

EDDY CURRENT TECHNOLOGY

Electrical Conductivity of Materials

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FORWARD

The Electrical Conductivities of Materials Report was first published by Eddy Current Technology in 1984 as the most comprehensive listing of the electrical conductivity of metals. After 15 years of publication, it remains the most complete publication of electrical conductivities of materials and has become the document that people throughout the world turn to first when they need to know the electrical conductivity of an alloy.

ACCURACY

The number of significant digits recorded on the following pages in no way indicates the accuracy of the values. Eddy Current Technology Incorporated makes no claim about the accuracy of the numbers in this report as this report is primarily a compilation of information published by others. Users will note that for some metals and alloys two numbers which are significantly different are published and that these two different numbers have come from two different sources.

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CONDUCTIVITY OF MATERIALS – SECTION 2

SKIN DEPTH FREQUENCY TABLE

This table gives you the frequency (in **kHz**) at which a given alloy and material thickness will have a skin depth of 1, the One Skin Depth Frequency and is abbreviated as 1SDF.

It is recommend that this frequency and 2 times this frequency be mixed for a support plate cancellation when performing eddy current inspections of heat exchanger tubes with the given alloy and wall thickness.

Skin Depth/Frequency Table

Alloy	r	\									
		Inch	0.010	0.018	0.020	0.022	0.025	0.028	0.032	0.035	0.042

ohm-meter		Frequency in kHz									
Copper	1.724E-08	68	21	17	14	11	8.6	6.6	5.5	3.8	2.8
AL2024T4	5.766E-08	226	70	57	47	36	29	22	18	13	9.4
Adm Brass	7.184E-08	282	87	71	58	45	36	28	23	16	12
Al Brass	7.496E-08	294	91	74	61	47	38	29	24	17	12
90/10	1.771E-07	695	215	174	144	111	89	68	57	39	29
Chromium	1.959E-07	769	237	192	159	123	98	75	63	44	32
70/30	3.831E-07	1504	464	376	311	241	192	147	123	85	63
Zirc	5.070E-07	1991	614	498	411	318	254	194	162	113	83
Titanium	5.562E-07	2184	674	546	451	349	279	213	178	124	91
SS 304	6.897E-07	2708	836	677	559	433	345	264	221	154	113
SS 347	7.184E-07	2821	871	705	583	451	360	275	230	160	117
Inconel	1.014E-06	3981	1229	995	823	637	508	389	325	226	166
Tit6Al-4V	1.724E-06	6769	2089	1692	1399	1083	863	661	553	384	282
Graphite	7.837E-06		9497	7692	6357	4923	3925	3005	2512	1744	1282

Alloy	r	\									
		Inch	0.058	0.065	0.072	0.083	0.095	0.109	0.120	0.134	0.148

ohm-meter		Frequency in kHz									
Copper	1.724E-08	2.0	1.6	1.3	0.98	0.75	0.57	0.47	0.38	0.31	0.25
AL2024T4	5.766E-08	6.7	5.4	4.4	3.3	2.5	1.9	1.6	1.3	1.0	0.83
Adm Brass	7.184E-08	8.4	6.7	5.4	4.1	3.1	2.4	2.0	1.6	1.3	1.0
Al Brass	7.496E-08	8.7	7.0	5.7	4.3	3.3	2.5	2.0	1.6	1.3	1.1
90/10	1.771E-07	21	16	13	10	7.7	5.9	4.8	3.9	3.2	2.6
Chromium	1.959E-07	23	18	15	11	8.5	6.5	5.3	4.3	3.5	2.8
70/30	3.831E-07	45	36	29	22	17	13	10	8.4	6.9	5.5
Zirc	5.070E-07	59	47	38	29	22	17	14	11	9.1	7.3
Titanium	5.562E-07	65	52	42	32	24	18	15	12	10	8.0
SS 304	6.897E-07	80	64	52	39	30	23	19	15	12	10
SS 347	7.184E-07	84	67	54	41	31	24	20	16	13	10
Inconel	1.014E-06	118	94	77	58	44	34	28	22	18	15
Tit6Al-4V	1.724E-06	201	160	131	98	75	57	47	38	31	25
Graphite	7.837E-06	915	728	594	447	341	259	214	171	140	113

Commonly used formulae in MKS Units:

$$(1) t_m = (r/\pi\mu F)^{1/2}$$

$$(2) F = r/\pi\mu t_m^2$$

Formula (2) rewritten substituting $4\pi \times 10^{-7}$ for μ_0 :

$$(3) F = 2.533 \times 10^5 r/\mu_r t_m^2$$

Converting to inches:

$$(4) F = 3.926 \times 10^8 r/\mu_r t_i^2$$

r Resistivity in ohm-meters

t_m Thickness in meters

t_i Thickness in inches

F Frequency in Hertz

μ Permeability $\mu_r \mu_0$

$$\mu_0 = 4\pi \times 10^{-7}$$

$\mu_r = 1$ for non-magnetic alloys

Multiply meters by 39.37 to get inches.

Divide inches by 39.37 to get meters.

Formulae (3) and (4) calculate the frequency at which there is 1 radian (57.3°) phase change in the eddy current flow for a given thickness and resistivity. This is the frequency at which this thickness of material has a thickness of one skin depth. This is referred to as the One Skin Depth Frequency and is abbreviated as 1SDF. There will be two radians (114.6°) phase shift as viewed on an impedance plane screen for defects this distance through a material because energy from the probe must travel from the probe, to the defect and back again, a distance of $2t$.

F is calculated for several values of r and t using Formulae (3) and (4) and is tabulated (in kHz) in Section 2 of this report. This value is not an "optimum" frequency. Formulae to calculate an "optimum" frequency have been published by many. A good frequency to use for tubing inspection is usually between the value F and $2XF$ calculated using Formulae (3) and (4). Many factors effect choice of Frequency; therefore, the best frequency or frequencies for a given application should be determined experimentally using Formulae (3) or (4) or the value listed in the table as a starting point.

