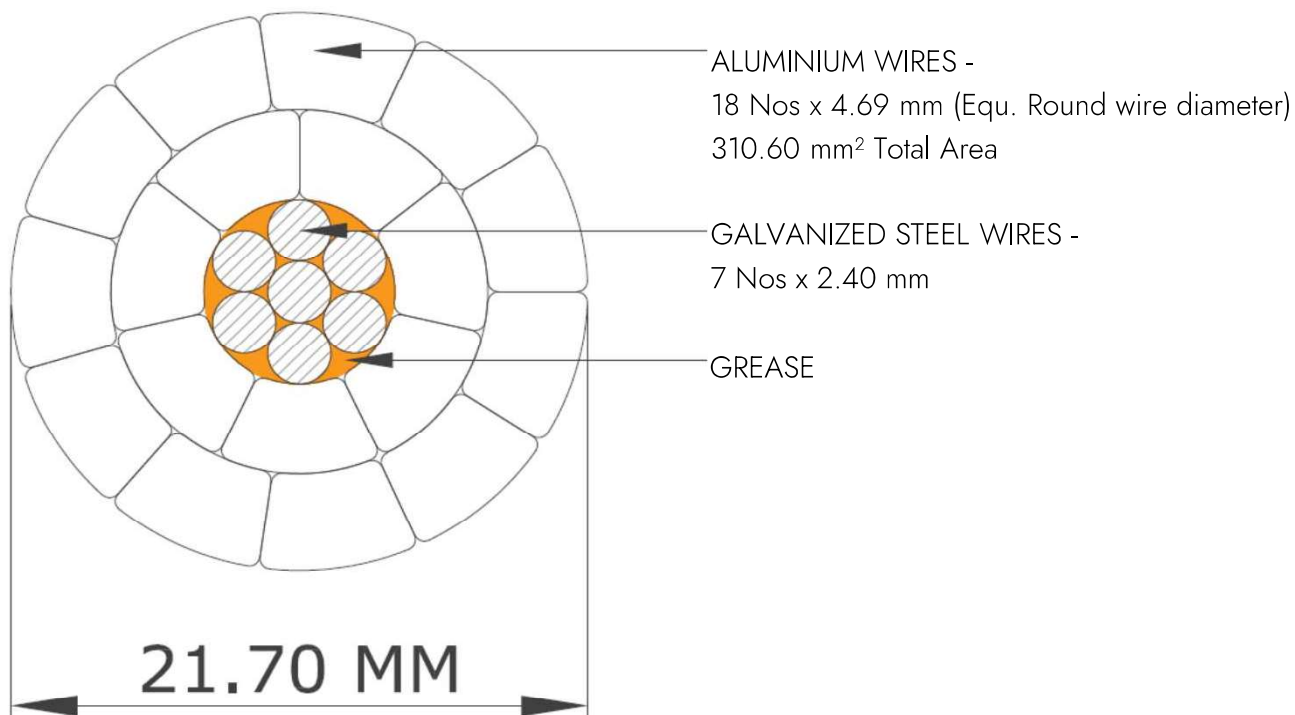


GTP / DATA SHEET FOR AFLs-10 310 mm ² CONDUCTOR				
SR No	PARTICULARS	UNIT	DATA	
A	ACSR CONDUCTOR			
1	Name & Address of Manufacturer	-	APAR INDUSTRIES LIMITED INDIA	
2	Specification according to which the conductor will be manufactured and tested.	-	PN-EN 62219: 2003E PN-EN 50189: 2002E PN-EN 60889: 2002E	
3	Code Name	-	AFLs-10 310 mm² (311-A1F/32-ST1A)	
4	Size / Construction		AL. 310.60 mm² (18 No's TW) + ST. 7/2.40 mm	
5	Outer Diameter of Conductor	mm	21.70	
6	Standard cross sectional area of Trapezoidal Aluminium	mm ²	310.60	
7	Standard cross sectional area of steel (st)	mm ²	31.67	
8	Total Sectional area of the conductor	mm ²	342.27	
9	Minimum Rated Strength of Conductor	kN	85.77	
10	Maximum DC resistance of conductor at 20 deg.C.	Ohm/km	0.0914	
11	Standard Linear mass of conductor			
	a) Aluminium	Kg/km	856.3	
	b) Steel	Kg/km	247.4	
	c) Conductor without Grease	Kg/km	1103.7 (Nominal)	
	d) Conductor with Grease	Kg/km	1109.98 (Nominal)	
12	Lay ratio of conductor	-		
	(a) 1+6 Steel layer	-	Min.16	Max.26
	(b) 7 Trapezoidal Wire layer	-	Min.10	Max.16
	(C) 11 Trapezoidal Wire layer	-	Min.10	Max.14
13	Direction of lay for outside layer	-	Right Hand (Z)	
14	Greasing	-	Steel core greased as per case-1 of EN 50182	
	a) Type & Grade	-	Type A of EN 50326 (35A120)	
	b) Temperature Ø1	°C	-35	
	c) Temperature Ø2	°C	120	
	d) Maximum safe operating temperature for the grease, for the temperature time longer than 5 Minutes	°C	120	
	e) Minimum Drop Point Temperature	°C	200	
	f) Weight of Grease	Kg/km	6.28 ± 20%	
B	Particulars of Raw Materials :			
1	Aluminium	-		
	(a) Minimum Purity of Aluminium	%	99.50%	
	(b) Maximum Copper Content	%	0.05%	
C	TRAPEZOIDAL ALUMINIUM STRANDS OF COMPLETE CONDUCTOR			
1	Nominal Aluminium Area	mm ²	310.6 ± 2%	
2	Minimum Ultimate Tensile Strength			
	a) before stranding (Minimum)	N/mm ²	160.00	
	b) after stranding (Minimum)	N/mm ²	152.00	
3	Maximum Resistivity per Km at 20°C	Ohm-mm ² /km	28.264	
D	STEEL STRANDS OF COMPLETE CONDUCTOR			
1	Diameter	-		
	(a) Nominal	mm	2.40	
	(b) Maximum	mm	2.44	
	(c) Minimum	mm	2.36	
2	Minimum Ultimate Tensile Strength			
	a) before stranding (Minimum)	N/mm ²	1350	
	b) after stranding (Minimum)	N/mm ²	1283	
3	Stress at 1% Elongation (Center wire only)	N/mm ²	1140	
