

References

- [Myers98] C. Myers, "Transformers – Condition Monitoring by Oil Analysis, Large or Small; Contentment or Catastrophe", Proceedings of the 1998 1st IEE/IMEChE International Conference on Power Station Maintenance – Profitability through Reliability", pp.53-58
- [C57.125] IEEE PES Transformers Committee, "IEEE Guide for Failure Investigation, Documentation, and Analysis for Power Transformers and Shunt Reactors", IEEE Standards Board, C57.125-1991
- [Darv97] M. Darveniza, T.K. Saha, D.J.T. Hill, T.T. Le, "Investigation into Effective Methods for Assessing the Condition of Insulation in Aged Power Transformers", IEEE PES WM 1997, PE-343-PWRD-0-11-1997
- [Chu99] Donald Chu, Andre Lux, "On-Line Monitoring of Power Transformers and Components: A Review of Key Parameters", IEEE Electrical Insulation Conference & Electrical Manufacturers and Coil Winding Exposition, Cincinnati, Ohio, Oct 25, 1999
- [Lund92] L.E. Lundgaard, "Partial Discharge – Part XIV: Acoustic Partial Discharge Detection – Practical Application", IEEE Electrical Insulation Magazine, Vol.8, No.5, Sept/Oct 1992, pp.34-43
- [Zarg96] Abbas Zargari, Trevor R. Blackburn, "Application of Optical Fiber Sensor for Partial Discharge Detection in High-Voltage Power Equipment", IEEE Annual Report – Conference on Electrical Insulation and Dielectric Phenomena, San Francisco, Oct 20-23, 1996, pp.541-544
- [Borsi95] H. Borsi, E. Gockenbach, D. Wenzel, "Separation of Partial Discharges From Pulse-Shaped Noise Signals With the Help of Neural Networks", IEE Proc. – Sci. Meas. Technol., Vol.142, No.1, Jan 1995, pp.69-74
- [Nag94] V. Nagesh, B.I. Gururaj, "Automatic Detection and Elimination of Periodic Pulse Shaped Interferences in Partial Discharge Measurements", IEE Proc. – Sci. Meas. Technol., Vol.141, No.5, Sept 1994, pp.335-342
- [Har76] Ronald T. Harrold, "The Relationship Between Ultrasonic and Electrical Measurements of Under-oil Corona Sources", IEEE Transactions on Electrical Insulation, Vol.11, No.1, 1976, pp.8-11
- [Deh91] Deheng Zhu, Kexiong Tan, Xianhe Jin, "The Study of Acoustic Emission Method for Detection of Partial Discharge in Power Transformers", Tsinghua University, Beijing, China, presented at 3rd International Conference on Properties and Applications of Dielectric Materials, July 8-12, 1991, Tokyo, Japan
- [Lund921] L.E. Lundgaard, "Partial Discharge – Part XIII: Acoustic Partial Discharge Detection – Fundamental Considerations", IEEE Electrical Insulation Magazine, Vol.8, No.4, July/Aug 1992, pp.25-31
- [Beng95] T. Bengtsson, M. Leijon, L. Ming, B. Jonsson, "Directivity of Acoustic Signals from Partial Discharges in Oil", IEE Proc. – Sci. Meas. Technol., Vol.142, No.1, Jan 1995, pp.85-88
- [Meu96] Robert Meunier, Georges H. Vaillancourt, "Propagation Behavior of Acoustic Partial Discharge Signals in Oil-Filled Transformers", Conference Record of the ICDL '96 12th International Conference on Conduction and Breakdown in Dielectric Liquids, Roma, Italy, July 15-19, 1996, pp.401-404
- [How81] E. Howells, E.T. Norton, "Location of Partial Discharge Sites in On-Line Transformers", IEEE Transactions on Power Apparatus and Systems, Vol.PAS-100, No.1, Jan 1981, pp.158-162
- [Kawa84] H. Kawada, M. Honda, T. Inoue, T. Amemiya, "Partial Discharge Automatic Monitor for Oil-Filled Power Transformer", IEEE Transactions on Power Apparatus and Systems", Vol.PAS-103, No.2, Feb 1984, pp.422-428

- [Elef95] Peter M. Eleftherion, "Partial Discharge XXI: Acoustic Emission-Based PD Source Location in Transformers", IEEE Electrical Insulation Magazine, Vol.11, No.6, 1995, pp.22-26