CONDUCTIVITY OF MATERIALS - SECTION 3 Sorted by Name

RESIST. ohm-m	COND. SIEMENS/m	% IACS		SOU. CODE	MATERIAL
7.184E-08	1.392E+07			2	Admiralty Brass
7.009E-08	1.427E+07			1	Admiralty Metal (annealed)
6.386E-08	1.566E+07			1	Aluminum Allcast, as cast
4.789E-08	2.088E+07			1	Aluminum Allcast, Cond. Sol. H.T. & Stress Relieved
5.747E-08	1.740E+07			1	Aluminum Allcast, Sol H.T. and Aged
5.747E-08	1.740E+07			1	Aluminum Allcast, Stress Relieved
4.660E-08	2.146E+07			1	Aluminum Alloy, A 108
5.945E-08	1.682E+07			1	Aluminum Alloy, A 132 Cond. T551
5.225E-08	1.914E+07			1	Aluminum Alloy, A214
4.926E-08	2.030E+07			1	Aluminum Alloy, B 195 Cond. T4
4.789E-08	2.088E+07			1	Aluminum Alloy, B 195 Cond. T6
6.386E-08	1.566E+07			1	Aluminum Alloy, C113
6.631E-08	1.508E+07			1	Aluminum Alloy, Red X-8 As Cast
5.747E-08	1.740E+07			1	Aluminum Alloy, R 317
3.435E-08	2.912E+07	50.10	-	3	Aluminum Alloy, X3005-0
3.769E-08	2.654E+07	45.50	-	3	Aluminum Alloy, X7178-F and -0
5.805E-08	1.723E+07	26.80	-	3	Aluminum Alloy, X7178-W and T6
5.562E-08	1.798E+07			1	Aluminum Alloy, 108
2.903E-08	3.445E+07	57.00	-	3	Aluminum Alloy, 1100
5.747E-08	1.740E+07			1	Aluminum Alloy, 113
5.071E-08	1.972E+07			1	Aluminum Alloy, 122 Perm. Mold As Cast
4.205E-08	2.378E+07			1	Aluminum Alloy, 122 Sand Cond. T2
5.225E-08	1.914E+07			1	Aluminum Alloy, 122 Sand Cond. T61
4.421E-08	2.262E+07			1	Aluminum Alloy, 13
5.388E-08	1.856E+07			1	Aluminum Alloy, 142 Perm. Mold Cond. T61
3.918E-08	2.552E+07			1	Aluminum Alloy, 142 Sand Cond. T21
5.071E-08	1.972E+07			1	Aluminum Alloy, 142 Sand Cond. T571
4.660E-08	2.146E+07			1	Aluminum Alloy, 142 Sand Cond. T77
4.926E-08	2.030E+07			1	Aluminum Alloy, 195 Cond. T4
4.660E-08	2.146E+07			1	Aluminum Alloy, 195 Cond. T62
4.756E-08	2.103E+07	36.00	-	3	Aluminum Alloy, 2011-T3
3.473E-08	2.880E+07	48.60	-	3	Aluminum Alloy, 2014-F and -0
5.124E-08	1.952E+07	32.50	-	3	Aluminum Alloy, 2014-T3 and -T4
4.438E-08	2.253E+07	38.00	-	3	Aluminum Alloy, 2014-T6
3.490E-08	2.865E+07	49.30	-	3	Aluminum Alloy, 2017-F
3.618E-08	2.764E+07	46.80	-	3	Aluminum Alloy, 2024-F
5.330E-08	1.876E+07	28.60	-	3	Aluminum Alloy, 2024-T3
5.884E-08	1.699E+07	29.10	-	3	Aluminum Alloy, 2024-T36
5.766E-08	1.734E+07	28.80	-	3	Aluminum Alloy, 2024-T4
4.081E-08	2.451E+07	42.10	-	3	Aluminum Alloy, 2127-T4
4.926E-08	2.030E+07			1	Aluminum Alloy, 214
7.184E-08	1.392E+07			1	Aluminum Alloy, 218
8.210E-08	1.218E+07			1	Aluminum Alloy, 220
4.610E-08	2.169E+07			3	Aluminum Alloy, 2218-T61
4.289E-08	2.332E+07			3	Aluminum Alloy, 2618
3.861E-08	2.590E+07	37.80	-	3	Aluminum Alloy, 3003-H14 and -H12
4.043E-08	2.474E+07	37.80	-	3	Aluminum Alloy, 3003-H24 and -H28
3.649E-08	2.741E+07	44.70	-	3	Aluminum Alloy, 3003-0
4.160E-08	2.404E+07	39.40	-	3	Aluminum Alloy, 3004
6.158E-08	1.624E+07			1	Aluminum Alloy, 319 Perm. Mold
6.386E-08	1.566E+07			1	Aluminum Alloy, 319 Sand
4.421E-08	2.262E+07			1	Aluminum Alloy, 355 Perm. Mold Cond. T6
4.010E-08	2.494E+07			1	Aluminum Alloy, 355 Sand Cond. T51
4.789E-08	2.088E+07			1	Aluminum Alloy, 355 Sand Cond. T6
4.660E-08	2.146E+07			1	Aluminum Alloy, 355 Sand Cond. T61
4.105E-08	2.436E+07			1	Aluminum Alloy, 355 Sand Cond. T7
4.010E-08	2.494E+07			1	Aluminum Alloy, 356 Sand Cond. T51