4	% Elongation on 250mm Gauge Length(min.)			
	a) before stranding (Minimum)	%	3.0	
	b) after stranding (Minimum)	%	2.5	
5	Min. No. of twists to breakage on a length of 100 times the wire diameter.			
	a) before stranding (Minimum)	Nos	16 Twist	
	b) after stranding (Minimum)	Nos	14 Twist	
6	Galvanising			
	(a) Minimum mass of zinc coating per sq.m of Uncoated wire surface.	g/m ²	230	
	(b) Minimum Number of Dip/ min.	Dip/min	3 Dips of 1 minute	
7	Wrapping Test	-	On 1XD	
8	Adhesion Test	-	On 4XD	



Prepared By : JITEN PATEL

Approved by : Wangdi Sherpa

CROSS SECTIONAL DRAWING OF CONDUCTOR



CUSTOMER	
CONDUCTOR CODE NAME	AFLs-10 310 mm ² (311-A1F/32-ST1A)
SIZE / CONSTRUCTION	AL. 310.60 mm ² (18 No's TW) + ST. 7/2.40 mm
SPECIFICATION	PN-EN 62219: 2003E
PREPARED BY : DOLAR VIJAY	APPROVED BY : PRADEEP AGNIHOTRI
SCALE : N.T.S	

GTP / DATA SHEET FOR ACSR/TW 311/32 CONDUCTOR

SR	PARTICULARS	UNIT	DATA
1	Name & Address of Manufacturer	-	APAR INDUSTRIES LTD. INDIA
2	Code Name	-	ACSR/TW 311/32 (311-A1F/32-20SA)
3	Size / Construction		Al. 310.60 mm² + ACS. 7/2.40 mm
4	Outer Diameter of Conductor	mm	21.70
5	Standard cross sectional area of Aluminium	mm ²	310.6
6	Standard cross sectional area of Aluminium Clad Steel (ACS)	mm ²	31.65
7	Total Sectional area of the conductor	mm ²	342.25
8	Specification according to which the conductor will be manufactured and tested.	-	PN-E-62219:2003
9	Particulars of Raw Materials :		
9.1	Aluminium	-	
	(a) Minimum Purity of Aluminium	%	99.50%
	(b) Maximum Copper Content	%	0.05%
10	ALUMINIUM STRANDS AFTER STRANDING		
10.1	Diameter	-	
	(a) Area of Single trapezoidal Aluminium Wire	mm ²	17.256 ± 2%
10.2	Minimum Ultimate Tensile Strength of Strands	N/mm ²	152.00
10.3	Maximum Resistivity per Km at 20°C	Ohm-mm ² /Km	28.264
10.4	Wrap Test	-	On 1XD
11	Aluminium Clad Steel STRANDS AFTER STRANDING		
11.1	Diameter	-	
	(a) Nominal	mm	2.40
	(b) Maximum	mm	2.44
	(c) Minimum	mm	2.36
11.2	Minimum Ultimate Tensile Strength of Strands	N/mm ²	1273
	Minimum Stress at 1% Extension of Strands	N/mm ²	1200
11.3	% Elongation on 250mm Gauge Length(min.)	%	1.5
11.4	Torsion Test	No.	20 (min)
11.5	Minimum Conductivity	% IACS	20
11.6	Wrapping Test	-	On 1XD
11.6	Thickness of Aluminium cladding		
	(a) Minimum thickness of Aluminium cladding	mm	10% of nominal wire radius for nominal diameter