- [Tang96] Liang Tang, Zhirong Wu, Huangzhang Li, Dexin Nie, "Location of Partial Discharges in Power Transformers Using Computer-Aided Acoustic Techniques", Canadian Journal of Electrical and Computer Engineering, Vol.21, No.2, 1996, pp.67-71
- [Chang97] Wang Changchang, Dong Xuzhu, Wang Zhongdong, et al, "On-Line Partial Discharge Monitoring System for Power Transformer", 10th International Symposium on High Voltage Engineering, Montreal, Canada, 1997, paper No.3387
- [Lzb82] B.F. Lzbasarov, M.Kh.Ul'masova, P.K. Khabibullaev, "Acoustic Dispersion in Transformer Oil", Soviet Physics Acoustics, Vol.28, No.1, Jan/Feb 1982, pp.74-75
- [How84] E. Howells, E.T. Norton, "Parameters Affecting the Velocity of Sound in Transformer Oil", IEEE Trans., Vol.PAS-103, No.5, May 1984, pp.1111-1115
- [Kemp95] I.J. Kemp, "Partial Discharge Plant Monitoring Technology: Present and Future Developments", IEE Proc. -Sci. Meas. Technolo., Vol.142, No.1, Jan 1995, pp.4-10
- [C57.113] IEEE PES Transformers Committee, "IEEE Trial-Use Guide for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors", IEEE/NEMA, C57.113-1988
- [C57.21] IEEE PES Transformers Committee, "IEEE Standard Requirements, Terminology, and Test Code for Shunt Reactors Rated Over 500 kVA", IEEE Standards Board, C57.21-1991
- [IEC599] IEC, "IEC 599- Interpretation of the Analysis of Gases in Transformers and Other Oil-Filled Electrical Equipment in Service", International Electrotechnical Commission, Geneva, Switzerland, 1978
- [IEC599r] IEC, "Revision of IEC 599 – Working Draft 2", International Electrotechnical Commission, Geneva, Switzerland, 1996
- [C57.104] ANSI/IEEE, C57.104-1991, Guide for the Interpretation of Gases Generated in Oil Immersed Transformers, Institute of Electrical and Electronic Engineers, Inc., New York, NY, 1994
- [Ding95] X. Ding, E. Yao, Y. Liu, P. J. Griffin, "ANN Based Transformer fault Diagnosis Using Gas-in-oil Analysis", Proceedings of the 57th American Power Conference, April 1995, Chicago IL.
- [Zhang96] Yuwen Zhang, An Artificial Neural Network Approach to Transformer Fault Diagnosis, Thesis of Virginia Tech, 1996
- [Lyke77] A.J. Lyke, A.P. Vitols, "Automated Monitoring of Dissolved Gas-in-oil for Large Power Transformers", *Minutes of Forty-Fourth International Conference of Doble Clients*, 1977, Section 10-601
- [Gold83] T.W. Goldsborough, J.F. Millward, "On-Line Hydrogen-in-oil Monitoring", *Minutes of Fiftieth International Conference of Doble Clients*, 1983, Section 6-601
- [McDe85] W. McDermid, J.F. Millward, "On-Line Hydrogen-in-oil Monitoring (A Progress Report)", *Minutes of Fifty-Second International Conference of Doble Clients*, 1985, Section 6-701
- [Bel85] G. Belanger, "Field Testing of HYDRAN® 101 and 201 for Dissolved Hydrogen in Transformer Oil", *Minutes of Fifty-Second International Conference of Doble Clients*, 1985, Section 6-801
- [Inoue90] Y. Inoue, K. Suganuma, M. Kamba, M. Kikkawa, "Development of Oil-Dissolved Hydrogen Gas Detector for Diagnosis of Transformers", IEEE Trans., Vol.PD-5, No.1, Jan 1995, pp.226-232
- [Tsu86] H. Tsukioka, K. Sugawara, "New Apparatus for Detecting Transformer Faults", IEEE Trans., Vol.EI-21, No.2, Apr 1986, pp.221-229
- [Lind94] S.R. Lindgren, "Transformer Fault Gas Analyzer", *Minutes of Sixty-First International Conference of Doble Clients*, 1994, Section 6-10.1
- [Lind95] S.R. "Transformer Fault Gas Analyzer – Update", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 5-3.1

