



Advice & Counsel

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100 Years of Training – Part 4

Dear Readers:

It is no secret that 2009 marks the 100th anniversary of AESF Foundation (formerly AES). To mark this milestone, I began a series of articles which look into the history of education in the art and science of electroplating and surface finishing.

As noted last month, the CEF training course began in 1972 and the CEF exam was first offered in 1977. Ten years later, almost 2,000 individuals had become certified.

The Clean Water Act also became a reality in 1972, and AESF responded by developing Wastewater Treatment and Environmental Compliance and Control courses shortly thereafter. The instructors for these courses often were also the resources for the training materials. They included Mr. Simon P. Gary, of Scientific Control Labs., Fred Steward of Lancy International (now a part of US Filter), and Dr. Clarence Roy of Rainbow Research (deceased).

The mid 60s saw the beginning of the consumer electronics age, and the first of numerous electronic specialty plating houses such as Precision Plating and Perfection Plating in Chicago and Summit Metal Finishing in Indianapolis began reel-to-reel plating services. Dozens of small manufacturers of printed circuits popped up all over the U.S.A. Plating for electronics applications became a growing segment of the metal finishing industry. Still, initially the growth of plating for electronics was slow due to a reluctance on the part of some consumers to accept these newfangled gadgets. Yours truly was one of these reluctant consumers.

I remember purchasing my first calculator in 1973, after failing a quiz in my Chemical Engineering class. To solve the quiz, I needed to be able to calculate “e” to the 2.7 power, an impossible task with my trusty slide rule! Having started the class with a zero on my first quiz, I purchased an HP calculator the same evening (and did very well the rest of the semester). I spent

nearly \$100 (close to \$1,000 in today’s dollars)!

Calculators required printed circuit boards, switches and various connectors. The birth of the personal computer added fuel to the fire.

AESF responded by holding numerous “short courses” on a variety of topics related to manufacture of printed circuit boards and plating of gold, silver, platinum, palladium and palladium alloys for electronic components.

The February 1984 issue of *Plating & Surface Finishing* announced the hiring of Mr. Richard G. Baker, CEF, as Technical Director of the Society. Mr. Baker was formerly of the Corrosion Engineering and Metal Finishing Group at AT&T Bell Laboratories, Murray Hill, NJ. Dick specialized in electrodeposited finishes for electronic components, and was active in evaluating the properties of gold and also of lower-priced, reliable substitutes. Several of his papers, including one Gold Medal Award Winner, appeared in *P&SF*. Dick had served on numerous occasions as an instructor of the AESF Intensive Training Course in Surface Finishing. Mr. Baker focused upon an expansion of AESF’s educational offerings.

As a result of Mr. Baker’s efforts and with help from industry consultant Harry Litsch (also from the AT&T organization, at Western Electric in Allentown, PA), in October of 1984, in Peabody MA, AESF offered the first “Intensive Training Course in Plating for Electronics Applications.” The instructors were Richard Baker (at that time a retired consultant) and Mike Carano, of Electrochemicals, a supplier to the industry. The course covered “associated finishing operations for circuit boards, semi-conductors and strip plat-

ing.” An examination followed the course. Successful completion of the examination bestowed upon the examinee the designation “CEF-SE”, Certified Electroplater-Finisher, Specialist in Electronics.

AESF added a Technical Education Director (yours truly) in 1993. As Technical Education Director, my goals included adding new training courses and updating the existing offerings. All course materials were converted to PowerPoint format and



Mr. Richard G. Baker, CEF

student handouts, which at that time, consisted of stapled booklets with black and white illustrations, were soon printed in full color, and were printed from computer files rather than offset printing. This eliminated a huge inventory of booklets, many of which were outdated.

The AESF Board of Directors also developed the existing certification program, which now leads to an advanced certification of “Master Surface Finisher.” It takes six examinations on a variety of subjects to obtain the MSF certification. I was honored by the AESF Board to become the first MSF. Since that time (around 1998), approximately 30 individuals have successfully completed the program, but dozens of candidates are working hard to earn the MSF certification as you read this article.

I have not covered the hundreds of symposia, short courses, one- and two-day

workshops, and SUR/FIN technical sessions that AES/AESF has offered over the 100 years of its existence. I apologize for these omissions as I am aware that there are hundreds of individuals who worked very hard to present them. I would like to take some additional space to mention all the AES/AESF Presidents who supported the educational efforts of this Society for the past 100 years, as officers, instructors, authors and mentors.



