U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
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ELECTRODEPOSITION

PUBLICATIONS BY THE STAFF OF THE NATIONAL BUREAU OF STANDARDS

I. SCOPE OF ACTIVITIES

The principal activities of the Bureau in the field of electrodeposition are as follows:

1. Researches upon the fundamental principles of electrodeposition.

2. Studies upon the quality and value of electroplated coatings and the development of specifications for use by the Government and industry.

3. The development of special processes and equipment required by other branches of the Government, such as the War, Navy, and Treasury Departments.

4. Investigation of the methods of testing electroplated products and the solutions used in electrodeposition.

5. Testing of electroplated metals, such as hardware and plumbing fixtures, that are purchased by the Federal Government on specifications. (Tests are not made for the general public.)

6. Furnishing information to the Government and the public. Requests for information in this field that are not covered by the inclosed publications will receive careful attention.

In all the above activities the Bureau cooperates directly with other Government agencies and with appropriate technical organizations, such as the American Electroplaters' Society, the International Association of Electrotypers, and the American Society for Testing Materials.

II. SCOPE OF THIS LETTER CIRCULAR

The publications that are listed in this letter circular are divided into three parts.

A--Government publications on electroplating, principally from the National Bureau of Standards.

FS-Federal Specifications that include definite requirements for electroplated coatings. (In certain cases, individual agencies, especially the War and Navy Departments, have separate specifications to meet their particular needs. Information regarding such specifications may be obtained from the Office of the Quartermaster General, War Department, Washington 25, D. C.; or the Bureau of Supplies and Accounts, Navy Department, Washington 25, D. C.

B--Papers from the National Bureau of Standards that were published in outside journals, files of which are available in many libraries.

In the first column, each paper is assigned a "reference number", purely for use in the index of this circular. This number should not be included in requests addressed to the Superintendent of Documents, but only the "serial number" and title.

For conveneince, a list "C" is added, of journals and books printed in the English language, that contain information on electrodeposition

The index contains reference to the principal subjects covered in lists A, FS, and B.

III. PUBLICATIONS

Government Publications:

List "A" includes in chronological order those papers published by the Government. Where the price is stated in the extreme right-hand column, the publication can be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The prices quoted are for delivery to addresses in the United States and its territories and possessions and in certain foreign countries which extend the franking privilege. In the case of all other countries one-third of the cost of the publication should be added to cover postage. Remittances should be made either by coupons (obtainable from the Superintendent of Documents in sets of 20 for $1.00 and good until used), or by check or money order payable to the "Superintendent of Documents, Government Printing Office" and sent to him with order. Letter Circulars are obtainable, without charge, from the Bureau. Publications marked "OP" are out of print. Files of the Government publications will be found in the larger libraries.

The explanation for the serial letters used for designating the separate papers of the Bureau is as follows:

RP = "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research"

(BS J. Research) and the "Journal of Research of the National Bureau of Standards" (J. Research NBS), the latter being the title of this periodical since July 1934 (vol. 13, number 1).

S = "Scientific Paper" of the National Bureau of Standards. From Nos. 1 to 329, inclusive, the separate papers of this series were known as reprints from the "Bulletin of the Bureau of Standards" (Bul. BS). Subsequently, from Nos. 330 to 572, the separates were known as reprints from the "Scientific Papers of the Bureau of Standards" (Sci. Pap. BS). This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

T = "Technologic Paper" of the National Bureau of Standards. Nos. 1 to 202 were issued each independent of the other with individual pagination. Later they were assembled to make the first 15 volumes of this series, and subsequent separates were given volume pagination. (Tech. Pap. BS). This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

C = "Circular" of the National Bureau of Standards.

LC = Mimeographed "Letter Circular of the National Bureau of Standards".

PHR = Public Health Reports, issued by the U. S. Public Health Service, Federal Security Agency.