- [Ger95] P. Gervais, J. Aubin, "On-Line Monitoring of Key Fault Gases in Power Transformers and Shunt Reactors", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 5-2.1
- [Glodjo98] A. Glodjo, "A Field Experience with Multi-Gas On-Line Monitors", *Minutes of Sixty-Fifth International Conference of Doble Clients*, 1998, Section 8-12.1
- [Liao98] R. Liao, C. Sun, W. Chen, C. Wang, "On-Line Detection of Gases Dissolved in Transformer Oil and the Fault Diagnosis", Proceedings of 1998 International Symposium on Electrical Insulating Materials, in conjunction with 1998 Asian International Conference on Dielectrics and Electrical Insulation, Toyohashi, Japan, Sept 27-30, 1998, pp.771-774
- [Birlase98] S. Birlasekaran, G. Ledwich, "Use of FFT and ANN Techniques in Monitoring of Transformer Fault Gases", Proceedings of 1998 International Symposium on Electrical Insulating Materials, in conjunction with 1998 Asian International Conference on Dielectrics and Electrical Insulation, Toyohashi, Japan, Sept 27-30, 1998, pp.75-78
- [Hayes86] T.W. Hayes, "Investigation to Determine the Location of a Low-Energy, Audible Electrical Arcing in a Power Transformer", *Minutes of Fifty-Third International Conference of Doble Clients*, 1986, Section 6-301
- [Austin92] P.L. Austin, "Use of DGA and Acoustic Devices to Detect and Locate Faults in a 588 MVA Generator Step-Up Transformer", *Minutes of Fifty-Ninth International Conference of Doble Clients*, 1992, Section 1-18.1
- [Berent95] D. Berent, "Acoustic Monitoring and Gas-in-oil Analysis for Transformers", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 8-3.1
- [Wang98] Zhenyuan Wang, Yilu Liu, P.J. Griffin, "A combined ANN and expert system tool for transformer fault diagnosis", IEEE Transactions on Power Delivery, Vol.13, No.4, Oct 1998, pp.1224-1229
- [Ber38] L.J. Berberich, "Influence of Gaseous Electric Charge of Hydrocarbon Oils", Industrial and Engineering Chemistry, Vol.30, 1938, pp.280-28
- [Vog51] F.J. Vogel, C.C. Peterson, L.M. Matsch, "Deterioration of Transformer Oil and Paper Insulation by Temperature", AIEE Transactions, Vol.78, No.1, 1951, pp.18-21
- [Bas55] H. Basseches, D.A. McClean, "Gassing of Liquid Dielectrics Under Electrical Stress", Industrial and Engineering Chemistry, Vol.47, No.9, Part I, 1955, pp.1782-1794
- [Bag62] A.H. Baguhn, R.E. Reinhard, S.L. Oake, "Gas Generation During Interruption Under Oil", AIEE 237, 1962
- [She63] H.R. Sheppard, "The Mechanism of Gas Generation in Oil-Filled Transformers", *Minutes of Thirtieth International Conference of Doble Clients*, 1963, Section 6-601
- [Slo67] T.K. Sloat, J.L. Johnson, G.M.L. Sommerman, "Gas Evolution from Transformer Oils under High Voltage Stress", IEEE Trans., Vol.PAS-86, No.3, 1967, pp.69-
- [Ped68] G. Pedersen, "Gassing of Insulating Oils under the influence of an Electric Discharge", Brown Boveri Review, Vol.55, No.415, Apr/May 1968, pp.222-228
- [Hal73] W.D. Halstead, "A Thermodynamic Assessment of the Formation of Gaseous Hydrocarbons in Faulty Transformers", Journal Inst. Petroleum, Vol.59, Sept 1973, pp.239-241
- [Baker82] A.E. Baker, "Gas Composition in Corona Discharge", *Minutes of Forty-Ninth International Conference of Doble Clients*, 1982, Section 10-701
- [Baker83] A.E. Baker, "Gassing Characteristics of Transformer Oils under Sustained Arcs", *Minutes of Fiftieth International Conference of Doble Clients*, 1983, Section 10-801
- [Nick91] Nick Dominelli, "The Analysis of Transformer Oil for Degradation Products from Overheated Solid Insulation", *Minutes of Fifty-Eighth International Conference of Doble Clients*, 1991, Section 6-12.1

