

# SPECIFICATION

## For

## AAC

### All Aluminium Stranded Conductor

BY



(Wachara Sangsomritphon)

MANAGER, Cable Design Section

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CUSTOMER

Rev.	Date	Description
0	25/09/2019	Issued specification
1	8/1/2025	Update Table 1

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 all aluminium concentric stranded conductor to be use for overhead transmission line.

The conductors shall be in accordance with TIS 85-2548.

## **2. Component Wire**

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

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

## **3. Stranded conductor**

The conductors shall be concentrically stranded uniformly and closely, the composition of which are exhibited at the Table 1.

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

## **4. Test and Properties**


The test and properties of the conductor shall be carried out 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 during ordinary storage and handling operations.

Each reel shall be clearly marked as follows.

1. Designation "AAC"
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/km .....specified in Table 1
- Construction.....specified in Table 1
- Breaking Strength, kg.....specified in Table 1

### **Definition concerning the tests**

#### **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	Conductor	Hard drawn aluminium conductor

**Application:** For overhead transmission and distribution line

**Table 1**

Nominal size (mm <sup>2</sup> )	Conductor strands (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ohm/km)	Breaking strength of conductor (kg)	Weight approx. (kg/km)	Standard length (m)
10	7/1.35	4.05	2.8633	199	27	3000
16	7/1.71	5.13	1.7896	310	44	3000
25	7/2.13	6.42	1.1453	459	69	3000
35	7/2.52	7.56	0.8200	585	95	3000
40	7/2.70	8.10	0.7158	694	109	3000
50	7/3.02	9.06	0.5710	805	137	3000
63	7/3.39	10.17	0.4545	1060	173	3000
70	19/2.15	10.75	0.4171	1205	189	3000
95	19/2.52	12.60	0.3036	1585	259	3000
100	19/2.59	12.95	0.2877	1733	274	3000
120	19/2.85	14.25	0.2374	1980	332	3000
125	19/2.89	14.45	0.2302	2167	341	3000
150	37/2.25	15.75	0.1960	2570	404	3000
160	19/3.27	16.35	0.1798	2692	437	3000
185	37/2.52	17.64	0.1563	3085	507	3000
200	19/3.66	18.30	0.1439	3262	547	3000
240	61/2.25	20.25	0.1192	4015	670	3000
250	19/4.09	20.45	0.1151	4078	683	3000
300	61/2.52	22.68	0.0950	4820	841	3000
315	37/3.29	23.03	0.0916	5298	864	3000
400	61/2.85	25.65	0.0743	6025	1075	3000
450	37/3.94	27.58	0.0641	3740	1240	3000
500	61/3.25	29.25	0.0571	7695	1399	3000
560	37/4.39	30.73	0.0515	9134	1539	2000
625	91/2.96	32.56	0.0463	9694	1735	2000
630	61/3.63	32.60	0.0458	10276	1745	2000

**Table 1 (continued)**

Nominal size (mm <sup>2</sup> )	Conductor strands (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ohm/km)	Breaking strength of conductor (kg)	Weight approx. (kg/km)	Standard length (m)
710	61/3.85	34.60	0.0407	11580	1963	2000
800	61/4.09	36.80	0.0361	13048	2215	1000
900	61/4.33	39.00	0.0321	14679	2483	1000
1000	61/4.57	41.10	0.0289	16310	2766	1000
1120	91/3.96	43.50	0.0258	18267	3105	1000
1250	91/4.18	46.00	0.0231	20388	3460	1000
1400	91/4.43	48.70	0.0207	22834	3886	1000
1500	91/4.58	50.40	0.0193	24465	4154	1000