CONDUCTIVITY OF MATERIALS - SECTION 3 Sorted by Name

RESIST. ohm-m	COND. SIEMENS/m	% IACS		SOU. CODE	MATERIAL	
4.421E-08	2.262E+07	39.00		1	Aluminum Alloy, 356 Sand Cond. T6	
4.660E-08	2.146E+07	37.00		1	Aluminum Alloy, 360	
6.386E-08	1.566E+07	27.00		1	Aluminum Alloy, 380	
4.926E-08	2.030E+07	35.00		1	Aluminum Alloy, 40E	
4.816E-08	2.076E+07	35.30	-	36.30	3	Aluminum Alloy, 4032-T6
3.235E-08	3.091E+07	52.30	-	54.30	3	Aluminum Alloy, 4043-F
4.105E-08	2.436E+07			42.00	1	Aluminum Alloy, 43 (Annealed)
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, 43 As Cast
3.281E-08	3.048E+07	52.30	-	52.80	3	Aluminum Alloy, 5005
3.515E-08	2.845E+07	48.30	-	49.80	3	Aluminum Alloy, 5050
4.843E-08	2.065E+07	33.60	-	37.60	3	Aluminum Alloy, 5052
5.956E-08	1.679E+07	28.10	-	29.80	3	Aluminum Alloy, 5056
5.448E-08	1.836E+07	30.50	-	32.80	3	Aluminum Alloy, 5154
3.861E-08	2.590E+07	42.30	-	47.00	3	Aluminum Alloy, 5357
3.950E-08	2.532E+07	39.30	-	48.00	3	Aluminum Alloy, 6053
3.798E-08	2.633E+07	42.30	-	48.50	3	Aluminum Alloy, 6061-F and -0
4.415E-08	2.265E+07	37.60	-	40.50	3	Aluminum Alloy, 6061-T4
4.066E-08	2.459E+07	40.00	-	44.80	3	Aluminum Alloy, 6061-T6 and -T9
3.519E-08	2.842E+07	47.00	-	51.00	3	Aluminum Alloy, 6062-F
3.941E-08	2.538E+07	43.50	-	44.00	3	Aluminum Alloy, 6062-T4
3.661E-08	2.732E+07	44.70	-	49.50	3	Aluminum Alloy, 6062-T6
4.066E-08	2.459E+07	41.50	-	43.30	3	Aluminum Alloy, 6151-T4
3.879E-08	2.578E+07	43.90	-	45.00	3	Aluminum Alloy, 6151-T6
3.184E-08	3.141E+07	53.30	-	55.00	3	Aluminum Alloy, 6151-0
3.250E-08	3.077E+07	53.00	-	53.10	3	Aluminum Alloy, 6951-F
3.073E-08	3.254E+07	55.70	-	56.50	3	Aluminum Alloy, 6951-0
2.871E-08	3.483E+07	60.00	-	60.10	3	Aluminum Alloy, 7072
3.736E-08	2.677E+07	44.50	-	47.80	3	Aluminum Alloy, 7075-F
5.209E-08	1.920E+07	31.40	-	34.80	3	Aluminum Alloy, 7075-T6
5.388E-08	1.856E+07			32.00	2	Aluminum Alloy, 7075-T6
5.388E-08	1.856E+07	27.00	-	37.00	3	Aluminum Alloy, 7075-W
3.831E-08	2.610E+07			45.00	1	Aluminum Alloy, 750
6.158E-08	1.624E+07			28.00	1	Aluminum Alloy, 85
3.135E-08	3.190E+07			55.00	1	Aluminum, A51S Cond. "0"
3.831E-08	2.610E+07			45.00	1	Aluminum, A51S Cond. T4 and T6
7.496E-08	1.334E+07			23.00	1	Aluminum Brass (Annealed)
1.232E-07	8.120E+06			14.00	1	Aluminum - Bronze
9.852E-08	1.015E+07			17.50	1	Aluminum - Bronze, 5% Aluminum (Annealed)
1.368E-07	7.308E+06			12.60	1	Aluminum - Bronze, 10% Aluminum (Annealed)
2.826E-08	3.538E+07			61.00	2	Aluminum, Pure
5.945E-08	1.682E+07			29.00	1	Aluminum, Red X-8 Cond. Stress Relieved
4.310E-08	2.320E+07			40.00	1	Aluminum, 11S Cond. T3
3.448E-08	2.900E+07			50.00	1	Aluminum, 14S Cond. "0"
4.310E-08	2.320E+07			40.00	1	Aluminum, 14S Cond. T6
3.831E-08	2.610E+07			45.00	1	Aluminum, 17S Cond. "0"
5.747E-08	1.740E+07			30.00	1	Aluminum, 17S Cond. T4
3.448E-08	2.900E+07			50.00	1	Aluminum, 18S Cond. "0"
4.310E-08	2.320E+07			40.00	1	Aluminum, 18S Cond. T61
2.922E-08	3.422E+07			59.00	1	Aluminum, 2S Cond. "0"
3.025E-08	3.306E+07			57.00	1	Aluminum, 2S Cond. H18
3.448E-08	2.900E+07			50.00	1	Aluminum, 24S Cond. "0"
5.747E-08	1.740E+07			30.00	1	Aluminum, 24S Cond. T4
4.310E-08	2.320E+07			40.00	1	Aluminum, 24S Cond. T6
3.448E-08	2.900E+07			50.00	1	Aluminum, 3S Cond. "0"
4.105E-08	2.436E+07			42.00	1	Aluminum, 3S Cond. H 12
4.205E-08	2.378E+07			41.00	1	Aluminum, 3S Cond. H 14
4.310E-08	2.320E+07			40.00	1	Aluminum, 3S Cond. H 18

CONDUCTIVITY OF MATERIALS - SECTION 3 Sorted by Name

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
4.310E-08	2.320E+07	40.00	1	Aluminum, 32S Cond. "0"
4.926E-08	2.030E+07	35.00	1	Aluminum, 32S Cond. T6
4.926E-08	2.030E+07	35.00	1	Aluminum, 52S Cond. "0" and H 38
3.831E-08	2.610E+07	45.00	1	Aluminum, 53S Cond. "0"
4.310E-08	2.320E+07	40.00	1	Aluminum, 53S Cond. T4 and T6
5.945E-08	1.682E+07	29.00	1	Aluminum, 56S Cond. "0"
3.831E-08	2.610E+07	45.00	1	Aluminum, 61S Cond. "0"
6.386E-08	1.566E+07	27.00	1	Aluminum, 56S Cond. H 38
4.310E-08	2.320E+07	40.00	1	Aluminum, 61S Cond. T4 and T6
5.747E-08	1.740E+07	30.00	1	Aluminum, 75S Cond. T6
2.655E-08	3.767E+07	64.94	1	Aluminum, 99.99%
1.449E-07	6.902E+06	11.90	1	Antimonial Tin Solder
2.188E-07	4.570E+06	7.88	1	Antimonial Lead, 1% (Quenched and Aged)
3.918E-07	2.552E+06	4.40	1	Antimony
2.874E-07	3.480E+06	6.00	1	Babbitt, Lead Base
1.014E-07	9.860E+06	17.00	1	Beryllium Copper, Cond. A
8.210E-08	1.218E+07	21.00	1	Beryllium Copper, Cond. At
4.000E-08	2.500E+07	43.10	1	Beryllium
4.432E-08	2.256E+07	38.90	1	Beryllium
7.184E-08	1.392E+07	24.00	2	Brass, Admiralty
7.496E-08	1.334E+07	23.00	1	Brass, Aluminum (Annealed)
6.158E-08	1.624E+07	28.00	1	Brass, Cartridge (Annealed)
1.437E-07	6.960E+06	12.00	1	Brass, High Strength Yellow
6.631E-08	1.508E+07	26.00	1	Brass, Leaded Naval (Annealed)
9.579E-08	1.044E+07	18.00	1	Brass, Leaded Semi Red
6.897E-08	1.450E+07	25.00	1	Brass, Leaded Yellow
5.388E-08	1.856E+07	32.00	1	Brass, Low (Annealed)
6.631E-08	1.508E+07	26.00	1	Brass, Low Leaded (Annealed)
6.631E-08	1.508E+07	26.00	1	Brass, Naval (Annealed)
4.660E-08	2.146E+07	37.00	1	Brass, Red (Annealed)
6.386E-08	1.566E+07	27.00	1	Brass, Yellow (Annealed)
1.232E-07	8.120E+06	14.00	1	Bronze Aluminum
9.852E-08	1.015E+07	17.50	1	Bronze Aluminum, 5% Aluminum (Annealed)
1.368E-07	7.308E+06	12.60	1	Bronze Aluminum, 10% Aluminum (Annealed)
3.918E-08	2.552E+07	44.00	1	Bronze, Commercial (Annealed)
4.105E-08	2.436E+07	42.00	1	Bronze, Commercial Leaded
1.567E-07	6.380E+06	11.00	2	Bronze, Phos.
1.232E-07	8.120E+06	14.00	1	Bronze, Leaded Tin
1.567E-07	6.380E+06	11.00	1	Bronze, Leaded Tin Bearing
7.184E-08	1.392E+07	24.00	1	Bronze Manganese (Annealed)
3.592E-08	2.784E+07	48.00	1	Bronze Phos., 1.25% Phos. Grade E
9.579E-08	1.044E+07	18.00	1	Bronze Phos., 5% Phos. Grade A
1.326E-07	7.540E+06	13.00	1	Bronze Phos., 8% Phos. Grade C
1.567E-07	6.380E+06	11.00	1	Bronze Phos., 10% Phos. Grade D
2.463E-07	4.060E+06	7.00	1	Bronze, Silicon Type A (Annealed)
1.437E-07	6.960E+06	12.00	1	Bronze, Silicon Type B (Annealed)
6.842E-08	1.462E+07	25.20	1	Cadmium
3.540E-08	2.825E+07	48.70	1	Calcium
6.158E-08	1.624E+07	28.00	1	Cartridge Brass (Annealed)
1.959E-07	5.104E+06	8.80	1	Chromium
6.247E-08	1.601E+07	27.60	1	Cobalt
1.306E-07	7.656E+06	13.20	1	Columbium
4.898E-07	2.042E+06	3.52	1	Constantan
1.014E-07	9.860E+06	17.00	1	Copper Beryllium, Cond. "A"
8.210E-08	1.218E+07	21.00	1	Copper Beryllium, Cond. At
2.028E-08	4.930E+07	85.00	1	Copper, Deoxidized (Annealed)
1.707E-08	5.858E+07	101.00	1	Copper, Electrolytic Tough Pitch (Annealed)