- [Grant92] D.H. Grant, "A Study of Furanic Compounds Generated in Transformers During Heat Runs", *Minutes of Fifty-Ninth International Conference of Doble Clients*, 1992, Section 10-5.1
- [Omn93] T.V. Oommen, E.M. Petrie, J.G. Reckleff, "Furanic Compounds Analysis by GC-MS, and Its Diagnostic Value for Transformer Insulating Aging", *Minutes of Sixtieth International Conference of Doble Clients*, 1993, Section 10-5
- [Griffin94] P.J. Griffin, L.R. Lewand, B. Pahlavanpour, "Paper Degradation By-Products Generated Under Incipient-Fault Conditions", *Minutes of Sixty-First International Conference of Doble Clients*, 1994, Section 10-5
- [Rogers78] R.R. Rogers, "IEEE and IEC Codes to Interpret Incipient Faults in Transformers, Using Gas In Oil Analysis", *IEEE Trans.*, Vol.EI-13, No.5, Oct 1978, pp.349-354
- [Pugh74] D.R. Pugh, "Advances in Fault Diagnosis by Combustible Gas Analysis", *Minutes of Forty-First International Conference of Doble Clients*, 1974, Section 10-1201
- [Yosh87] Yoshida, Ishioka, Y., Suzuki, T., Yanuri, T., Terinash, T., "Degradation of Insulation Materials of Transformers", *IEEE Trans.*, Vol.EI-22, Dec 1987, pp.795-800
- [Anto91] A.M. Corvo, A.C.T. Dioge, D. Ferratone, "Power Transformer Aging", *Minutes of Fifty-Eighth International Conference of Doble Clients*, 1991, Section 6-18
- [Hisao94] H. Kan, T. Miyamoto, Y. Makino, S. Mamba, T. Hara, "Absorption of CO₂ and CO Gases and Furfural in Insulating Oil into Paper Insulation in Oil-Immersed Transformers", *Conference Record of the 1994 IEEE International Symposium on Electrical Insulation*, Pittsburgh, PA USA, June 5-8, 1994, pp.41-44
- [Hisao95] H. Kan, T. Miyamoto, "Proposals for an Improvement in Transformer Diagnosis Using Dissolved Gas Analysis (DGA)", *IEEE Electrical Insulation Magazine*, Vol.11, No.6, Nov./Dec. 1995, pp.15-21
- [Rick78] A.L. Rickley, A.E. Baker, G.W. Armstrong, Jr., "Analytical Techniques for Fault-Gas Analysis", *Minutes of Forty-Fifth International Conference of Doble Clients*, 1978, Section 10-401
- [Randy97] R.D. Stebbins, J.J. Kelly, S.D. Myers, "Power Transformer Fault Diagnosis", 1997 IEEE PES WM, Panel Session, New York, New York, Feb 6, 1997
- [Dorn67] E. Dornenburg, O.E. Gerber, "Analysis of Dissolved and Free Gases for Monitoring Performance of Oil-Filled Transformers", *The Brown Boveri Review*, 54 (2/3):104-111, 1967
- [Fallou70] B. Fallou, F. Viale, I. Davies, R.R. Rogers, E. Dornenburg, "Application of Physico-Chemical Methods of Analysis to the Study of Deterioration in the Insulation of Electrical Apparatus", *CIGRE 1970 Report 15-07*
- [Bar73] B. Barraclough, E. Bayley, I. Davies, K. Robinson, R.R. Rogers, C. Shanks, "CEGB Experience of the Analysis of Dissolved Gas in Transformer Oil for the Detection of Incipient Faults", *IEE Conference on Diagnostic Testing of High Voltage Power Apparatus in Service*, March 6-8, 1973
- [Rogers75] R.R. Rogers, "U.K. Experiences in the Interpretation of Incipient Faults in Power Transformers by Dissolved Gas-in-oil Chromatography Analysis (A Progress Report)", *Minutes of Forty-Second International Conference of Doble Clients*, 1975, Section 10-201
- [Rogers77] R.R. Rogers, "U.K. Experience in the Interpretation of Incipient Faults in Power Transformers by Dissolved Gas-in-oil Chromatography Analysis (A Progress Report)", *Minutes of Forty-Fourth International Conference of Doble Clients*, 1977, Section 10-501
- [Man78] H.C. Manger, "Combustible Gas Ratios and Problems Detected", *Minutes of Forty-Fifth International Conference of Doble Clients*, 1978, Section 6-1101
