

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

TABLE I Electronic Mean Free Path of Several Metals

Metal	Calculated mean free path, Å			Temp coeff ppm/°C (0-100)	Room temp resistivity, μohm-cm
	-200°C	0°C	100°C		
Li.....	955	113	79	4,220	8.55
Na.....	1,870	335	233	4,400	4.3
K.....	1,330	376	240	5,500	6.1
Cu.....	2,965	421	294	4,330	1.69
Ag.....	2,425	575	405	4,100	1.47
Au.....	1,530	406	290	4,000	2.44
Ni.....	133	80	6,750	7.24
Co.....	130	79	6,580	9.7
Fe.....	2,785	220	156	4,110	8.85
Pt.....	720	110	79	3,920	9.83

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

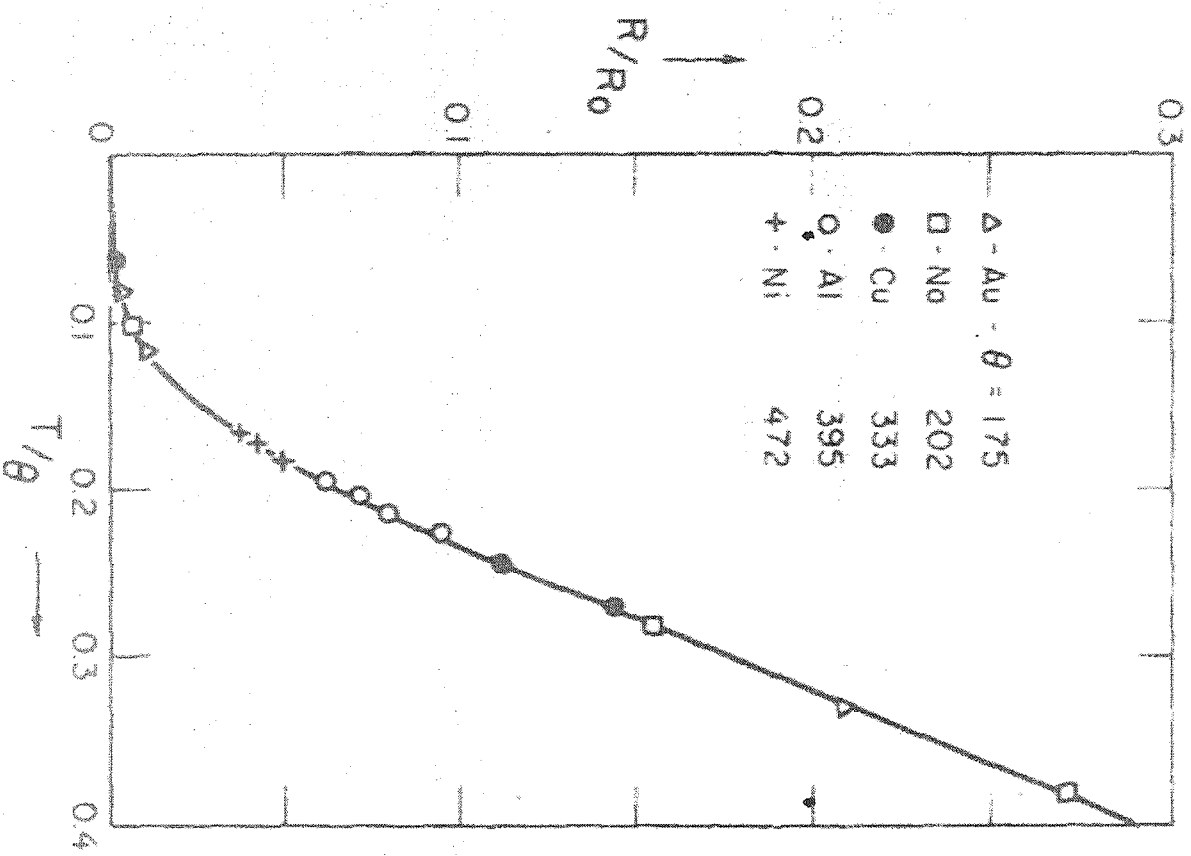
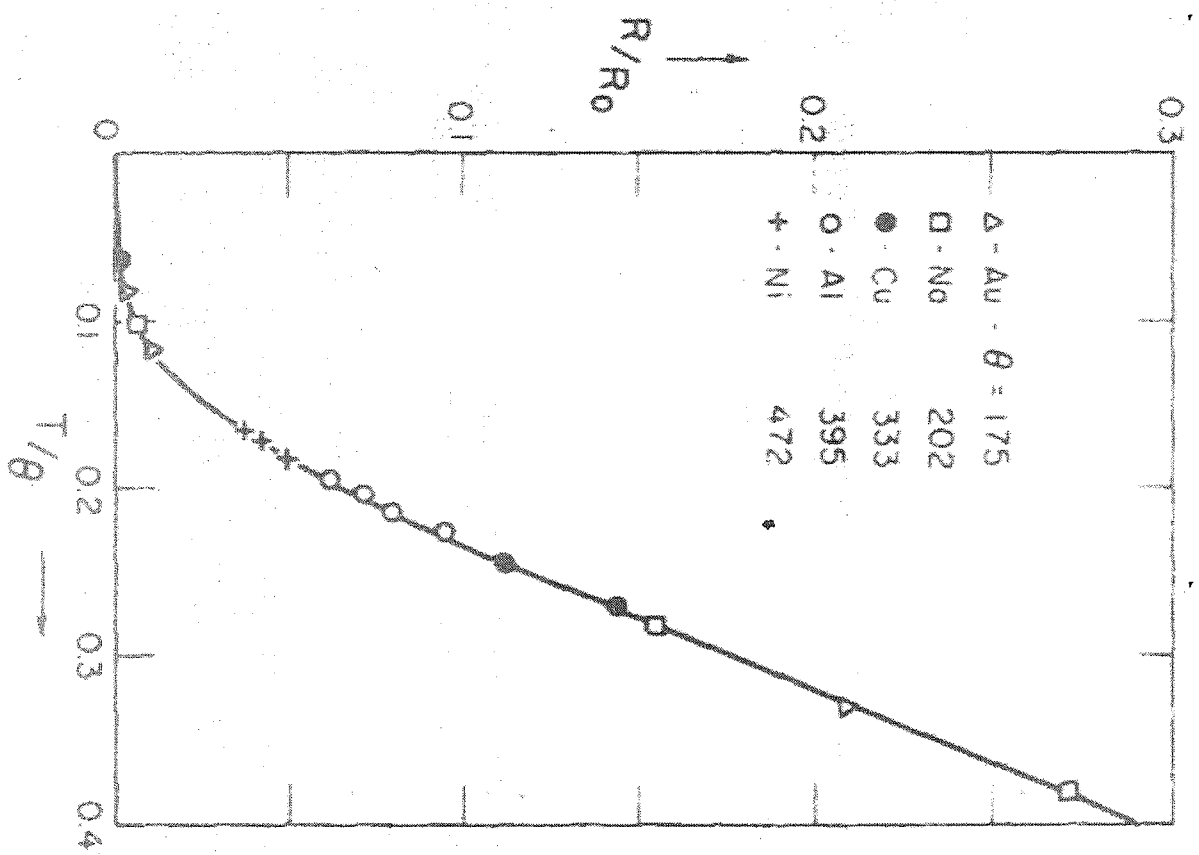