CONDUCTIVITY OF MATERIALS - SECTION 3 Sorted by Name

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
1.664E-08	6.009E+07	103.60	1	Copper, Pure
1.724E-08	5.800E+07	100.00	2	Copper, Pure
3.831E-07	2.610E+06	4.50	2	Copper 70%, Nickel 30%
1.771E-07	5.647E+06	9.74	4	Copper 90%, Nickel 10%
2.077E-07	4.814E+06	8.30	1	Corrodine Lead
3.748E-07	2.668E+06	4.60	1	Cupro - Nickel 30%
3.079E-08	3.248E+07	56.00	1	Gilding Metal (Annealed)
2.349E-08	4.257E+07	73.40	1	Gold
2.463E-08	4.060E+07	70.00	2	Gold, Pure
7.837E-06	1.276E+05	0.22	1	Graphite
1.232E-06	8.120E+05	1.40	1	Hastelloy "A"
1.326E-06	7.540E+05	1.30	1	Hastelloy "B" & "C"
1.149E-06	8.700E+05	1.50	1	Hastelloy "D"
1.149E-06	8.700E+05	1.50	2	Hastelloy "X"
9.796E-07	1.021E+06	1.76	1	Inconel
1.014E-06	9.860E+05	1.70	2	Inconel 600
1.105E-07	9.048E+06	15.60	1	Ingot Iron (99.9% Fe)
5.289E-08	1.891E+07	32.60	1	Iridium
1.895E-07	5.278E+06	9.10	1	Iridium - Platinum Alloys
3.316E-07	3.016E+06	5.20	1	Iridium - Platinum Alloys, 18% Nickel Silver Alloy B
9.579E-08	1.044E+07	18.00	2	Iron
1.105E-07	9.048E+06	15.60	1	Iron Ingot (99.9% Fe)
2.053E-07	4.872E+06	8.40	2	Lead
2.188E-07	4.570E+06	7.88	1	Lead, 1% Antimonial (Quenched & Aged)
2.077E-07	4.814E+06	8.30	1	Lead, Corrodine
2.239E-07	4.466E+06	7.70	1	Lead, Hard (Quenched & Aged)
4.105E-08	2.436E+07	42.00	1	Leaded Commercial Bronze
9.579E-08	1.044E+07	18.00	1	Leaded Semi Red Brass
1.567E-07	6.380E+06	11.00	1	Leaded Tin Bearing Bronze
1.232E-07	8.120E+06	14.00	1	Leaded Tin Bronze
6.897E-08	1.450E+07	25.00	1	Leaded Yellow Brass
8.535E-08	1.172E+07	20.20	1	Lithium
4.660E-08	2.146E+07	37.00	2	Magnesium
1.149E-07	8.700E+06	15.00	1	Magnesium Alloys (Cast)
1.596E-07	6.264E+06	10.80	1	Magnesium, AZ80BTA
1.916E-07	5.220E+06	9.00	1	Magnesium Cast Alloys
1.181E-07	8.468E+06	14.60	1	Magnesium, A2 80
1.002E-07	9.976E+06	17.20	1	Magnesium, A231
1.347E-07	7.424E+06	12.80	1	Magnesium, A251
1.402E-07	7.134E+06	12.30	1	Magnesium, A261
4.467E-08	2.239E+07	38.60	1	Magnesium, Pure
1.379E-07	7.250E+06	12.50	1	Magnesium, T454
4.998E-08	2.001E+07	34.50	1	Magnesium (Wrought Alloys)
7.184E-08	1.392E+07	24.00	1	Manganese Bronze (Annealed)
5.225E-08	1.914E+07	33.00	1	Molybdenum
4.789E-07	2.088E+06	3.60	2	Monel
4.816E-07	2.076E+06	3.58	1	Monel
9.579E-07	1.044E+06	1.80	1	Mercury
6.158E-08	1.624E+07	28.00	1	Muntz Metal (Annealed)
3.831E-07	2.610E+06	4.50	2	Nickel 30%, Copper 70%
9.579E-08	1.044E+07	18.00	1	Nickel "A"
2.330E-07	4.292E+06	7.40	1	Nickel - Platinum Alloys
1.268E-07	7.888E+06	13.60	1	Nickel - Platinum Alloys
6.842E-08	1.462E+07	25.20	1	Nickel, Pure (Electrolytic)
3.748E-07	2.668E+06	4.60	1	Nickel 30% - Cupro
2.874E-07	3.480E+06	6.00	1	Nickel, 18% Nickel Sil
9.473E-08	1.056E+07	18.20	1	Osmium