- [Kelly80] J.J. Kelly, "Transformer Fault Diagnosis by Dissolved-Gas Analysis", *IEEE Trans.*, Vol.IA-16, No.6, Nov/Dec 1980, pp.777-782

- [Sobral86] C.L.C. Sobral Vieira, "Correlation Between Results of Dissolved Gas Analysis and Actual Transformer Inspection", [Baker82] A.E. Baker, "Gas Composition in Corona Discharge", *Minutes of Fifty-Third International Conference of Doble Clients*, 1986, Section 6-501
- [Pugh73] D.R. Pugh, "Combustible Gas Analysis", *Minutes of Fortieth International Conference of Doble Clients*, 1973, Section 10-401
- [Griffin88] P.J. Griffin, "Criteria for the Interpretation of Data for Dissolved Gases in Oil from Transformers (A Review)", *Electrical Insulating Oils*, STP 998, H.G. Erdman edited, American Society for Testing and Materials, Philadelphia, 1988, pp.89-106
- [Barrett89] K.A. Barrett, "Dissolved Gas-in-oil Analysis – An Expert System", *Minutes of Fifty-Sixth International Conference of Doble Clients*, 1989, Section 10-3.1
- [Lin93] C.E. Lin, J.M. Ling, C.L. Huang, "An Expert System for Transformer Fault Diagnosis Using Dissolved Gas Analysis", *IEEE Trans. on Power Delivery*, Vol.8, No.1, Jan. 1993, pp.231~238
- [Joseph94] J. Carbonara, M. Lynch, M. Hunt, J. Brazil, "The Transformer Gas Analyzer, "A Practical Expert System for the Diagnosis of Operational Faults in Electrical Transformers", *Proceedings of the American Power Conference*, Vol.56, Part I, 1994, pp.342-347
- [Duk93] James J. Dukarm, "Transformer Oil Diagnosis Using Fuzzy Logic and Neural Networks", 1993 Canadian Conference on Electrical and Computer Engineering, Vol.1, pp.329~332
- [Tom93] K. Tomsovic, M. Tapper, T. Ingvarsson, "Fuzzy Information Approach to Integrating Different Transformer Diagnostic Methods", *IEEE Trans.*, Vol.PD-8, No.3, July 1993, pp.1638-1644
- [Huang97] Y.C. Huang, H.T. Yang, C.L. Huang, "Developing a New Transformer Fault Diagnosis System through Evolutionary Fuzzy Logic", *IEEE Trans.*, Vol.PD-12, No.2, Apr 1997, pp.761-767
- [Gao98] N. Gao, G.J. Zhang, Z. Qian, Z. Yan, D.H. Zhu, "Diagnosis of DGA Based on Fuzzy and ANN Methods", *Proceedings of 1998 International Symposium on Electrical Insulating Materials*, in conjunction with 1998 Asian International Conference on Dielectrics and Electrical Insulation, Toyohashi, Japan, Sept 27-30, 1998, pp.767-770
- [Yang981] H.T. Yang, C.C. Liao, "Adaptive Fuzzy Diagnosis System for Dissolved Gas Analysis of Power Transformers", *IEEE 1998 WM*, PE-069-PWRD-0-12-1998
- [Sumit93] Sumit K. Bhattacharyya, R. E. Smith, Tim A. Haskew, "A Neural Network Based Approach to Transformer Fault Diagnosis Using Dissolved Gas Analysis Data", *NAPS*, 1993
- [Zhang97] Y. Zhang, X. Ding, Y. Liu, P. J. Griffin, "An Artificial Neural Network Approach to Transformer Fault Diagnosis", *IEEE Trans. on PWRD*, Vol.11, No.4, Oct 1997, pp1836~1841
- [Wang97] Zhenyuan Wang, Yuwen Zhang, Chun Li, Yilu Liu, "ANN-Based Transformer Fault Diagnosis", *Proceedings of the 59th American Power Conference*, Vol.59-I, Chicago, April 1997, pp.428~432
- [Yang98] H.T. Yang, Y.C. Huang, "Intelligent Decision Support for Diagnosis of Incipient Transformer Faults Using Self-Organizing Polynomial Networks", *IEEE Trans.*, Vol.13, No.3, Aug 1998, pp.946-952
- [Esp98] D.G. Esp, M.Carrillo, A.J. McGrail, "Data Mining Applied to Transformer Oil Analysis Data", *Conference Record of the IEEE International Symposium on Electrical Insulation*, Arlington, Virginia, USA, June 7-10, 1998, pp.12-15
