CURRICULUM VITAE

Name	KARLÉN, Olof
Nationality	Swedish
Present position	Head of Karlén Engineering
Languages	Swedish, English, working knowledge of German.

Education

1980	Master of Science and Diploma in electrical engineering at the Chalmers University of Technology, Göteborg, Sweden.
	EMTP-course in transient simulation, Ludvika, Sweden, April 6-10, 1992 held by Professor Dommel.
	Seminar on modern HVDC technology Februari 11-15, 1991 Falun, Sweden held by ABB Power Systems.
	Cigré circuit-breaker colloquium in Sarajevo 1988.
	HVCD Transmission and Controls. One week workshop in PSCAD/EMTDC. Copenhagen, February 20-24, 1995.
	PQA97. Conference on Power Quality Issues sponsored by EPRI. Columbus, Ohio, March 3-6, 1997.
	Inustrial Applications of Static Compensators for Voltage Control. Training course at University of Wisconsin-Madison, May 13-15, 1996.
	1998 IEEE Industry Applications Conference, St. Louis, October 12-15, 1998.

Membership of Professional Associations

1986-1990	Member of Cigré Working group 13-06 ” Reliability of high-voltage circuit-breakers”.
1984-1999	Member of Cigré
1998-2000	Member of IEEE

Employment Record

2010-	Head of Karlén Engineering.

2006- 2010	Assistant CEO, ABEL Gruppen Sverige AB, ABEL Group consulting company in electrical consulting services.
2003 - 2006 Manager	SwedPower AB, Power Quality and System Studies. Area SwedPower Malmö office.
1999- 2002	Swedpower AB, Reliability and Power Quality Applications. Manager (Swedpower Malmö office).
1995-1999	Sydkraft AB, Marketing and Sales. Manager Power Quality Services Development.
1991-1995	Sydkraft Konsult AB, department of Electrical Engineering, Manager of the section for High Voltage Equipment and Network Analysis.
1986-1991	Sydkraft AB, department of Electrical Engineering, Manager of the Electrical Power section.
1984-1986	Sydkraft AB, department of Maintenance Technique. Maintenance engineer.
1980-1984	Sydkraft AB, department of Substation Design. Design engineer and project manager.

Professional Experience

1999-	Some significant consulting assignments: Solar Stirling concept development with respect to power system layout and power electronics and its control strategies. PSCAD/EMTDC modelling of a DPC/DTC controlled VSC full converter. Wind mill plant-Low voltage system dimensioning and verification with respect to safety disconnecting conditions. Thermal plant grid code verification with respect to SvK:s grid specifications.

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Calculation and simulations for an Active Filter implementation at Höganäs AB.

Development of a flicker reduction model in PSCAD based on the VSC technology for studies in the Arc Furnace Plant in Halmstad.

Overvoltage studies and simulations for rotating converter development in traction applications.

Overvoltage studies for a new 400 kV cable connection in the Stockholm Link Project using ATP software.

Development of a full converter wind power PMSG-model in PSCAD/EMTDC including control strategy.

Development of a DTC (Direct Torque Control) based frequency converter model for motor applications.

Participating in preparing of a off-shore wind park EU-proposal covering Research and Demonstration of optimal grid integration.

Preparing technical specifications focused on electrical equipment, for the Stony Creek plant, US, run by Höganäs AB.

Arc Furnace flicker studies and measurments for increased Power Quality.

Responsible for system studies at Scanraff in Lysekil covering how voltage dips due to lightning affects the petroleum production and what precautions that could be made.

Studies for implementation of reactive power filtering equipment for the extruding process at ARCA SYSTEMS in Perstorp.

Responsible for system studies and preparation of specifications for the new off-shore wind power plant at Lillgrund in Öresund

Power Quality studies and field measurements for food industry Findus AB

Power Quality studies for nuclear power plant Ringhals AB

Responsible for starting performance studies for safty classed motor application at Forsmark Nuclear Plant at Forsmark Sweden.

Responsible for commutation failure studies for the HVDC Bakun Transmission Project Sesco-Sabah.

Responsible for Adjustable Speed Drive fault investigation, measurements and mitigation recommendation at Perstorp AB, Perstorp Sweden.

Responsible for Power Quality Studies and generation standby specification for Electrolux AB at Ljungby Sweden.

1995- 1999

Responsible for Power Quality Services, Concepts and new Developments focused on Industrial Plants.

Resonsible for specifications and installation of a stand-bye diesel plant for Sydkraft. Preparing and negotiating of an agreement between the different parts utilyzing the stand-bye equipment.

Field measurments of Transients, Harmonics and Voltage dips.

Trouble shooting due to the shut down of industrial plants.

Dynamic modeling of industrial equipment i.e. Adjustable Speed Drives.

Customer recomendations minimizing electrical disturbances.

Seminars on Power Quality Issues.

Tender preparation and presentation.

1986-1995

Responsible for high voltage equipment specifications intended for Sydkrafts´ transmission and generating system.

Implementation of computer simulation technique regarding fast electromagnetic transients.

Lecturer at international management courses in electrical engineering and management carried out yearly at Sydkraft Konsult.

Lecturer at an international maintenance seminar in Costa Rica.

Responsible for the high voltage circuit breaker testing team.

Responsible for development of consulting experience in the field of HVDC and implementation in different projects.

Participating in the feasibility study of the Baltic Cable interconnection.

1984-1986	Preparing maintenance guidelines and instructions for hydro power plants. Development of new diagnostic methods for condition based maintenance. Software development for optimizing of transformer temperatures at various loading conditions. Preparing reports concerning circuit-breaker stresses at different switching modes. Energizing studies, field tests and computer simulations regarding capacitor banks and reactor switching. Conducting of short circuit tests for preparation of new guidelines for derating of old types of earth-switches. Conducting and evaluation of heat run tests for old types of disconnectors. Development of an expert system with the aim to support fault location in faulted air blast breakers.
1980-1984	Project management and designing of 130 kV substations including purchasing of high voltage and relay protection equipment. Implementation of a new operation and supervising system at Sydkraft.

Publications

”Development of controlled switching of reactors, capacitors, transformers and lines”. Report presented at the Cigré meeting in Paris 1990. (Co-authors: R. Alvinsson, A. Holm, U. Åkesson).

”Condition motoring of SF6 circuit breakers”. Report presented at the Cigré meeting in Paris 1992. (Co-authors: U.Åkesson, U. Lager, P. Hoff, A. Holm).

”Maintenance objectives at Sydkraft”. Report presented at the Cigré colloquium in Bangkok 1989. (Co-author: Y. Hansson).

”Interim report on the second international enquiry of the reliability of high-voltage single pressure SF6 circuit-breakers”. Report
presented at the Cigré meeting in Paris 1990 and prepared by the members of Cigré Working group 13-06.

”Application of diagnostic techniques for high voltage circuit-breakers”. Report presented in the name of working group 13-06.

Different internal computer study and reports.

Inrush Currents in unloaded transformers at different energizing conditions.

Synchronized switching of capacitor banks.

Implementation of a transient induction machine model in a standard computer simulation software. Study regarding earth fault close to the induction machine by using the model.

Development of vacuum switching models and subsequent restrike study.

Arc study in circuit-breakers and disconnectors using a modified Mayr model.

1987 Philadelphia, US (Working group meeting Cigré 13-06)

1983 Pittsburgh, US (Technical discussions concerning a new 750 MVA transf. Unit for the Hemsjö 400 kV substation).