Figure 7.15. The reduced resistance of five metals at low reduced temperatures. [After Meissner. "Handbuch der Experimental Physik," Vol. 11, Pt. 2, p. 30, 1935]

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS



PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

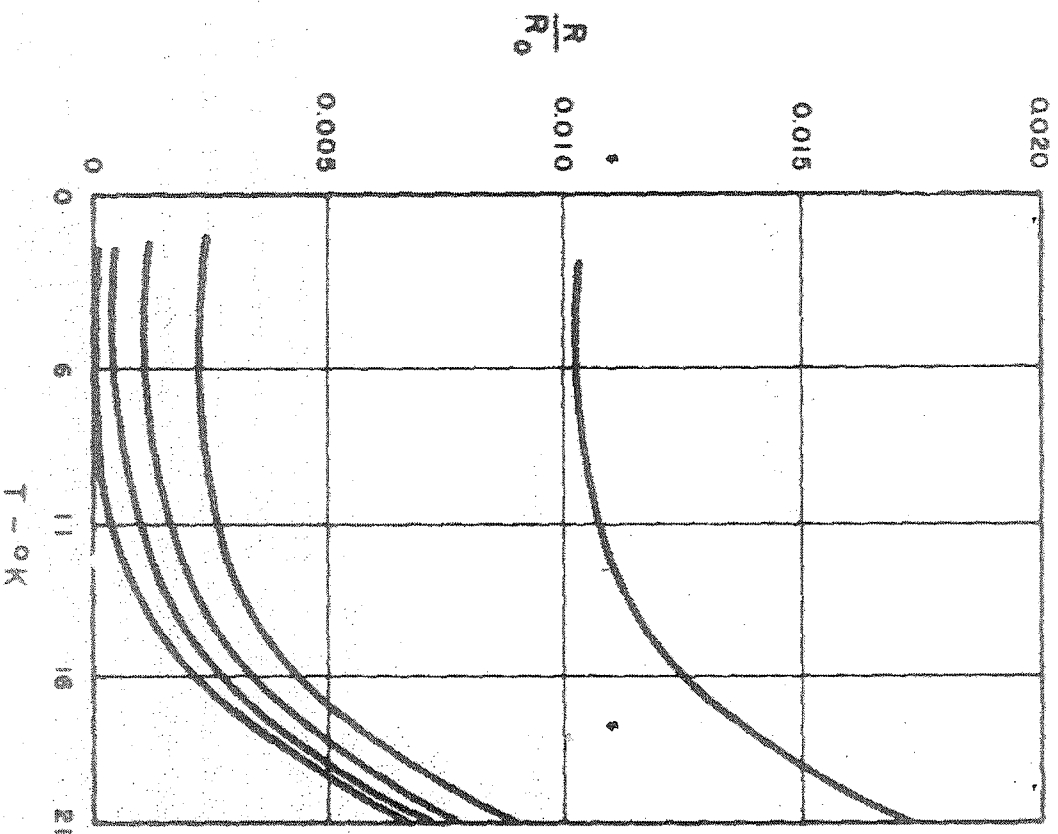


Figure 7.14. The electrical resistance of gold at low temperatures. Higher resistance curves are for gold of lesser purity. (Van den Berg, Thesis, Leiden, 1938)