- [Omn82] T.V. Oommen, H.R. Moore, L.E. Luke, "Experience with Gas-in-oil Analysis Made During Factory Tests on Large Power Transformers", *IEEE Trans.*, Vol.PAS-101, No.5, May 1982, pp.1048-1052
- [MacD80] J.D. MacDonald, A.P. Vitols, "Gas-in-oil Analysis as a Diagnostic Tool for Monitoring Power Transformer Insulation Integrity", *Minutes of Forty-Seventh International Conference of Doble Clients*, 1980, Section 6-901

- [Griffin91] P.J. Griffin, "Monitoring the Integrity of Cellulose Insulation in Order to Determine Power Transformer Life", *Minutes of Fifty-Eighth International Conference of Doble Clients*, 1991, Section 6-16
- [Myers92] D.P. Myers, J.R. Sans, S.D. Myers, "Field Studies of Furan Formation in Transformer Fluid as an Indicator of Damage to Paper Insulation", *Minutes of Fifty-Ninth International Conference of Doble Clients*, 1992, Section 10-6
- [Domi93] N. Dominelli, F.J. Bird, E.A. Hall, S.J. Hassanali, "Recent Developments in Paper Degradation Products Analysis", *Minutes of Sixtieth International Conference of Doble Clients*, 1993, Section 10-4
- [Griffin93] P.J. Griffin, L.R. Lewand, E. Finnan, "Measurement of Cellulosic Insulation Degradation", *Minutes of Sixtieth International Conference of Doble Clients*, 1993, Section 10-3
- [Griffin94] P.J. Griffin, L.R. Lewand, B. Pahlavanpour, "Paper Degradation By-Products Generated Under Incipient-Fault Conditions", *Minutes of Sixty-First International Conference of Doble Clients*, 1994, Section 10-5
- [Griffin95] P.J. Griffin, L.R. Lewand, "A Practical Guide for Evaluating the Condition of Cellulosic Insulation in Transformers", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 5-6
- [Griffin97] E. Finnan, P.J. Griffin, E. Zuleta, A. Matamoros, A. Ciendua, M.P. Diaz, "A Report on the Assessment of Insulation Aging and Condition by Means of Laboratory Oil Tests", *Minutes of Sixty-Fourth International Conference of Doble Clients*, 1997, Section 5-5
- [Mar77] A. Marquez, "Recurring Core Ground Found by Combustible-Gas Analysis", *Minutes of Forty-Fourth International Conference of Doble Clients*, 1977, Section 6-301
- [Oms81] L.W. Oms, "Transformer Problems Detected or Confirmed by Use of Combustible Gas Analysis (A Progress Report)", *Minutes of Forty-Seventh International Conference of Doble Clients*, 1980, Section 10-101
- [Bak81] J.F. Baker, J.A. Salovaara, "Gas-in-oil Practice and Experience on Ontario Hydro Power Transformers and Shunt Reactors", *Minutes of Forty-Eighth International Conference of Doble Clients*, 1981, Section 10-201
- [Men82] K.A. Mennerich, "Additional Experience with Gas-in-oil Analysis Involving Step-up Transformer No.2 at the Riseton Electric Generating Station", *Minutes of Forty-Ninth International Conference of Doble Clients*, 1982, Section 6-101
- [Duval88] M. Duval, F. Langdeau, G. Belanger, P. Gervais, "Interpretation of Dissolved Gas-In-Oil Levels in Power Transformers", *Minutes of Fifty-Fifth International Conference of Doble Clients*, 1988, Section 10-7.1
- [Duval89] M. Duval, F. Langdeau, P. Gervais, G. Belanger, "Acceptable Dissolved Gas-In-Oil Concentration Levels Versus Age in Power and Instrument Transformers", *Minutes of Fifty-Sixth International Conference of Doble Clients*, 1989, Section 10-4.1
- [Gri90] P.J. Griffin, C.E. Locke, "Dissolved Gas-in-oil Database", *Minutes of Fifty-Seventh International Conference of Doble Clients*, 1990, Section 10-9.1
- [Cro95] D.W. Crofts, B.R. Hughes, "Generator Step-up Transformers at Texas Utilities' Comanche Peak Nuclear Plant – Identification and Resolution", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 8-7.1
