0.6 [15.24]	0.648 [16.46]	24 [600]	820 [1220]	58,600 [260.7]	52,740 [234.6]	3.5

Coating Performance of Flo-Gard and Flo-Bond



BENDING CHARACTERISTICS OF COATING:

The coating develops no abnormalities even under severe conditions; SUCH AS, WHEN WOUND AROUND A CYLINDER MANDREL WITH A DIAMETER 32 times that of the strand diameter.



COMPARISON WITH CONVENTIONAL STRANDS IN ACCELERATED TEST:

Epoxy-coated strand has superior corrosion resistance compared with bare strand and galvanized strand (after 1000 hours in salt spray test).

ADHESION AND CONTINUITY OF COATING UNDER TENSIONING:

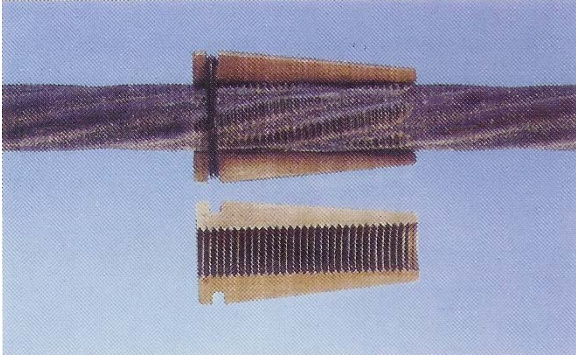
The coating follows the steel wire and maintains continuity up until the wire breaks. Even after wire breakage, the coating demonstrates uniform behavior with the steel wire.

OTHER CHARACTERISTICS:

ITEM	DESCRIPTION
Water Resistance:	With ASTM G-20-77 No blistering, softening, loss of bond or holidays in coating after immersion for 45 days in 20± 1°C distilled water.
Chemical Resistance: • 3M-CaCl ₂ • 3M-NaOH • Saturated Ca(OH) ₂	With ASTM G-20-77 No blistering, softening, loss of bond or holidays in coating after immersion for 45 days in various 20± 1°C solutions.
Adaptive Electrical Resistance:	With ASTM G-8 No under-cutting of coating.
Impact Test:	With ASTM G-14-72 No shattering or bond loss in coating.
Salt Spray Test:	With ASTM B117-73 No visible signs or corrosion in coating after 3000 hours under tension 70% of maximum load.

Anchorage Characteristics of Flo-Gard and Flo-Bond

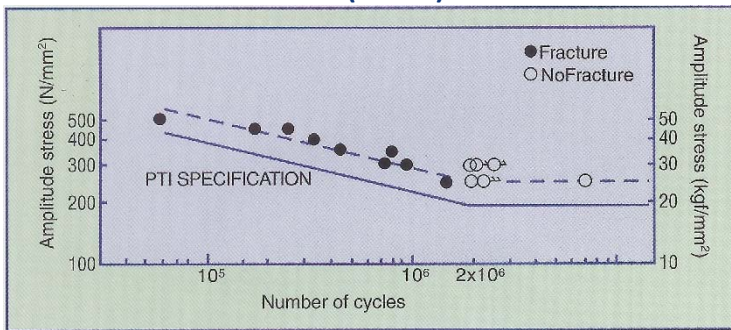
CONDITION OF FLO-BOND AND ANCHORAGE GRIPS AFTER LOADING UP TO RATED TENSION LOAD



Epoxy strand can be anchored from directly above the coating with a special anchoring tool to provide an anchorage efficiency equal to that of a bare strand.

Fatigue Resistance of Flo-Gard and Flo-Bond

RESULTS OF FATIGUE TEST (SWPR) 7B 15.2



The epoxy resin filling prevents fretting between the strands as well as between the wedge and steel, providing superior fatigue resistance.

Maximum Load = 261x0.45
 = 117kN
 = (12,000kgf)

Bond Characteristics with Concrete of Flo-Bond

RESULTS OF PULL-OUT TEST

Sample No.	Flo-Bond		Bare		
	KG	N/cm ² (kg/cm ²)	KG	N/cm ² (kg/cm ²)	
Initial Slippage Load	1	4,980	386 (39.4)	2,560	199 (20.3)
	2	5,080	394 (40.2)	2,350	182 (18.6)
	3	5,030	390 (39.8)	2,420	187 (19.1)
	Average Value	5,030	390 (39.8)	2,443	189 (19.3)
Maximum Load	1	9,120	708 (72.2)	7,600	589 (60.1)
	2	9,300	722 (73.6)	8,040	624 (63.6)
	3	9,020	700 (71.4)	8,860	687 (70.1)
	Average Value	9,147	710 (72.4)	8,167	634 (64.6)

Special surface treatment makes Flo-Bond adhere to concrete as well as or better than bare strand.

FLO-BOND AFTER PULL-OUT TEST