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

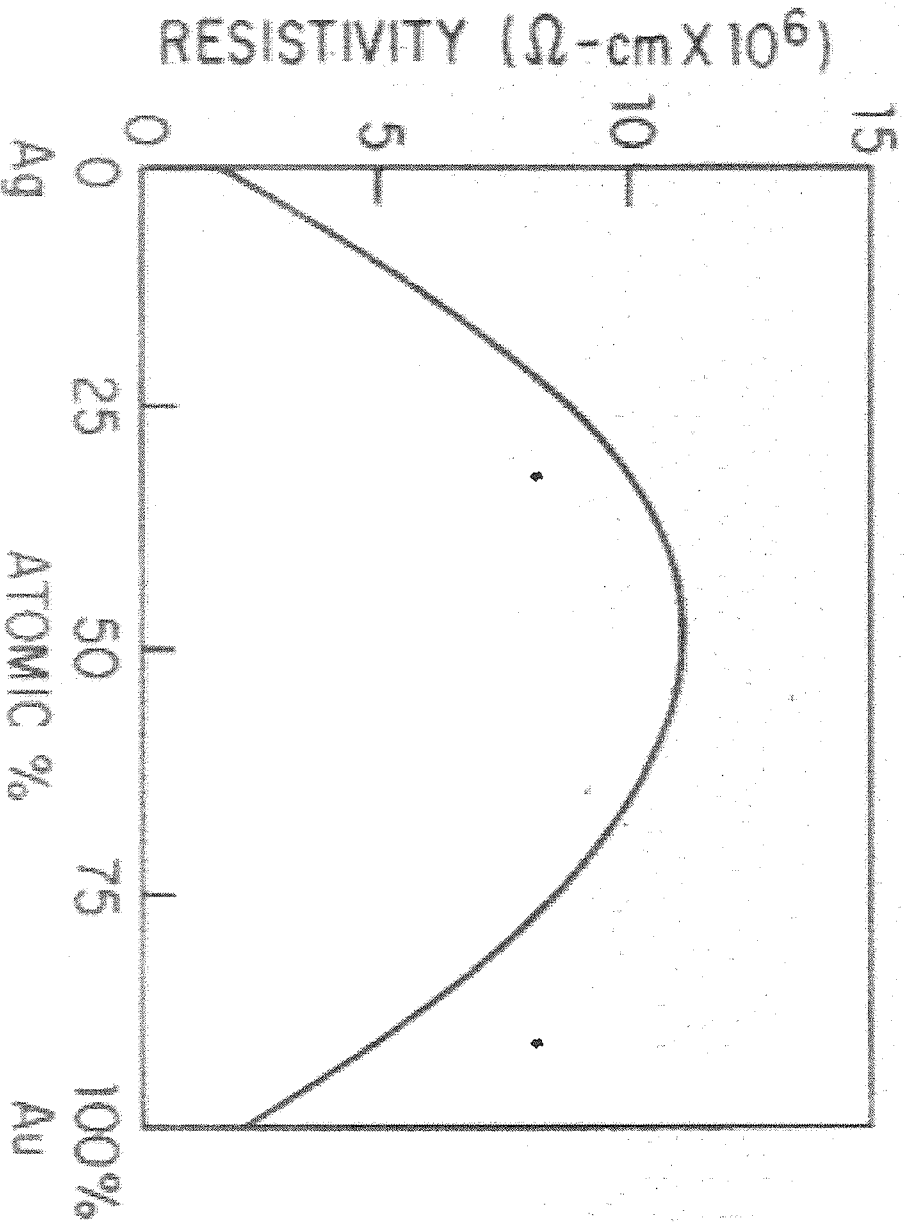


Fig. 1 Resistivity vs. composition for the gold-silver system.

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

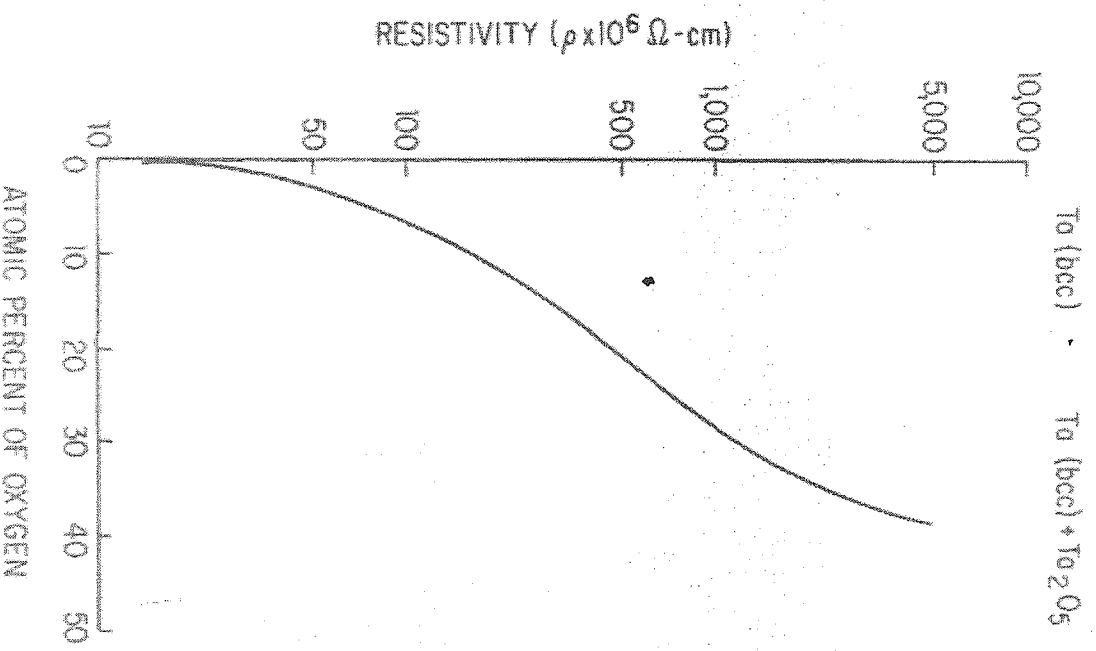


Fig. 3 Resistivity of tantalum as a function of oxygen impurity concentration.

