

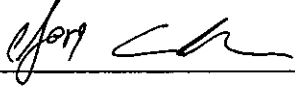
SPECIFICATION**For****ACSR**

Aluminium Conductor Steel Reinforced

BY 

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CUSTOMER

Rev.	Date	Description
0	30/10/2019	Issued specification

Customer Document	Rev.

Remark:

This document is based on the Customer Document for the structure and properties of electric wire and cable only. If there are different points, will be shown in deviation table.

1. Scope

This specification covers bare aluminium conductor steel reinforced to be used for overhead power transmission purposes. The conductor shall be in accordance with TIS 85-2548 (TIS 85-2548 : Standard for aluminum conductor, steel reinforced)

2. Component Wire

Aluminum wire :

The component wire shall be hard drawn aluminium wire for electrical purposes.

The wire shall be clean, smooth and free from harmful defects.

Steel wire :

The component wire shall be galvanized round steel wire for general purposes.

The wire shall be clean, smooth and free from harmful defects.

3. Stranded conductor

The conductor shall be concentrically stranded uniformly and closely in the construction of a steel core aluminium conductor, depicted at the Table 1.

The direction of lay shall be reversed in successive layers and right-hand (Z) lay in the outermost layer.

4. Test and Properties

The conductor shall meet the requirement in Table 1, when tested in accordance with TIS 85-2548.

5. Packing

The conductor shall be placed on the non-returnable wooden reels.

The reel shall be covered with suitable covering to provide the conductors with physical protection during transportation and ordinary storage and handling operations.


Each reel shall be clearly marked as followed.

1. Designation "ACSR"

2. Size of conductor

3. Conductor length

4. Net and gross weight

5. Manufacturer's name and/or trade mark "  **YAZAKI** "

6. Rolling direction of reel

Test and Inspection

Sample Tests

- Maximum conductor resistance, Ohm/kmspecified in Table 1
- Construction.....specified in Table 1
- Minimum breaking strength, kgf.....specified in Table 1

Definition concerning the tests

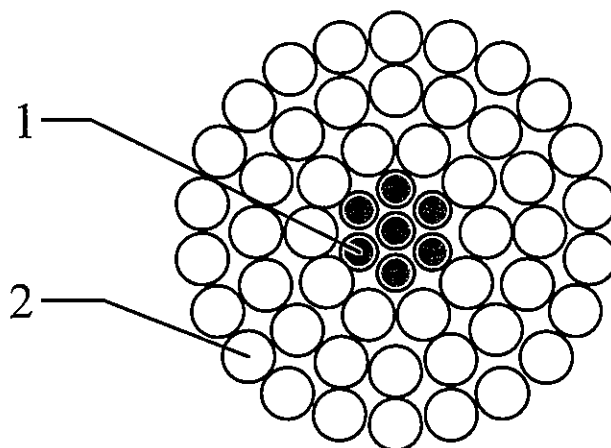
Routine tests: Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

Sample tests: Tests made by the manufacturer on samples of completed cable or components taken from a completed cable, at a specified frequency, so as to verify that the finished product meets the specified requirements.

Type tests: Tests made before supplying, on a general commercial basis, a type of cable covered by this standard, in order to demonstrate satisfactory performance characteristics to meet the intended application.

Cable structure

Cross-sectional (Not scale)



No.	Structure	Material
1	Steel wire	Galvanized steel
2	Aluminium wire	Hard drawn aluminium

Application: For overhead transmission and distribution line

Table 1

Nominal size (mm ²)	Aluminium conductor strands (No./mm)	Steel conductor strands (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ohm/km)	Breaking strength minimum (kgf)	Weight approx. (kg/km)	Standard length (m)
16/2.67	6/1.84	1/1.84	5.53	1.7934	620	65	4000
25/4.17	6/2.30	1/2.30	6.91	1.1478	931	100	4000
35/6.00	6/2.70	1/2.70	8.10	0.8352	1265	140	3000
40/6.67	6/2.91	1/2.91	8.47	0.7174	1468	160	3000
50/8.00	6/3.20	1/3.20	9.60	0.5946	1716	200	3000
50/30.0	12/2.33	7/2.33	11.70	0.5644	4380	380	3000
63/10.5	6/3.66	1/3.66	11.00	0.4555	2205	260	3000
70/12.0	26/1.85	7/1.44	11.70	0.4131	2676	280	3000
95/15.0	26/2.15	7/1.67	13.60	0.3058	3565	380	3000
95/55.0	12/3.20	7/3.20	16.00	0.2992	7965	700	3000
100/16.7	6/4.61	1/4.61	13.80	0.2869	3500	410	3000
120/20.0	26/2.44	7/1.90	15.50	0.2374	4555	490	2000
120/70.0	12/3.60	7/3.60	18.00	0.2364	10034	900	2000
125/6.94	18/2.97	1/2.97	14.90	0.2304	2974	400	2000
125/20.4	26/2.47	7/1.92	15.70	0.2310	4658	500	2000
125/30.0	30/2.33	7/2.33	16.10	0.2259	5759	600	2000
150/25.0	26/2.70	7/2.10	17.10	0.1939	5513	600	2000
160/8.89	18/3.36	1/3.36	16.80	0.1800	3688	500	2000
160/26.1	26/2.80	7/2.18	17.70	0.1805	5881	650	2000
170/40.0	30/2.70	7/2.70	18.90	0.1682	7675	800	1500
185/30.0	26/3.00	7/2.33	19.00	0.1571	6618	750	1500
200/11.1	18/3.76	1/3.76	18.80	0.1440	4508	650	1500
200/32.6	26/3.13	7/2.43	19.80	0.1444	7149	800	1500
210/35.0	26/3.20	7/2.49	20.30	0.1381	7489	850	1500
210/50.0	30/3.00	7/3.00	21.00	0.1383	9390	1000	1500
230/30.0	24/3.50	7/2.33	21.00	0.1250	7313	850	1500