LIST "A"
Published by the Government

Ref. No.	Title	Year	Series	Price
1	Relation between composition and density of aqueous solutions of copper sulfate and sulfuric acid. H. D. Holler and E. L. Peffer, Bul. BS 13, 273 (1916-17)	1916	S275	OP
2	Black nickel plating solutions. G. B. Hogaboom, T. F. Slattery, and L. B. Ham, Tech. Pap. BS 15 (1921)	1921	T190	OP
3	Zinc cyanide plating solutions. W. Blum, F. J. Liscomb, and C. M. Carson, Tech. Pap. BS 15 (1921)	1921	T195	OP
4	Electrodeposition of chromium from chromic acid baths. H. E. Haring and W. P. Barrows, Tech. Pap. BS 21, 413 (1926-27)	1927	T346	15c

Ref. No.	Title	Year	Series	Price
5	Health hazards in chromium plating. J. J. Bloomfield (Public Health Service) and W. Blum, Public Health Reports 43, 2330 (1928)	1928	PHR 1245	5c
6	Reflecting power of beryllium, chromium, and several other metals. W. W. Coblentz and R. Stair, BS J. Research 2, 343 (1929)	1929	RP39	OP
7	The spotting of plated or finished metals, W. P. Barrows, BS J. Research 2, 1085 (1929)		RP72	10c
8	Throwing power in chromium plating. H. L. Farber and W. Blum, BS J. Research 4, 27 (1930)	1930	RP131	OP
9	Conductivity and density of chromic acid solutions. H. R. Moore and W. Blum, BS J. Research 5, 255 (1930)		RP198	OP
10	Copper electrotyping. Cir. BS 387 (1930)		C387	10c
11	Addition agents in copper electrotyping solutions. R. O. Hull and W. Blum, BS J. Research 5, 767 (1930)		RP228	OP
12	The making of mirrors by the deposition of metal on glass. Cir. BS 389 (1931)	1931	C389	10c
13	The resistance of chromium-plated gages to wear. H. K. Herschmann, BS J. Research 6, 295 (1931)		RP276	OP
14	Dimensional changes in the manufacture of electrotypes. N. Bekkedahl and W. Blum, BS J. Research 6, 829 (1931)		RP308	10c
15	Purification and analysis of alkali cyanides. M. R. Thompson, BS J. Research 6, 1051 (1931)		RP323	OP
16	The porosity of electroplated chromium coatings. W. Blum, W. P. Barrows, and A. Brenner, BS J. Research 7, 607 (1931)		RP368	OP
17	The analysis of cyanide silverplating solutions. R. M. Wick, BS J. Research 7, 913 (1931)		RP384	OP

Ref. No.	Title	Year	Series	Price
18	The structure of the chromic acid plating bath. The theory of chromium deposition, C. Kasper, BS J. Research 9, 353 (1932)	1932	RP476	OP
19	A metal-connected glass electrode (For pH measurements). M. R. Thompson, BS J. Research 9, 833 (1932)	1932	RP511	OP
20	The deposition of chromium from solutions of chromic and chromous salts. C. Kasper, BS J. Research 11, 515 (1933)	1933	RP604	OP
21	Protective value of nickel and chromium plating on steel, W. Blum, P. W. C. Strausser, and A. Brenner, J. Research NBS 13, 331 (1934)	1934	RP712	10c
22	Accelerated tests of nickel and chromium plating on steel. P. W. C. Strausser, A. Brenner, and W. Blum, J. Research NBS 13, 519 (1934)		RP724	5c
23	Mechanism of chromium deposition from the chromic acid bath, C. Kasper, J. Research NBS 14, 693 (1935)	1935	RP797	OP
24	Neale's chord method for measuring the thickness of metal coatings. W. Blum and A. Brenner, J. Research NBS 16, 171 (1936)	1936	RP866	5c
25	Corrosion-protective value of electrodeposited zinc and cadmium coatings on steel. W. Blum, P. W. C. Strausser and A. Brenner, J. Research NBS 16, 185 (1936)		RP867	5c
26	Rapid electrodeposition of iron from ferrous chloride baths. C. Kasper, J. Research NBS 18, 536 (1937)	1937	RP991	OP
27	Magnetic method for measuring the thickness of nickel coatings on non-magnetic base metals. A. Brenner, J. Research NBS 18, 565 (1937)		RP994	OP
28	Magnetic method for measuring the thickness of non-magnetic coatings on iron and steel, A. Brenner, J. Research NBS 20, 357 (1938)	1938	RP1081	5c