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

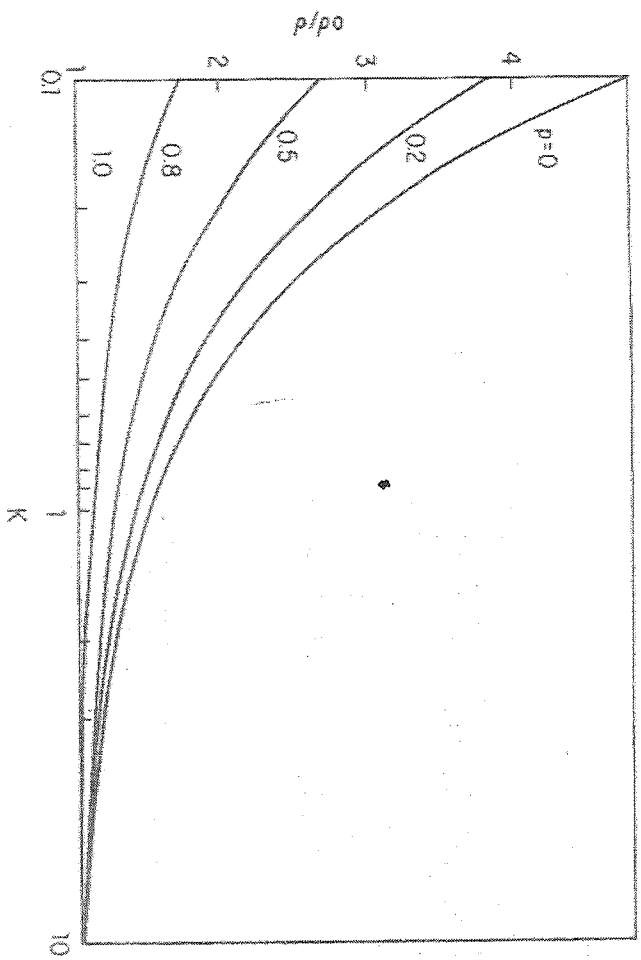


Fig. 8 Effect of film thickness on resistivity.