GTP / DATA SHEET FOR ACSR/TW 311/32 CONDUCTOR

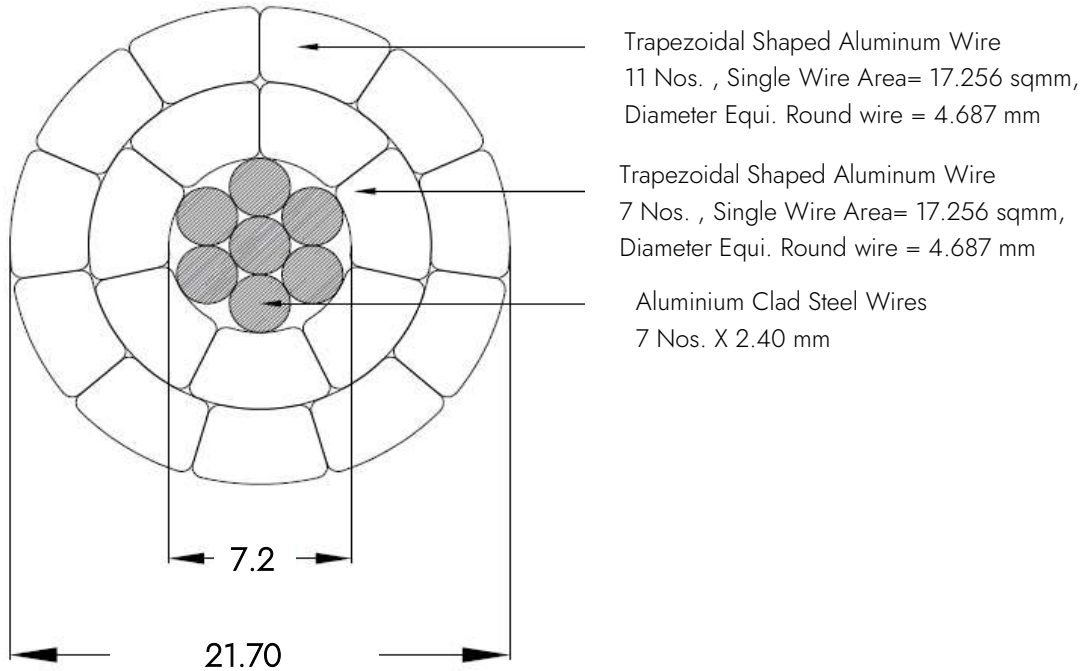
SR	PARTICULARS	UNIT	DATA
12	AFLse-10-310 mm² CONDUCTOR		
12.1	Co-efficient of linear expansion	/°C	20.7 X 10 ⁻⁶
12.2	Final modulus of elasticity	N/mm ²	64900
12.3	Minimum Rated Strength of Conductor	kN	87.68
12.4	Maximum DC resistance of conductor at 20 deg.C.	Ohm/km	0.0898
12.5	Lay ratio of conductor	-	
	(a) 1+6 Aluminium Clad Steel layer	-	Min.16 Max.26
	(b) Al. 7 trapezoidal wire layer	-	Min.10 Max.16
	(c) Al. 11 trapezoidal wire layer	-	Min.10 Max.14
12.6	Direction of lay for outside layer	-	Right Hand
12.7	Greasing	-	Ungreased
12.8	Standard Linear mass of conductor		
	a) Aluminium	Kg/km	856.3
	b) Aluminium Clad Steel	Kg/km	209.5
	c) Conductor without greased	Kg/km	1066 (Nominal)
13	PACKING	-	As per attached DD



Prepared By : JITEN PATEL

Reviewed By : Wangdi sherpa

CROSS SECTIONAL DRAWING OF CONDUCTOR



CUSTOMER	
CONDUCTOR CODE NAME	ACSR/TW 311/32 (311-A1F/32-20SA)
SIZE / CONSTRUCTION	Al. 310.60 mm ² + ACS. 7/2.40 mm
SPECIFICATION	PN-E-62219:2003
PREPARED BY : JITEN PATEL	APPROVED BY : Wangdi Sherpa
SCALE : N.T.S	