CONDUCTIVITY OF MATERIALS - SECTION 3 Sorted by Name

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
1.078E-07	9.280E+06	16.00	1	Palladium
1.567E-07	6.380E+06	11.00	2	Phos. Bronze
3.592E-08	2.784E+07	48.00	1	Phos. Bronze, 1.25% Phos. Grade E
9.579E-08	1.044E+07	18.00	1	Phos. Bronze, 5% Phos. Grade A
1.326E-07	7.540E+06	13.00	1	Phos. Bronze, 8% Phos. Grade C
1.567E-07	6.380E+06	11.00	1	Phos. Bronze, 10% Phos. Grade D
1.059E-07	9.442E+06	16.28	1	Platinum
1.486E-07	6.728E+06	11.60	1	Platinum, Commercial
1.895E-07	5.278E+06	9.10	1	Platinum - Iridium Alloys
3.316E-07	3.016E+06	5.20	1	Platinum - Iridium Alloys, 18% Nickel Silver Alloy B
2.330E-07	4.292E+06	7.40	1	Platinum - Nickel Alloys
1.268E-07	7.888E+06	13.60	1	Platinum - Nickel Alloys
4.310E-07	2.320E+06	4.00	1	Platinum - Ruthenium (Contact Grade)
3.135E-07	3.190E+06	5.50	1	Platinum - Ruthenium (Jewelry Grade)
4.490E-08	2.227E+07	38.40	1	Rhodium
7.595E-08	1.317E+07	22.70	1	Ruthenium
4.310E-07	2.320E+06	4.00	1	Ruthenium - Platinum (Contact Grade)
3.135E-07	3.190E+06	5.50	1	Ruthenium - Platinum (Jewelry Grade)
1.197E-07	8.352E+06	14.40	1	Selenium
2.463E-07	4.060E+06	7.00	1	Silicon Bronze, Type A (Annealed)
1.437E-07	6.960E+06	12.00	1	Silicon Bronze, Type B (Annealed)
1.642E-08	6.090E+07	105.00	2	Silver, Pure
1.591E-08	6.287E+07	108.40	1	Silver, Pure
1.039E-07	9.628E+06	16.60	1	Silver, Tin Solder
2.874E-07	3.480E+06	6.00	1	Silver, 18% Nickel Alloy A
1.449E-07	6.902E+06	11.90	1	Solder, Antimonial Tin
1.039E-07	9.628E+06	16.60	1	Solder, Tin Silver
1.759E-07	5.684E+06	9.80	1	Solder, 20-80 Soft
1.959E-07	5.104E+06	8.80	1	Solder, 5-95 Soft
1.567E-07	6.380E+06	11.00	1	Solder, 50-50 Soft
1.611E-07	6.206E+06	10.70	1	Steel, Cast
5.945E-07	1.682E+06	2.90	1	Steel, High Alloy
6.897E-07	1.450E+06	2.50	2	Steel, 304 Stainless
6.897E-07	1.450E+06	2.50	1	Steel, 304 Stainless
7.496E-07	1.334E+06	2.30	1	Steel, 316 Stainless
7.184E-07	1.392E+06	2.40	1	Steel, 347 Stainless
1.240E-07	8.062E+06	13.90	1	Tantalum
1.449E-07	6.902E+06	11.90	1	Tin Solder (Antimonial)
4.105E-07	2.436E+06	4.20	1	Tin, Foil
1.232E-07	8.120E+06	14.00	1	Tin (Leaded), Bronze
1.149E-07	8.700E+06	15.00	1	Tin, Pure
1.039E-07	9.628E+06	16.60	1	Tin, Silver Solder
5.562E-07	1.798E+06	3.10	2	Titanium
7.837E-07	1.276E+06	2.20	1	Titanium
1.724E-06	5.800E+05	1.00	2	Titanium, 6A1-4V
5.491E-08	1.821E+07	31.40	1	Tungsten
2.874E-07	3.480E+06	6.00	1	Uranium
2.612E-07	3.828E+06	6.60	1	Vanadium
1.232E-06	8.120E+05	1.40	2	Waspaloy
1.553E-07	6.438E+06	11.10	1	White Metal
5.945E-08	1.682E+07	29.00	2	Zinc
6.158E-08	1.624E+07	28.00	1	Zinc, Commercial Rolled
6.897E-08	1.450E+07	25.00	1	Zinc, Die Cast
6.386E-08	1.566E+07	27.00	1	Zinc, Die Cast
7.184E-07	1.392E+06	2.40	2	Zircaloy - 2
4.105E-07	2.436E+06	4.20	1	Zirconium
5.071E-07	1.972E+06	3.40	2	Zirconium

Source Code: 1 - CSNDT

2 - Eddy Current Testing Manual on Eddy Current Method

3 - NDT Magazine Sept/Oct 1955, Cosgrove Article

CONDUCTIVITY OF MATERIALS - SECTION 4 Sorted by Resistivity

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
1.591E-08	6.287E+07		1	Silver, Pure
1.642E-08	6.090E+07		2	Silver, Pure
1.664E-08	6.009E+07		1	Copper, Pure
1.707E-08	5.858E+07		1	Copper, Electrolytic Tough Pitch (Annealed)
1.724E-08	5.800E+07		2	Copper, Pure
2.028E-08	4.930E+07		1	Copper, Deoxidized (Annealed)
2.349E-08	4.257E+07		1	Gold
2.463E-08	4.060E+07		2	Gold, Pure
2.655E-08	3.767E+07		1	Aluminum, 99.99%
2.826E-08	3.538E+07		2	Aluminum, Pure
2.871E-08	3.483E+07	60.00 -	3	Aluminum Alloy, 7072
2.903E-08	3.445E+07	57.00 -	3	Aluminum Alloy, 1100
2.922E-08	3.422E+07		1	Aluminum, 2S Cond. "0"
3.025E-08	3.306E+07		1	Aluminum, 2S Cond. H18
3.073E-08	3.254E+07	55.70 -	3	Aluminum Alloy, 6951-0
3.079E-08	3.248E+07		1	Gilding Metal (Annealed)
3.135E-08	3.190E+07		1	Aluminum, A51S Cond. "0"
3.184E-08	3.141E+07	53.30 -	3	Aluminum Alloy, 6151-0
3.235E-08	3.091E+07	52.30 -	3	Aluminum Alloy, 4043-F
3.250E-08	3.077E+07	53.00 -	3	Aluminum Alloy, 6951-F
3.281E-08	3.048E+07	52.30 -	3	Aluminum Alloy, 5005
3.435E-08	2.912E+07	50.10 -	3	Aluminum Alloy, X3005-0
3.448E-08	2.900E+07		1	Aluminum, 14S Cond. "0"
3.448E-08	2.900E+07		1	Aluminum, 24S Cond. "0"
3.448E-08	2.900E+07		1	Aluminum, 18S Cond. "0"
3.448E-08	2.900E+07		1	Aluminum, 3S Cond. "0"
3.473E-08	2.880E+07	48.60 -	3	Aluminum Alloy, 2014-F and -0
3.490E-08	2.865E+07	49.30 -	3	Aluminum Alloy, 2017-F
3.515E-08	2.845E+07	48.30 -	3	Aluminum Alloy, 5050
3.519E-08	2.842E+07	47.00 -	3	Aluminum Alloy, 6062-F
3.540E-08	2.825E+07		1	Calcium
3.592E-08	2.784E+07		1	Phos. Bronze, 1.25% Phos. Grade E
3.592E-08	2.784E+07		1	Bronze Phos., 1.25% Phos. Grade E
3.618E-08	2.764E+07	46.80 -	3	Aluminum Alloy, 2024-F
3.649E-08	2.741E+07	44.70 -	3	Aluminum Alloy, 3003-0
3.661E-08	2.732E+07	44.70 -	3	Aluminum Alloy, 6062-T6
3.736E-08	2.677E+07	44.50 -	3	Aluminum Alloy, 7075-F
3.769E-08	2.654E+07	45.50 -	3	Aluminum Alloy, X7178-F and -0
3.798E-08	2.633E+07	42.30 -	3	Aluminum Alloy, 6061-F and -0
3.831E-08	2.610E+07		1	Aluminum, 61S Cond. "0"
3.831E-08	2.610E+07		1	Aluminum, 53S Cond. "0"
3.831E-08	2.610E+07		1	Aluminum Alloy, 750
3.831E-08	2.610E+07		1	Aluminum, 17S Cond. "0"
3.831E-08	2.610E+07		1	Aluminum, A51S Cond. T4 and T6
3.861E-08	2.590E+07	42.30 -	3	Aluminum Alloy, 5357
3.861E-08	2.590E+07	37.80 -	3	Aluminum Alloy, 3003-H14 and -H12
3.879E-08	2.578E+07	43.90 -	3	Aluminum Alloy, 6151-T6
3.918E-08	2.552E+07		1	Aluminum Alloy, 142 Sand Cond. T21
3.918E-08	2.552E+07		1	Bronze, Commercial (Annealed)
3.941E-08	2.538E+07	43.50 -	3	Aluminum Alloy, 6062-T4
3.950E-08	2.532E+07	39.30 -	3	Aluminum Alloy, 6053
4.000E-08	2.500E+07		1	Beryllium
4.010E-08	2.494E+07		1	Aluminum Alloy, 355 Sand Cond. T51
4.010E-08	2.494E+07		1	Aluminum Alloy, 356 Sand Cond. T51
4.043E-08	2.474E+07	37.80 -	3	Aluminum Alloy, 3003-H24 and -H28
4.066E-08	2.459E+07	41.50 -	3	Aluminum Alloy, 6151-T4
4.066E-08	2.459E+07	40.00 -	3	Aluminum Alloy, 6061-T6 and -T9