Table 1 (continued)

Nominal size (mm ²)	Aluminium conductor strands (No./mm)	Steel conductor strands (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ohm/km)	Breaking strength minimum (kgf)	Weight approx. (kg/km)	Standard length (m)
240/40.0	26/3.45	7/2.68	21.90	0.1188	8640	1000	1500
250/24.6	22/3.80	7/2.11	21.60	0.1154	7005	900	1500
250/40.7	26/3.50	7/2.72	22.20	0.1155	8937	1000	1500
265/35.0	24/3.74	7/2.49	22.40	0.1095	8307	1000	1500
300/50.0	26/3.86	7/3.00	24.50	0.0949	10702	1200	1000
305/40.0	54/2.68	7/2.68	24.10	0.0949	9942	1200	1000
315/21.8	45/2.99	7/1.99	23.90	0.0917	8056	1100	1000
315/51.3	26/3.93	7/3.05	24.90	0.0917	10890	1300	1000
380/50.0	54/3.00	7/3.00	27.00	0.0758	12312	1500	1000
400/27.7	45/3.36	7/2.24	26.90	0.0722	10027	1300	1000
400/51.9	54/3.07	7/3.07	27.60	0.0723	12543	1500	1000
435/55.0	54/3.20	7/3.20	28.80	0.0666	13673	1700	1000
450/31.1	45/3.57	7/2.38	28.50	0.0642	10956	1500	1000
450/58.3	54/3.26	7/3.26	29.30	0.0643	14110	1700	1000
490/65.0	54/3.40	7/3.40	30.60	0.0590	15343	1900	1000
500/34.6	45/3.76	7/2.51	30.10	0.0578	12173	1700	1000
500/64.8	54/3.43	7/3.43	30.90	0.0578	15678	1900	1000
550/70.0	54/3.60	7/3.60	32.40	0.0526	17096	2100	500
560/38.7	45/3.98	7/2.65	31.80	0.0516	13633	1900	500
560/70.9	54/3.63	19/2.18	32.70	0.0516	17594	2100	500
630/43.6	45/4.22	7/2.81	33.80	0.0459	15337	2100	500
630/79.8	54/3.85	19/2.31	34.70	0.0459	19549	2400	500
680/85.0	54/4.00	19/2.40	36.00	0.0426	21040	2600	500
710/49.1	45/4.48	7/2.99	35.90	0.0407	17285	2400	500
710/89.9	54/4.09	19/2.45	36.80	0.0407	22031	2700	500

Table 1 (continued)

Nominal size (mm ²)	Aluminium conductor strands (No./mm)	Steel conductor strands (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ohm/km)	Breaking strength minimum (kgf)	Weight approx. (kg/km)	Standard length (m)
800/34.6	72/3.76	7/2.51	37.60	0.0361	17066	2500	500
800/66.7	84/3.48	7/3.48	38.30	0.0362	20931	2800	500
800/101	54/4.34	19/2.61	39.10	0.0362	24824	3000	500
900/38.9	72/3.99	7/2.66	39.90	0.0321	19198	2800	500
900/75.0	84/3.69	7/3.69	40.60	0.0322	23089	3100	500
1000/43.2	72/4.21	7/2.80	42.10	0.0289	21332	3100	500
1120/47.3	72/4.45	19/1.78	44.50	0.0258	23908	3500	500
1120/91.2	84/4.12	19/2.47	45.30	0.0258	28866	3800	500
1250/102	84/4.35	19/2.61	47.90	0.0232	32217	4300	500
1250/52.8	72/4.70	19/1.88	47.00	0.0231	26682	3900	500