Ref. No.	Title	Year	Series	Price
29	Dropping tests for measuring the thickness of zinc and cadmium coatings on steel, A. Brenner, J. Research NBS 23, 387 (1939)	1939	RP1240	10c
30	Methods of measuring pH in alkaline cyanide plating baths. M. R. Thompson, J. Research NBS 24, 423 (1940)	1940	RP1291	OP
31	Outdoor exposure tests of electroplated nickel and chromium coatings on steel and nonferrous metals. W. Blum and P. W. C. Strausser, J. Research NBS 24, 443 (1940)		RP1293	5c
32	Methods of polishing steel and their effects upon the protective value of electroplated coatings. G. A. Lux and W. Blum, J. Research NBS 34, 295 (1945)	1945	RP1645	10c
33	A method for determining small amounts of gold, and its use in ascertaining the thickness of electrodeposited gold coatings, W. Stanley Claybaugh, J. Research NBS. 36, 119 (1946)	1946	RP1694	5c
34	Nickel plating on steel by chemical reduction. A. Brenner and Grace E. Riddell, J. Research NBS 37, 31 (1946)		RP1725	5c
35	Electrodeposition of alloys of tungsten with iron, nickel and cobalt. A. Brenner, Polly Burkhead and Emma Seegmiller, J. Research NBS 39, 351 (1947)	1947	RP1834	20c
36	Deposition of nickel and cobalt by chemical reduction. A. Brenner and Grace E. Riddell, J. Research NBS 37, 385 (1947)		RP1835	10c
37	Physical properties of electrodeposited chromium. A. Brenner, P. Burkhead and C. W. Jennings, J. Research NBS 40, 31 (1948)	1948	RP1854	15c
38	Magnetic measurement of the thickness of composite copper and nickel coatings on steel. A. Brenner and E. Kellogg, J. Research NBS 40, 295 (1948)	1948	RP1875	10c

LIST "FS"

Federal Specifications Relating to Electroplating

Federal Specifications may be obtained by sending the list price (not stamps) to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. DO NOT send money to the National Bureau of Standards.

Ref. No.	Title	Plating Reference	Series	Date	Price
201	Bolts, lag; steel (lagscrews)	Zinc Cadmium	FF-B-561	8/27/37	5c
203	Hardware, builders';	Nickel, chromium on nonferrous metals. Nickel, chromium, zinc cadmium on steel.	FF-H-106	8/19/30	5c
203a	Hardware, builders'; door-closers	as above	FF-H-121a	4/12/37	5c
204	Hardware, builders'; shelf and miscellaneous	Nickel, chromium on nonferrous metals. Nickel, chromium, zinc, cadmium on steel	FF-H-111	9/5/33	10c
205	Hardware, builders'; hinges (nontemplate)	as above	FF-H-116b	11/26/40	10c
206	Hardware, and Fittings, (for) lavatory partitions and inclosures	Nickel, chromium on brass and bronze	FF-H-136	10/29/36	5c
207	Turnbuckles	Zinc, cadmium on steel	FF-T-791	1/28/36	5c
208	Salts; nickel (for) electroplating and electrotyping	Nickel sulfate, nickel ammonium sulfate, nickel chloride	O-S-61	5/27/30	5c
220	Tableware; silverplated	Silver plating	RR-T-51a	6/5/34	5c

Ref. No.	Title	Plating Reference	Series	Date	Price
231	Outlet boxes; steel cadmium or zinc coated with covers and accessories	Cadmium, zinc on steel	W-O-821a	6/10/37	5c
232	Conduit; steel rigid, zinc-coated	Zinc on steel	WW-C-581a	5/7/35	5c
233	Plumbing fixtures; (for) land use	Nickel; chromium on brass and bronze, Zinc on steel	WW-P-541a	3/30/40	15c
234	Tubing, electrical metallic	Zinc on steel	WW-T-806a	1/8/35	5c
235	Unions; brass or bronze, 250 lbs.	Nickel, chromium on brass	WW-U-516	12/5/33	5c
236	Valves, radiator; air, thermostatic (gravity steam heating systems)	Nickel, chromium on brass	WW-V-151	4/23/37	5c
237	Outlet boxes	Cadmium, zinc on cast iron	W-O-806	7/13/37	5c
238	Fittings; cable and conduit	Zinc on iron or steel	W-F-406	8/27/37	5c
239	Outlet-bodies; iron, cadmium or zinc coated	Zinc or cadmium on iron or steel	W-O-806	5/17/37	5c
240	Nails; spikes; stables and tacks	Zinc, tin or brass on steel	FF-N-101	5/3/32	5c
241	Screws; wood	Nickel on steel	FF-S-111	7/28/31	5c
242	Instruments, dental and surgical; general specifi-cations	Chromium, copper, nickel on steel or brass	GG-I-526	1/12/43	5c
243	Laundry appliances and wood presses	Zinc on steel	QQ-L-131c	9/10/45	5c