CONDUCTIVITY OF MATERIALS - SECTION 4 Sorted by Resistivity

RESIST. ohm-m	COND. SIEMENS/m	% IACS		SOU. CODE	MATERIAL	
4.081E-08	2.451E+07	42.10	-	42.40	3	Aluminum Alloy, 2127-T4
4.105E-08	2.436E+07			42.00	1	Leaded Commercial Bronze
4.105E-08	2.436E+07			42.00	1	Aluminum, 3S Cond. H 12
4.105E-08	2.436E+07			42.00	1	Aluminum Alloy, 355 Sand Cond. T7
4.105E-08	2.436E+07			42.00	1	Aluminum Alloy, 43 (Annealed)
4.105E-08	2.436E+07			42.00	1	Bronze, Commercial Leaded
4.160E-08	2.404E+07	39.40	-	43.50	3	Aluminum Alloy, 3004
4.205E-08	2.378E+07			41.00	1	Aluminum, 3S Cond. H 14
4.205E-08	2.378E+07			41.00	1	Aluminum Alloy, 122 Sand Cond. T2
4.289E-08	2.332E+07			40.20	3	Aluminum Alloy, 2618
4.310E-08	2.320E+07			40.00	1	Aluminum, 61S Cond. T4 and T6
4.310E-08	2.320E+07			40.00	1	Aluminum, 14S Cond. T6
4.310E-08	2.320E+07			40.00	1	Aluminum, 53S Cond. T4 and T6
4.310E-08	2.320E+07			40.00	1	Aluminum, 3S Cond. H 18
4.310E-08	2.320E+07			40.00	1	Aluminum, 11S Cond. T3
4.310E-08	2.320E+07			40.00	1	Aluminum, 32S Cond. "0"
4.310E-08	2.320E+07			40.00	1	Aluminum, 24S Cond. T6
4.310E-08	2.320E+07			40.00	1	Aluminum, 18S Cond. T61
4.415E-08	2.265E+07	37.60	-	40.50	3	Aluminum Alloy, 6061-T4
4.421E-08	2.262E+07			39.00	1	Aluminum Alloy, 356 Sand Cond. T6
4.421E-08	2.262E+07			39.00	1	Aluminum Alloy, 355 Perm. Mold Cond. T6
4.421E-08	2.262E+07			39.00	1	Aluminum Alloy, 13
4.432E-08	2.256E+07			38.90	1	Beryllium
4.438E-08	2.253E+07	38.00	-	39.70	3	Aluminum Alloy, 2014-T6
4.467E-08	2.239E+07			38.60	1	Magnesium, Pure
4.490E-08	2.227E+07			38.40	1	Rhodium
4.610E-08	2.169E+07			37.40	3	Aluminum Alloy, 2218-T61
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, 43 As Cast
4.660E-08	2.146E+07			37.00	1	Brass, Red (Annealed)
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, 195 Cond. T62
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, A 108
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, 355 Sand Cond. T61
4.660E-08	2.146E+07			37.00	2	Magnesium
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, 360
4.660E-08	2.146E+07			37.00	1	Aluminum Alloy, 142 Sand Cond. T77
4.756E-08	2.103E+07	36.00	-	36.50	3	Aluminum Alloy, 2011-T3
4.789E-08	2.088E+07			36.00	1	Aluminum Alloy, B 195 Cond. T6
4.789E-08	2.088E+07			36.00	1	Aluminum Allcast, Cond. Sol. H.T. & Stress Relieved
4.789E-08	2.088E+07			36.00	1	Aluminum Alloy, 355 Sand Cond. T6
4.816E-08	2.076E+07	35.30	-	36.30	3	Aluminum Alloy, 4032-T6
4.843E-08	2.065E+07	33.60	-	37.60	3	Aluminum Alloy, 5052
4.926E-08	2.030E+07			35.00	1	Aluminum, 32S Cond. T6
4.926E-08	2.030E+07			35.00	1	Aluminum, 52S Cond. "0" and H 38
4.926E-08	2.030E+07			35.00	1	Aluminum Alloy, 214
4.926E-08	2.030E+07			35.00	1	Aluminum Alloy, B 195 Cond. T4
4.926E-08	2.030E+07			35.00	1	Aluminum Alloy, 195 Cond. T4
4.926E-08	2.030E+07			35.00	1	Aluminum Alloy, 40E
4.998E-08	2.001E+07			34.50	1	Magnesium (Wrought Alloys)
5.071E-08	1.972E+07			34.00	1	Aluminum Alloy, 142 Sand Cond. T571
5.071E-08	1.972E+07			34.00	1	Aluminum Alloy, 122 Perm. Mold As Cast
5.124E-08	1.952E+07	32.50	-	34.80	3	Aluminum Alloy, 2014-T3 and -T4
5.209E-08	1.920E+07	31.40	-	34.80	3	Aluminum Alloy, 7075-T6
5.225E-08	1.914E+07			33.00	1	Aluminum Alloy, A214
5.225E-08	1.914E+07			33.00	1	Aluminum Alloy, 122 Sand Cond. T61
5.225E-08	1.914E+07			33.00	1	Molybdenum
5.289E-08	1.891E+07			32.60	1	Iridium
5.330E-08	1.876E+07	28.60	-	36.10	3	Aluminum Alloy, 2024-T3