- [Gri96] P.J. Griffin, E. Finnan, L.R. Lewand, "Case Studies", *Minutes of Sixty-Third International Conference of Doble Clients*, 1996, Section 5-4.1
- [Gri97] P.J. Griffin, L.R. Lewand, "Case Studies", *Minutes of Sixty-Fourth International Conference of Doble Clients*, 1997, Section 5-7.1

- [Hau97] T. Hauptert, D. Hanson, W. McDonald, "The Use of Diagnostic Testing of Insulating Oil for Fault Detection in Electrical Equipment", Proceedings of the Electrical Electronics Insulation Conference, 1997, Piscataway, NJ, USA, 97Ch36075, pp.537-541
- [Gri98] P.J. Griffin, L.R. Lewand, E. Finnan, "Evaluation of Electric Apparatus - Case Studies", *Minutes of Sixty-Fifth International Conference of Doble Clients*, 1998, Section 5-2.1
- [Griffin84] P.J. Griffin, A.E. Baker, "Some Precision Factors in Dissolved Gas Analysis", *Minutes of Fifty-First International Conference of Doble Clients*, 1984, Section 10-5
- [Duval84] M. Duval, Y. Giguere, "Preparation of Standard Samples of Dissolved Gases in Insulating Oil", *Minutes of Fifty-First International Conference of Doble Clients*, 1984, Section 10-601
- [Ferrito90] S.J. Ferrito, "A Comparative Study of Dissolved Gas Analysis Techniques: The Vacuum Extraction Method Versus the Direct Injection Method", IEEE Trans., Vol.PD-5, No.1, Jan 1990, pp.220-222
- [Jalbert94] J. Jalbert, R. Gilbert, "Comparison Between Headspace and Vacuum Gas Extraction Techniques for the Gas Chromatographic Determination of Dissolved Gases from Transformer Insulation Oils", Conference Record of the 1994 IEEE International Symposium on Electrical Insulation, Pittsburgh, PA USA, June 5-8, 1994, pp.123-129
- [Omn821] T.V. Oommen, "Adjustments to Gas-in-oil Analysis Data Due to Gas Distribution Possibilities in Power Transformers", IEEE Trans., Vol.PAS-101, No.6, June 1982, pp.1716-1722
- [Hayk99] Simon Haykin, Neural Networks – A Comprehensive Foundation, Prentice Hall, 2nd edition, New Jersey, 1999
- [Dorn70] E. Dornenburg, W. Strittmatter, "Monitoring Oil-Cooled Transformers by Gas Analysis", Brown Boveri Review, Vol.61, No.5, 1970, p.238
- [Griffin86] A.E. Baker, P.J. Griffin, C. Locke, "An Update on Fault-Gas Analysis (A Review)", *Minutes of Fifty-Third International Conference of Doble Clients*, 1986, Section 10-301
- [C57.106] IEEE PES Transformers Committee, "IEEE Guide for Acceptance and Maintenance of Insulating Oil in Equipment", IEEE Standards Board, C57.106-1991
- [Gri87] P.J. Griffin, "Characteristics of Electrical Insulating Mineral Oils (A Review)", *Minutes of Fifty-Fourth International Conference of Doble Clients*, 1987, Section 10-701
- [Gri90] P.J. Griffin, "Aging Characteristics of Transformer Mineral Oils (An Interim Report)", *Minutes of Fifty-Seventh International Conference of Doble Clients*, 1990, Section 10-3
- [Hey98] R.G. Heydon, B. Gronowski, J. Rungis, J. Diesendorf, F. Mitchell, "Condition Monitoring of Transformer Oil", 1998 International Conference on Power Electronics Drives and Energy Systems for Industrial Growth", Perth, Western Australia, Dec 1-3, 1998, pp.240-253
- [Gri881] P.J. Griffin, C.M. Bruce, J.D. Christie, "Comparison of Water Equilibrium in Silicone and Mineral Oil Transformers", *Minutes of Fifty-Fifth International Conference of Doble Clients*, 1988, Section 10-9
- [James86] R.E. James, F.E. Trick, B.T. Phung, P.A. White, "Interpretation of Partial Discharge Quantities as Measured at the Terminals of HV Power Transformers", IEEE Transactions on Electrical Insulation, Vol.EI-21, No.4, Aug 1986, pp.629-638