Ref. No.	Title	Plating Reference	Series	Date	Price
244	Iron and steel; sheet, zinc coated (galvanized)	Zinc on steel	QQ-I-716	3/19/42	5c
245	Metals general specification for inspection op.	Salt spray test	QQ-M-151a	11/27/36	5c
246	Nickel anodes	Grade and types	QQ-N-265	8/17/44	5c
247	Strapping, flat, steel	Zinc on steel	QQ-S-781a	7/9/42	5c
248	Strapping, round, steel base and zinc coating	Zinc on steel	QQ-S-790	3/15/44	5c
249	Wire, steel, copper covered	Copper on steel	QQ-W-421	7/5/38	5c
250	Wire, steel (carbon) base and zinc coated	Zinc on steel	QQ-W-461	6/16/41	5c
251	Fence-post gates and accessories	Zinc on steel	RR-F-183	8/13/46	5c
252	Fencing, chain-link or welded	Zinc on steel	RR-F-191	4/23/37	5c
253	Fencing-wire (barbed, metting and woven) black and galvanized	Zinc on steel	RR-F-221	6/24/30	5c
254	Pipe, wrought iron welded, black and zinc coated	Zinc on steel	WW-P-441a	12/28/39	5c

LIST "B"

Outside Publications (available only in libraries)

Ref. No.	Title	Year
301	Preliminary studies in the deposition of copper in electrotyping baths. W. Blum, H. D. Holler, and H. S. Rawdon, Trans. Am. Electrochem. Soc. 30, 159 (1916).	1916

Ref. No.	Title	Year
302	Factors governing the structure of electrodeposited metals. W. Blum, Trans. Am. Electrochem. Soc. 36, 213 (1919)	1919
303	Lead plating from fluoborate solutions. W. Blum F. J. Liscomb, Z. Jencks, W. E. Bailey, Trans. Am. Electrochem. Soc. 36, 243 (1919)	
304	The embrittling effects of cleaning and pickling upon carbon steels. S. C. Langdon, and M. A. Grossman, Trans. Am. Electrochem. Soc. 37, 543 (1920)	1920
305	The use of fluorides in solutions for nickel deposition. W. Blum, Trans. Am. Electrochem. Soc. 39, 459 (1921)	1921
306	The structure and properties of alternately electrodeposited metals. W. Blum, Trans. Am. Electrochem. Soc. 40, 307 (1921)	
307	The electrodeposition of lead-tin alloys. W. Blum, and H. E. Haring, Trans. Am. Electrochem. Soc. 40, 287 (1921)	
308	The electrolytic reproduction of engraved printing plates. W. Blum, and T. F. Slattery, Chem. & Met. Eng. 25, 320 (1921)	
309	The acidity of nickel depositing solutions. M. R. Thompson, Trans. Am. Electrochem. Soc. 41, 333 (1922)	1922
310	The effect of impurities in nickel salts used for electrodeposition. M. R. Thompson, and C. T. Thomas, Trans. Am. Electrochem. Soc. 42, 79 (1932)	
311	The influence of the base metal on the structure of electrodeposits. W. Blum and H. S. Rawdon, Trans. Am. Electrochem. Soc. 44, 305 (1923)	1923
312	Current distribution and throwing power in electrodeposition. H. E. Haring and W. Blum, Trans. Am. Electrochem. Soc. 44, 313 (1923)	
313	The effect of iron on the electrodeposition of nickel. M. R. Thompson, Trans. Am. Electrochem. Soc. 44, 359 (1923)	1923