Charles H. Proctor.....	1909-1913
George B. Hogaboom	1913-1914
H.J. Hansjosten	1914-1915
Walter S. Barrows	1915-1916
H.H. Williams	1916-1917
Walter J. Fraine	1917-1919
Oscar E. Servis.....	1919-1920
Sylvester P. Gartland.....	1920-1921
Philip Uhl	1921-1922
Walter J. Allen.....	1922-1923
John E. Sterling.....	1923-1924
Frank J. Hanlon.....	1924-1925
Edward J. Musick.....	1925-1926
Frank C. Mesle.....	1926-1927
John H. Feeley	1927-1928
Horace H. Smith.....	1928-1930
George Gehling.....	1930-1931
Philip Sievering.....	1931-1932
Clarence L. Van Derau	1932-1934
H. A. Gilbertson	1934-1935
Thomas F. Slattery	1935-1936
Austin B. Wilson	1937-1938
William M. Phillips.....	1938-1939
Raymond M. Goodsell.....	1939-1940
Frederick Fulforth	1940-1941
Ellsworth T. Candee	1941-1942
Charles C. Conley	1942-1943
George J. Wagner.....	1943-1944
Maurice R. Caldwell	1944-1945
Walter L. Pinner.....	1945-1946
Frank K. Savage.....	1946-1947
Kenneth M. Huston.....	1947-1948
Samuel S. Johnston.....	1948-1949
Arthur W. Logozzo.....	1949-1950
William J. Neill.....	1950-1951

Cleveland F. Nixon	1951-1952
Franklyn J. MacStoker.....	1952-1953
George P. Swift	1953-1954
Ralph A. Shaefer.....	1954-1955
Clyde Kelly	1955-1956
Samuel Heiman.....	1956-1957
Francis T. Eddy	1957-1958
Herberth E. Head	1958-1959
Ralph D. Wysong.....	1959-1960
W. Andrew Wesley.....	1960-1961
Chester G. Borlet	1961-1962
Manuel Ben	1962-1963
Frank O. Beuckman	1963-1964
Edward E. Oberland.....	1964-1965
Leslie L. Diveley.....	1965-1966
George W. Cavanaugh	1966-1967
William H. Safranek, CEF	1967-1968
Marmaduke H. Dent.....	1968-1969
James H. Lindsay, CEF	1969-1970
Harold J. Wiesner.....	1970-1971
R. Scott Modjeska, CEF	1971-1972
John G. Donaldson, CEF	1972-1973
Robert L. Ruleff.....	1973-1974
Edwin J. Smith.....	1974-1975
Arthur J. Pierdon.....	1975-1976
Isidore Cross, CEF	1976-1977
Bernard Gagnon, CEF.....	1977-1978
Gerald H. Schmidt	1978-1979
Simon P. Gary, CEF	1979-1980
James E. Voytko, CEF.....	1980-1981
Harry J. Litsch, MSF.....	1981-1982
Cort G. Platt, CEF	1982-1983
Herb Tilton, CEF.....	1983-1984
Jack Dini, CEF	1984-1985
Hrant Shoushanian	1985-1986
Charles R. Fotheringham	1986-1987
Dan Leonhardt, CEF	1987-1988
Herman Hammer.....	1988-1989
Steve Schachameyer	1989-1990
Fred Clay, CEF-2	1990-1991
Sherwood O. Cassell, CEF.....	1991-1992
Dick Watson, CEF.....	1992-1993
B. J. Mason	1993-1994
Bill Bonivert.....	1994-1995
Brian Manty, CEF-2.....	1995-1996
Tam Van Tran	1996-1997
Kenneth Gatchel, CEF	1997-1998
Robert T. Groom, CEF	1998-1999
Paul L. Frank.....	1999-2000
Ken Lemke, CEF	2000-2001
Howard Saunders, CEF.....	2001-2002
Tim Baublitz	2002-2003
Doug Lay, CEF-2.....	2003-2004
I. Gene Burman, CEF.....	2004=2005
Fred Mueller, CEF-2.....	2005-2006
Joelie Zak	2006-2007
Peter Gallerani	2007-2008
Melissa Klingenberg	2008-2009

Test Your Plating I.Q. #452

By Dr. James H. Lindsay

A Look Back - Plating I.Q. #1

Given that 2009 is the Centennial year of the founding of AESF, it is worthwhile to look back at the origins of this feature. The late Fred Pearlstein, CEF, AESF Fellow and AESF National Honorary member began this feature in the September 1968 issue of Plating. This space was ably filled by Mr. Pearlstein until April 1992, when it fell into the talented and knowledgeable hands of John Laurilliard, CEF. In May 2000, Mr. Laurilliard put away his pen, and Plating IQ #348 was the first quiz put forth by Dr. Jim Lindsay, who continues the effort to this day. To honor the efforts of Messrs. Pearlstein and Laurilliard, we repeat the very first of these popular quizzes.

1. The limit of carbonate concentration in cyanide copper solutions is approximately (____) oz/gal.
2. Zinc contamination in cyanide copper plating solutions may be removed by (____).
3. At the same current density and cathodic current efficiency, acid copper plates at (____) the rate of cyanide copper.
4. Organic contamination of plating solutions may be remedied by a (____) treatment.
5. It is difficult to plate cast iron with zinc from a cyanide bath because hydrogen tends to deposit in preference to zinc as a result of the low (____) on cast iron.

Answers on page 43.