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

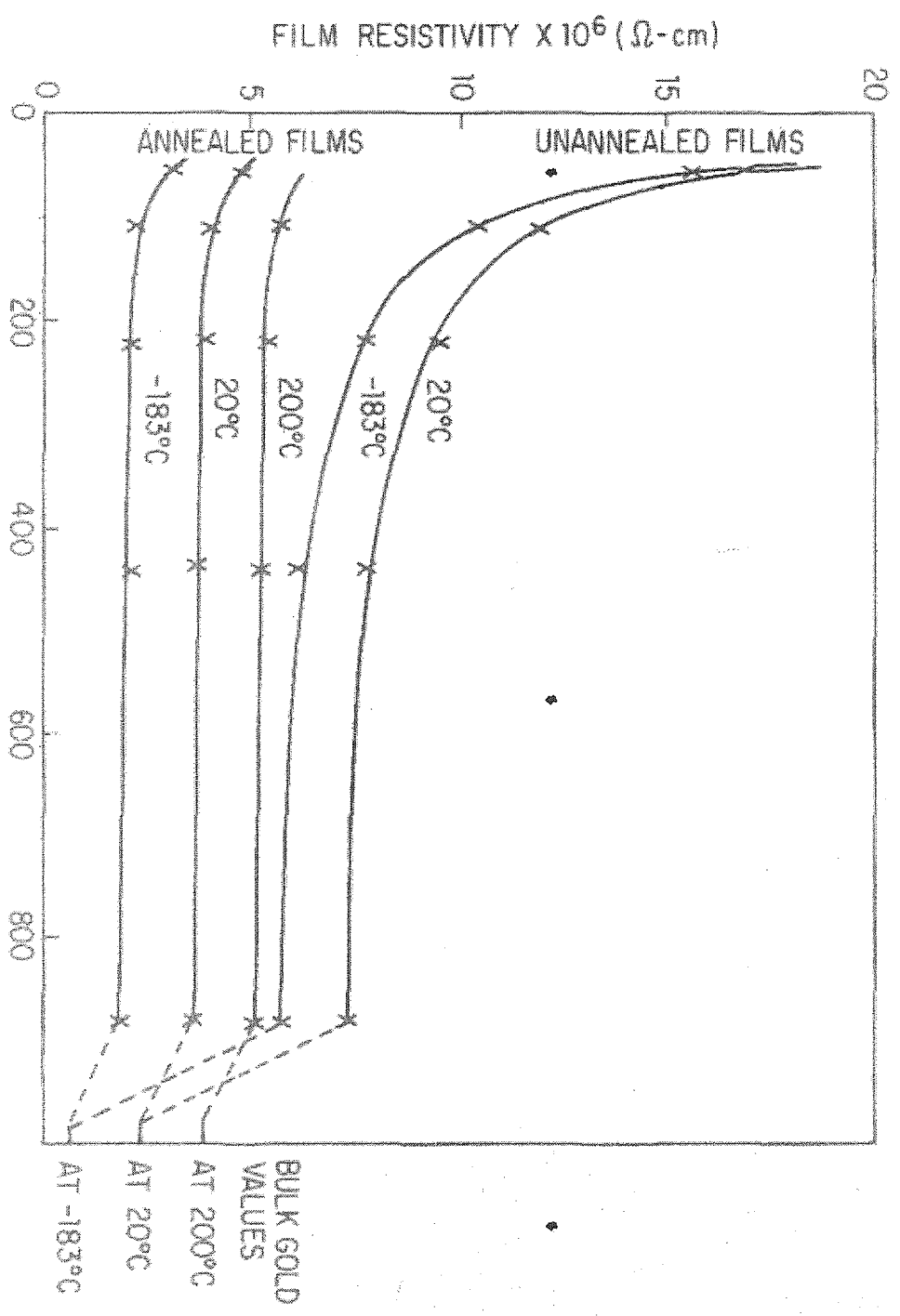


Fig. 10 Resistivity vs. thickness for gold films at several temperatures.