Ref. No.	Title	Year
314	The crystalline form of electrodeposited metals. W. Blum and H. S. Rawdon, Trans. Am. Electrochem. Soc. 44, 397 (1923)	
315	Recent progress in electroplating and electroforming. W. Blum, Trans. Am. Electrochem. Soc. 45, 187 (1924)	1924
316	Nickel anodes. C. T. Thomas and W. Blum, Trans. Am. Electrochem. Soc. 45, 193 (1924)	
317	Electroplating worn machine gun barrels. W. W. de Svenshnikoff and H. E. Haring, Army Ordnance 5, 503 (1924)	
318	Conductivity of nickel depositing solutions. L. D. Hammond, Trans. Am. Electrochem. Soc. 45, 219 (1924)	
319	Fluorine determination in nickel depositing solutions. L. D. Hammond, Ind. Eng. Chem. 16, 938 (1924)	
320	Throwing power, cathode potentials and efficiencies in nickel deposition. H. E. Haring, Trans. Am. Electrochem. Soc. 46, 107 (1924)	
321	Principles and operating conditions of chromium plating. H. E. Haring, Chem. & Met. Eng. 32, 692 (1925)	1925
322	Electrolytes and ionogens. W. Blum, Trans. Am. Electrochem. Soc. 47, 123 (1925)	
323	The nickel plating of zinc and zinc-base die-castings. M. R. Thompson, Trans. Am. Electrochem. Soc. 47, 163 (1925)	
324	Teaching principles of electrodeposition. W. Blum, J. Chem. Educ. 2, 556 (1925)	
325	The protective value of nickel plating. C. T. Thomas and W. Blum, Trans. Am. Electrochem. Soc. 48, 69 (1925)	
326	Note on the protection of iron by cadmium. H. S. Rawdon, Trans. Am. Electrochem. Soc. 49, 339 (1926)	1926

Ref. No.	Title	Year
327	A simple method for measuring polarization and resistivity. H. E. Haring, Trans. Am. Electrochem. Soc. 49, 417 (1926)	1926
328	Future trends in electrochemistry. W. Blum, Ind. & Eng. Chem. 18, 1028 (1926)	
329	Acid zinc plating baths. M. R. Thompson, Trans. Am. Electrochem. Soc. 50, 193 (1926)	
330	Protection against corrosion by means of metallic coatings. W. Blum, J. Chem. Educ. 4, 1477 (1927)	1927
331	The protective value of nickel plating (supplemental observations). C. T. Thomas and W. Blum, Trans. Am. Electrochem. Soc. 52, 271 (1927)	
332	Principles of electrolytic studies on corrosion. W. Blum and H. S. Rawdon, Trans. Am. Electrochem. Soc. 52, 403 (1927)	
333	Electroplating (In the automobile industry). W. Blum, Ind. Eng. Chem. 19, 1111 (1927)	
334	Note on the crystal structure of electrodeposited chromium. F. Sillers, Trans. Am. Electrochem. Soc. 52, 301 (1927)	
335	Nickel electrotyping solutions. W. Blum and J. H. Winkler, Trans. Am. Electrochem. Soc. 55, 419 (1928)	1928
336	The properties of graphite used in electrotyping. J. H. Winkler and W. Blum, Trans. Am. Electrochem. Soc. 53, 435 (1928)	
337	Colloids in the electrodeposition of metals. W. Blum, Colloid Symposium, p. 301	
338	Mechanical applications of chromium plating. W. Blum, Mech. Eng. 50, 927 (1928)	
339	The measurement of pH in nickel plating solutions. W. Blum and N. Bekkedahl, Trans. Am. Electrochem. Soc. 56, 291 (1929)	1929
340	The production of electrolytic iron printing plates. C. T. Thomas and W. Blum, Trans. Am. Electrochem. Soc. 57, 59 (1930)	1930

Ref. No.	Title	Year
341	Applications of chromium plating in the graphic arts. W. Blum, Typothetae Bul. (November 10, 1930)	1930
342	Adhesion of electroplated coatings. W. Blum, Metals & Alloys 2, 57 (1931)	1931
342a	The titration of free cyanide in copper baths. M. R. Thompson, Month. Rev. Am. Electroplaters' Soc. 18 (May, 1931)	
343	Cyanides in metallurgy. M. R. Thompson, Trans. Electrochem. Soc. 60, 35 (1931)	
344	The definition and determination of free cyanide in electroplating solutions. W. Blum, Trans. Electrochem. Soc. 60, 143 (1931)	
345	The status of chromium plating. W. Blum, J. Franklin Inst. 213, 17 (1932)	1932
346	The decomposition of cyanide solutions. R. M. Wick, Month. Rev. Am. Electroplaters' Soc. 19 (April, 1933)	1933
347	Methods of stripping plated coatings. A. Brenner, Month. Rev. Am. Electroplaters' Soc. 20 (November, 1933)	1933
348	Notes on cyanide solutions. R. M. Wick, Month. Rev. Am. Electroplaters' Soc. 20, (June, 1934)	1934
349	Notes on the analysis of alkaline tin plating solutions. M. R. Thompson, Month. Rev. Am. Electroplaters' Soc. 20 (June 1934)	
350	Testing of plated metals for compliance with Federal Specifications. M. R. Thompson, Month. Rev. Am. Electroplaters' Soc. 21 (September, 1934)	
351	The definition of polarization, overvoltage, and the decomposition potential. W. Blum and G. W. Vinal, Trans. Electrochem. Soc. 66, 359 (1934)	
352	The structure and physical properties of nickel deposited at high current densities. W. Blum and C. Kasper, Trans. Faraday Soc. 31, 1203 (1935)	1935