- [Vaz95] D.C. Vazquez, E.O. Lopez, R.M. Albores, "Insulation Power Factor Measurement Options in Oil-Filled Power Transformers", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 8-15
- [Griffin89] P.J. Griffin, J.D. Christie, "Power-Factor Characteristics of Oil-Impregnated Cellulose (A Review)", *Minutes of Fifty-Sixth International Conference of Doble Clients*, 1989, Section 10-6

- [Ali96] M. Ali, C. Eley, A.M. Emsley, R. Heywood, X. Xaio, "Measuring and Understanding the Ageing of Kraft Insulating Paper in Power Transformers", IEEE Electrical Insulation Magazine, Vol.12, No.3, May/June 1996, pp.28-34
- [Bas90] A. Bassetto F., J. Mark, "Analysis of the Degree of Polymerization of Paper Samples from Service-Aged Transformers", *Minutes of Fifty-Seventh International Conference of Doble Clients*, 1990, Section 10-5
- [Griffin92] P.J. Griffin, "Measurement of Cellulose Insulation Degradation: A Study of Service-Aged Transformers", *Minutes of Fifty-Ninth International Conference of Doble Clients*, 1992, Section 10-4
- [Philip91] P. Guinic, P.L. Guennec, J.M. Maujean, J. Sapet, M. Tudrej, "Transformer Aging and Replacement Policy (An Review)", *Minutes of Fifty-Eighth International Conference of Doble Clients*, 1991, Section 6-20
- [Burton85] P.J. Burton, "The Analysis of Insulating Oil for Products Specific to the Low Temperature Overheating of Paper Insulation", Notes for CIGRE WG 15-01, 1985
- [Kgoto90] K. Goto, H. Tsukioka, E. Mori, "Measurement of Winding Temperature of Power Transformers and Diagnosis of Aging Deterioration by Detection of CO₂ and CO", CIGRE 1990, Session 12-102
- [Kawa91] T. Kawada, E. Mori, "Prediction of the Expected Transformer Lifetime by Detection of CO₂ and CO", *Minutes of Fifty-Eighth International Conference of Doble Clients*, 1991, Section 6-19
- [Omn98] T.V. Oommen, R.S. Girgis, R.A. Ronnau, "Hydrogen Generation from Some Oil-Immersed Cores of Large Power Transformers", *Minutes of Sixty-Fifth International Conference of Doble Clients*, 1998, Section 8-8
- [Danny91] D.E. Bates, P.W. Brunson, Jr., "Detection, Analysis, and Rehabilitation of Unintentional Core Grounds in Large Power Transformers", *Minutes of Fifty-Eighth International Conference of Doble Clients*, 1991, Section 6-10
- [Young93] R. Youngblood, "Application of DGA to Detection of Hot Spots in Load Tap-Changers", *Minutes of the Sixtieth Annual International Conference of Doble Clients*, 1993, Section 6-4
- [Young94] R. Youngblood, "An Update on Load Tap Changer Hot Spot Detection Through the Use of DGA", *Minutes of the Sixty-first Annual International Conference of Doble Clients*, 1994, Section 6-14
- [Desk95] F. M. Deskins, S. P. Patel, T. R. Bode, "Use of Infrared Thermal Image Tests and Dissolved Gas-In-Oil Analysis to Detect Abnormal Conditions in Transformer Load Tap Changers", *Minutes of Sixty-Second International Conference of Doble Clients*, 1995, Section 8-16
- [Pomi98] D. Pomi, "Discoveries of LTC Problems Which Support the Success of New Technology Monitoring and Test Devices", *Minutes of Sixty-Fifth Annual International Conference of Doble Clients*, 1998, Section 8-19
- [Anon98] Anon, "General Discussion of the Panel Session", *Minutes of the Sixty-Fifth Annual International Conference of Doble Clients*, 1998, Section 8-20
- [Lsec98] J. C. Lsecke, "Experiences With Load Tap Changer Monitoring", *Minutes of the Sixty-Fifth Annual International Conference of Doble Clients*, 1998, Section 8-17
- [Kram96] A. Kramer, J. Meyer, J.A.J. Pettinga, R. Janus, V. Seitz, "Monitoring Methods For On-Load Tap-Changers. An Overview and Future Perspectives", CIGRE 1996, 12-108