CONDUCTIVITY OF MATERIALS - SECTION 4 Sorted by Resistivity

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
5.388E-08	1.856E+07		1	Aluminum Alloy, 142 Perm. Mold Cond. T61
5.388E-08	1.856E+07		1	Brass, Low (Annealed)
5.388E-08	1.856E+07		2	Aluminum Alloy, 7075-T6
5.388E-08	1.856E+07	27.00 -	3	Aluminum Alloy, 7075-W
5.448E-08	1.836E+07	30.50 -	3	Aluminum Alloy, 5154
5.491E-08	1.821E+07		1	Tungsten
5.562E-08	1.798E+07		1	Aluminum Alloy, 108
5.747E-08	1.740E+07		1	Aluminum, 24S Cond. T4
5.747E-08	1.740E+07		1	Aluminum, 17S Cond. T4
5.747E-08	1.740E+07		1	Aluminum, 75S Cond. T6
5.747E-08	1.740E+07		1	Aluminum Alloy, R 317
5.747E-08	1.740E+07		1	Aluminum Allcast, Sol H.T. and Aged
5.747E-08	1.740E+07		1	Aluminum Allcast, Stress Relieved
5.747E-08	1.740E+07		1	Aluminum Alloy, 113
5.766E-08	1.734E+07	28.80 -	3	Aluminum Alloy, 2024-T4
5.805E-08	1.723E+07	26.80 -	3	Aluminum Alloy, X7178-W and T6
5.884E-08	1.699E+07	29.10 -	3	Aluminum Alloy, 2024-T36
5.945E-08	1.682E+07		1	Aluminum, 56S Cond. "0"
5.945E-08	1.682E+07		1	Aluminum Alloy, A 132 Cond. T551
5.945E-08	1.682E+07		2	Zinc
5.945E-08	1.682E+07		1	Aluminum, Red X-8 Cond. Stress Relieved
5.956E-08	1.679E+07	28.10 -	3	Aluminum Alloy, 5056
6.158E-08	1.624E+07		1	Muntz Metal (Annealed)
6.158E-08	1.624E+07		1	Aluminum Alloy, 319 Perm. Mold
6.158E-08	1.624E+07		1	Brass, Cartridge (Annealed)
6.158E-08	1.624E+07		1	Aluminum Alloy, 85
6.158E-08	1.624E+07		1	Zinc, Commercial Rolled
6.158E-08	1.624E+07		1	Cartridge Brass (Annealed)
6.247E-08	1.601E+07		1	Cobalt
6.386E-08	1.566E+07		1	Aluminum Alloy, 380
6.386E-08	1.566E+07		1	Aluminum Alloy, C113
6.386E-08	1.566E+07		1	Aluminum Allcast, as cast
6.386E-08	1.566E+07		1	Aluminum, 56S Cond. H 38
6.386E-08	1.566E+07		1	Aluminum Alloy, 319 Sand
6.386E-08	1.566E+07		1	Zinc, Die Cast
6.386E-08	1.566E+07		1	Brass, Yellow (Annealed)
6.631E-08	1.508E+07		1	Aluminum Alloy, Red X-8 As Cast
6.631E-08	1.508E+07		1	Brass, Leaded Naval (Annealed)
6.631E-08	1.508E+07		1	Brass, Naval (Annealed)
6.631E-08	1.508E+07		1	Brass, Low Leaded (Annealed)
6.842E-08	1.462E+07		1	Nickel, Pure (Electrolytic)
6.842E-08	1.462E+07		1	Cadmium
6.897E-08	1.450E+07		1	Brass, Leaded Yellow
6.897E-08	1.450E+07		1	Leaded Yellow Brass
6.897E-08	1.450E+07		1	Zinc, Die Cast
7.009E-08	1.427E+07		1	Admiralty Metal (annealed)
7.184E-08	1.392E+07		1	Manganese Bronze (Annealed)
7.184E-08	1.392E+07		1	Aluminum Alloy, 218
7.184E-08	1.392E+07		2	Admiralty Brass
7.184E-08	1.392E+07		2	Brass, Admiralty
7.184E-08	1.392E+07		1	Bronze Manganese (Annealed)
7.496E-08	1.334E+07		1	Brass, Aluminum (Annealed)
7.496E-08	1.334E+07		1	Aluminum Brass (Annealed)
7.595E-08	1.317E+07		1	Ruthenium
8.210E-08	1.218E+07		1	Copper Beryllium, Cond. At
8.210E-08	1.218E+07		1	Aluminum Alloy, 220
8.210E-08	1.218E+07		1	Beryllium Copper, Cond. At

CONDUCTIVITY OF MATERIALS - SECTION 4 Sorted by Resistivity

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
8.535E-08	1.172E+07	20.20	1	Lithium
9.473E-08	1.056E+07	18.20	1	Osmium
9.579E-08	1.044E+07	18.00	2	Iron
9.579E-08	1.044E+07	18.00	1	Nickel "A"
9.579E-08	1.044E+07	18.00	1	Phos. Bronze, 5% Phos. Grade A
9.579E-08	1.044E+07	18.00	1	Leaded Semi Red Brass
9.579E-08	1.044E+07	18.00	1	Bronze Phos., 5% Phos. Grade A
9.579E-08	1.044E+07	18.00	1	Brass, Leaded Semi Red
9.852E-08	1.015E+07	17.50	1	Aluminum - Bronze, 5% Aluminum (Annealed)
9.852E-08	1.015E+07	17.50	1	Bronze Aluminum, 5% Aluminum (Annealed)
1.002E-07	9.976E+06	17.20	1	Magnesium, A231
1.014E-07	9.860E+06	17.00	1	Copper Beryllium, Cond. "A"
1.014E-07	9.860E+06	17.00	1	Beryllium Copper, Cond. A
1.039E-07	9.628E+06	16.60	1	Solder, Tin Silver
1.039E-07	9.628E+06	16.60	1	Tin, Silver Solder
1.039E-07	9.628E+06	16.60	1	Silver, Tin Solder
1.059E-07	9.442E+06	16.28	1	Platinum
1.078E-07	9.280E+06	16.00	1	Palladium
1.105E-07	9.048E+06	15.60	1	Ingot Iron (99.9% Fe)
1.105E-07	9.048E+06	15.60	1	Iron Ingot (99.9% Fe)
1.149E-07	8.700E+06	15.00	1	Magnesium Alloys (Cast)
1.149E-07	8.700E+06	15.00	1	Tin, Pure
1.181E-07	8.468E+06	14.60	1	Magnesium, A2 80
1.197E-07	8.352E+06	14.40	1	Selenium
1.232E-07	8.120E+06	14.00	1	Bronze Aluminum
1.232E-07	8.120E+06	14.00	1	Tin (Leaded), Bronze
1.232E-07	8.120E+06	14.00	1	Leaded Tin Bronze
1.232E-07	8.120E+06	14.00	1	Bronze, Leaded Tin
1.232E-07	8.120E+06	14.00	1	Aluminum - Bronze
1.240E-07	8.062E+06	13.90	1	Tantalum
1.268E-07	7.888E+06	13.60	1	Platinum - Nickel Alloys
1.268E-07	7.888E+06	13.60	1	Nickel - Platinum Alloys
1.306E-07	7.656E+06	13.20	1	Columbium
1.326E-07	7.540E+06	13.00	1	Bronze Phos., 8% Phos. Grade C
1.326E-07	7.540E+06	13.00	1	Phos. Bronze, 8% Phos. Grade C
1.347E-07	7.424E+06	12.80	1	Magnesium, A251
1.368E-07	7.308E+06	12.60	1	Bronze Aluminum, 10% Aluminum (Annealed)
1.368E-07	7.308E+06	12.60	1	Aluminum - Bronze, 10% Aluminum (Annealed)
1.379E-07	7.250E+06	12.50	1	Magnesium, T454
1.402E-07	7.134E+06	12.30	1	Magnesium, A261
1.437E-07	6.960E+06	12.00	1	Brass, High Strength Yellow
1.437E-07	6.960E+06	12.00	1	Bronze, Silicon Type B (Annealed)
1.437E-07	6.960E+06	12.00	1	Silicon Bronze, Type B (Annealed)
1.449E-07	6.902E+06	11.90	1	Antimonial Tin Solder
1.449E-07	6.902E+06	11.90	1	Tin Solder (Antimonial)
1.449E-07	6.902E+06	11.90	1	Solder, Antimonial Tin
1.486E-07	6.728E+06	11.60	1	Platinum, Commercial
1.553E-07	6.438E+06	11.10	1	White Metal
1.567E-07	6.380E+06	11.00	1	Solder, 50-50 Soft
1.567E-07	6.380E+06	11.00	2	Phos. Bronze
1.567E-07	6.380E+06	11.00	1	Phos. Bronze, 10% Phos. Grade D
1.567E-07	6.380E+06	11.00	1	Bronze Phos., 10% Phos. Grade D
1.567E-07	6.380E+06	11.00	1	Bronze, Leaded Tin Bearing
1.567E-07	6.380E+06	11.00	2	Bronze, Phos.
1.567E-07	6.380E+06	11.00	1	Leaded Tin Bearing Bronze
1.596E-07	6.264E+06	10.80	1	Magnesium, AZ80BTA
1.611E-07	6.206E+06	10.70	1	Steel, Cast