Ref. No.	Title	Year
353	Dropping tests for determining the local thickness of zinc and cadmium coatings. R. O. Hull and P. W. C. Strausser, Month. Rev. Am. Electroplaters' Soc. 22 (March, 1935)	
354	The use of color photography for recording the results of exposure tests. C. A. Vincent-Daviss and W. Blum, Month. Rev. Am. Electroplaters' Soc. 24, 818 (1937)	1937
355	Laboratory tests of electroplated coatings on nonferrous metals. P. W. C. Strausser, Month. Rev. Am. Electroplaters' Soc. 24, 822 (1937)	
356	Magnetic method for measuring the thickness of nickel coatings on nonmagnetic base metals. A. Brenner, Month. Rev. Am. Electroplaters' Soc. 25, 252 (1938)	1938
357	Magnetic method for measuring the thickness of nonmagnetic coatings on iron and steel. A. Brenner, Month. Rev. Am. Electroplaters' Soc. 25, 261 (1938)	
358	Current distribution in electrodeposition, I. Linear, Cylindrical and spherical conductors. C. Kasper, Month. Rev. Am. Electroplaters' Soc. 26, 11 (1939)	1939
359	Current distribution in electrodeposition, II. Point-plane and line-plane systems. C. Kasper, Month. Rev. Am. Electroplaters' Soc. 26, 91 (1939)	1939
360	Porosity tests for nickel coatings on steel. P.W.C. Strausser, Convention Proc. Am. Electroplaters' Soc. 1, 194 (1939)	
361	The measurement of pH in alkaline plating solutions. M. R. Thompson, Convention Proc. Am. Electroplaters' Soc. p. 200 (1939)	
362	Some effects of anode shape and position upon cathode current distribution. C. Kasper, Convention Proc. Am. Electroplaters' Soc. p. 209 (1939)	

Ref. No.	Title	Year
363	A study of silver plating for industrial applications. A. J. Dornblatt, C. S. Bowe and A. C. Simon, Convention Proc. Am. Electroplaters' Soc. p. 214 (1939)	
364	Dropping tests for zinc and cadmium on steel. A. Brenner, Convention Proc. Am. Electroplaters' Soc. p. 204 (1939)	
365	The theory of the potential and the technical practice of electrodeposition, I. The general problem and the cases of uniform flow. C. Kasper, Trans. Electrochem. Soc. 77, 353 (1940)	1940
366	The theory of the potential and the technical practice of electrodeposition, II. Point-plane and line-plane systems. C. Kasper, Trans. Electrochem. Soc. 77, 365 (1940)	
367	Notes on the spot test for thickness of chromium coatings. W. Blum and W. A. Olson, Convention Proc. Am. Electroplaters' Soc. p. 25 (1940)	
368	Silver plating at very high current densities. A. C. Simon and J. T. Lumley, Convention Proc. Am. Electroplaters' Soc. p. 91 (1940)	
369	A method for studying cathode films by freezing. A. Brenner, Convention Proc. Am. Electroplaters' Soc. p. 95 (1940)	
370	The theory of the potential and the technical practice or electrodeposition, III. Linear polarization on some line-plane systems. C. Kasper, Trans. Electrochem. Soc. 78, 131 (1940)	
371	The theory of the potential and the technical practice of electrodeposition, IV. The flow between and to circular cylinders. C. Kasper, Trans. Electrochem. Soc. 78, 147 (1940)	
372	What metals can be deposited from aqueous solutions? W. Blum, Month. Rev. Am. Electroplaters' Soc. 27, 923 (1940)	
373	The constitution and properties of cyanide plating baths. M. R. Thompson, Trans. Electrochem. Soc. 79, 417 (1941)	1941