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

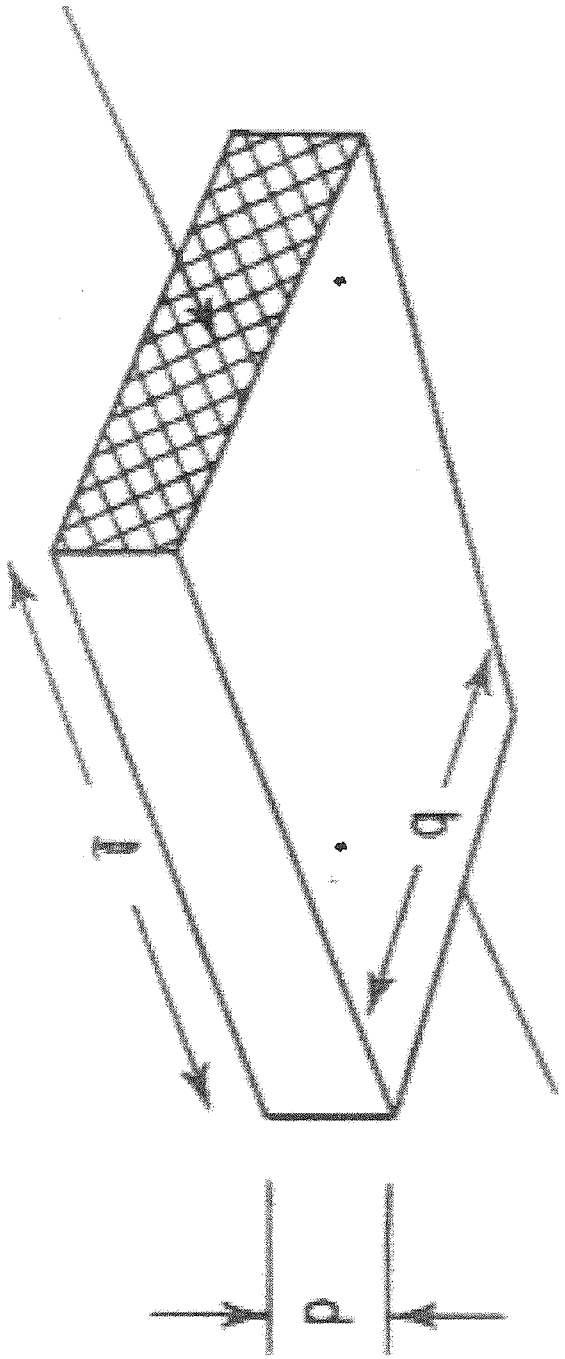


Fig. 4 Definition of sheet resistance.

PROPIEDADES ELÉTRICAS DE FILMES METÁLICOS

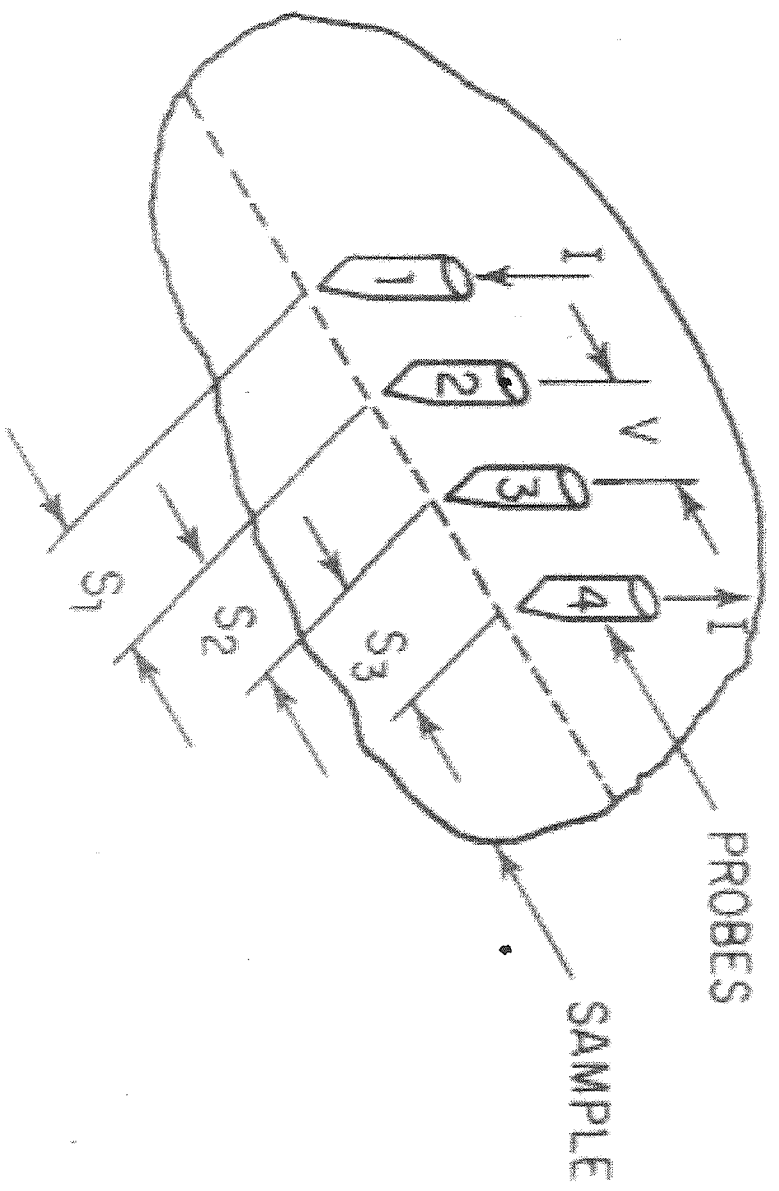


Fig. 6 In-line four-point probe.