CONDUCTIVITY OF MATERIALS - SECTION 4 Sorted by Resistivity

RESIST. ohm-m	COND. SIEMENS/m	% IACS	SOU. CODE	MATERIAL
1.759E-07	5.684E+06	9.80	1	Solder, 20-80 Soft
1.771E-07	5.647E+06	9.74	4	Copper 90%, Nickel 10%
1.895E-07	5.278E+06	9.10	1	Platinum - Iridium Alloys
1.895E-07	5.278E+06	9.10	1	Iridium - Platinum Alloys
1.916E-07	5.220E+06	9.00	1	Magnesium Cast Alloys
1.959E-07	5.104E+06	8.80	1	Chromium
1.959E-07	5.104E+06	8.80	1	Solder, 5-95 Soft
2.053E-07	4.872E+06	8.40	2	Lead
2.077E-07	4.814E+06	8.30	1	Corrodine Lead
2.077E-07	4.814E+06	8.30	1	Lead, Corrodine
2.188E-07	4.570E+06	7.88	1	Lead, 1% Antimonial (Quenched & Aged)
2.188E-07	4.570E+06	7.88	1	Antimonial Lead, 1% (Quenched and Aged)
2.239E-07	4.466E+06	7.70	1	Lead, Hard (Quenched & Aged)
2.330E-07	4.292E+06	7.40	1	Platinum - Nickel Alloys
2.330E-07	4.292E+06	7.40	1	Nickel - Platinum Alloys
2.463E-07	4.060E+06	7.00	1	Silicon Bronze, Type A (Annealed)
2.463E-07	4.060E+06	7.00	1	Bronze, Silicon Type A (Annealed)
2.612E-07	3.828E+06	6.60	1	Vanadium
2.874E-07	3.480E+06	6.00	1	Uranium
2.874E-07	3.480E+06	6.00	1	Babbit, Lead Base
2.874E-07	3.480E+06	6.00	1	Nickel, 18% Nickel Sil
2.874E-07	3.480E+06	6.00	1	Silver, 18% Nickel Alloy A
3.135E-07	3.190E+06	5.50	1	Ruthenium - Platinum (Jewelry Grade)
3.135E-07	3.190E+06	5.50	1	Platinum - Ruthenium (Jewelry Grade)
3.316E-07	3.016E+06	5.20	1	Platinum - Iridium Alloys, 18% Nickel Silver Alloy B
3.316E-07	3.016E+06	5.20	1	Iridium - Platinum Alloys, 18% Nickel Silver Alloy B
3.748E-07	2.668E+06	4.60	1	Nickel 30% - Cupro
3.748E-07	2.668E+06	4.60	1	Cupro - Nickel 30%
3.831E-07	2.610E+06	4.50	2	Copper 70%, Nickel 30%
3.831E-07	2.610E+06	4.50	2	Nickel 30%, Copper 70%
3.918E-07	2.552E+06	4.40	1	Antimony
4.105E-07	2.436E+06	4.20	1	Zirconium
4.105E-07	2.436E+06	4.20	1	Tin, Foil
4.310E-07	2.320E+06	4.00	1	Ruthenium - Platinum (Contact Grade)
4.310E-07	2.320E+06	4.00	1	Platinum - Ruthenium (Contact Grade)
4.789E-07	2.088E+06	3.60	2	Monel
4.816E-07	2.076E+06	3.58	1	Monel
4.898E-07	2.042E+06	3.52	1	Constantan
5.071E-07	1.972E+06	3.40	2	Zirconium
5.562E-07	1.798E+06	3.10	2	Titanium
5.945E-07	1.682E+06	2.90	1	Steel, High Alloy
6.897E-07	1.450E+06	2.50	1	Steel, 304 Stainless
6.897E-07	1.450E+06	2.50	2	Steel, 304 Stainless
7.184E-07	1.392E+06	2.40	1	Steel, 347 Stainless
7.184E-07	1.392E+06	2.40	2	Zircaloy - 2
7.496E-07	1.334E+06	2.30	1	Steel, 316 Stainless
7.837E-07	1.276E+06	2.20	1	Titanium
9.579E-07	1.044E+06	1.80	1	Mercury
9.796E-07	1.021E+06	1.76	1	Inconel
1.014E-06	9.860E+05	1.70	2	Inconel 600
1.149E-06	8.700E+05	1.50	2	Hastelloy "X"
1.149E-06	8.700E+05	1.50	1	Hastelloy "D"
1.232E-06	8.120E+05	1.40	2	Waspaloy
1.232E-06	8.120E+05	1.40	1	Hastelloy "A"
1.326E-06	7.540E+05	1.30	1	Hastelloy "B" & "C"
1.724E-06	5.800E+05	1.00	2	Titanium, 6A1-4V
7.837E-06	1.276E+05	0.22	1	Graphite

Source Code: 1 - CSNDT

2 - Eddy Current Testing Manual on Eddy Current Method

3 - NDT Magazine Sept/Oct 1955, Cosgrove Article