Ref. No.	Title	Year
374	Polishing steel specimens prior to plating for exposure tests. Gerald A. Lux, Convention Proc. Am. Electroplaters' Soc. p. 54 (1941)	
375	Effects of metal shortages on the plating industry. W. Blum, Convention Proc. Am. Electroplaters' Soc. p. 6 (1941)	
376	Plating relieves metal shortages. W. Blum, Chem. & Met. Eng. 48, 78 (1941)	1941
377	General principles and methods of electroplating. W. Blum, Trans. Electrochem. Soc. 80, 249 (1941)	
378	Lead plating. Allen G. Gray and W. Blum, Trans. Electrochem. Soc. 80, 645 (1941)	
379	Substitution of iron for nickel and copper in printing plates. Vernon A. Lamb and W. Blum, Technical Bulletin No. 7, issued April 15, 1942 by the International Association of Electrotypers and Stereotypers, Cleveland, Ohio	1942
380	The theory of the potential and the technical practice of electrodeposition, V. The two-dimensional rectangular enclosures. Charles Kasper, Trans. Electrochem. Soc. 82, 153 (1942)	
381	Military applications of electroplating. W. Blum, Convention Proc. Am. Electroplaters' Soc. p. 5 (1942)	
382	Effect of polishing base metals upon the protective value of electroplated coatings (Progress Report). G. A. Lux and M. Berdick, Convention Proc. Am. Electroplaters' Soc. p. 19 (1942)	
383	Iron plating and its application to printing plates. V. A. Lamb and W. Blum, Convention Proc. Am. Electroplaters' Soc. p. 106 (1942)	
384	Cleaning and pickling (Review of 1942). V. A. Lamb, Metals and Alloys 17, 86 (1943)	1943
385	Applications of electroplating to military supplies. W. Blum, Convention Proc. Am. Electroplaters' Soc. p. 3 (1943)	

Ref. No.	Title	Year
386	Electroplating and the war. W. Blum, Convention Proc. Am. Electroplaters' Soc. p. 1 (1944)	1944
387	Summary of wartime research on plating at the National Bureau of Standards. W. Blum, Ann. Proc. Am. Electroplaters' Soc. p. 16 (1946)	1946
388	Nickel plating on steel by chemical reduction. A. Brenner and Grace E. Riddell, Ann. Proc. Am. Electroplaters' Soc. p. 23 (1946)	
389	Purification of rhodium plating solutions. A. Brenner and W. A. Olson, Ann. Proc. Am. Electroplaters' Soc. p. 29 (1946)	1946
390	Military applications of electroplating in world war II. W. Blum, Trans. Electrochemical Soc. 90, 85, (1946)	
391	Physical properties of electrodeposited chromium. A. Brenner, Polly Burkhead and C. W. Jennings, Ann. Proc. Am. Electroplaters' Soc. p. 32 (1947)	1947
392	Deposition of nickel and cobalt by chemical reduction. A. Brenner and Grace E. Riddell, Ann. Proc. Am. Electroplaters' Soc. p. 156 (1947)	
393	Physical properties of electrodeposited metals, Nickel, Literature Survey. A. Brenner and C. W. Jennings, Plating, 35, 52 (1948)	1948
394	Magnetic measurement of the thickness of composite copper and nickel coatings on steel. A. Brenner and E. Kellogg, Plating, 35, 242 (1948)	1948
395	Chromated protein films for metal protection. A. Brenner, G. Riddell and R. Seegmiller, J. Electrochem. Soc. 93, 55 (1948)	1948

BOOKS

Among the recent books in English on electrodeposition are:

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Practical electroplating, (5th Ed., 1923) W.L.D. Bedell

Modern electroplating. W. E. Hughes, (Oxford Technical Publications, 1923)

The chemical coloring of metals. S. Field and S. R. Bonney, (Chapman and Hall, Ltd., 1925)

Electroplating with chromium, copper and nickel. D. Freeman and F. G. Hoppe, (Prentice-Hall Co., 1929)

Principles of electroplating and electroforming. W. Blum and G. B. Hogaboom, (McGraw-Hill Book Co., 2nd Ed., 1930)

Electroplating. S. Field and A. E. Weill, (I. Pitman and Sons, Ltd., 1930)

Chromium plating. E. S. Richards, (J. B. Lippincott Co., 1932)

Chromium plating. O. Bauer, H. Arndt and W. Krause, English translation by E. W. Parker, (Edward Arnold and Co., 1935)

Modern Electroplating, Compilation. The Electrochem. Soc., N. Y. 1942

IV. INDEX

In the following list, each publication is referred to by the reference number, by which it is listed in the first column in the preceding pages of this circular, in which are given explicit references, and directions for ordering Government publications.